MATLOCK BEND LANDFILL – PHASE I & PHASE II/IV UPGRADE
GROUNDWATER MONITORING REPORT
2nd SEMI-ANNUAL EVENT - 2015

SANTEK PROJECT NO. 200-1510.3 & 200-1510.4

PREPARED BY:
SANTEK WASTE SERVICES
650 25TH STREET NW, SUITE 100
CLEVELAND, TN 37311

DECEMBER 2015

December 2, 2015

SANTEK
WasteServices

650 25th Street, N.W., Suite 100
Cleveland, Tennessee 37311
(423) 303-7101

Email: mail@santekenviro.com
Internet: www.santekenviro.com

Mr. Ryan Miller
Tennessee Department of Environment and Conservation
Division of Solid Waste Management
3711 Middlebrook Pike
Knoxville, TN 37921-5602

RE: Groundwater Monitoring Report – 2nd Semi-Annual Event
Matlock Bend Landfill – Phase I
SNL #53-103-0203

Dear Mr. Miller:

Please find enclosed a copy of the groundwater monitoring report generated from the second semi-annual groundwater event of 2015 at the Matlock Bend Landfill – Phase I. This package includes data pertaining to site information, geologic summary, groundwater sampling, analytical laboratory reports, statistical analysis, and groundwater elevations and flow.

If you have any questions and/or comments, please feel free to call at (423) 303-7101.

Sincerely,

Robert Hudson
Environmental Compliance Coordinator

Ron E. Vail, P.E.
V.P. of Engineering
TN. Registration No. 109716

Enclosures

cc: Steve Field, Loudon County Solid Waste Department Chairman
Matt Dillard, Executive V.P. of Operations, Santek
Raymond Givens, Landfill Manager, Santek

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Phase I

Phase II/IV Upgrade

MATLOCK BEND LANDFILL

PHASE I

MATLOCK BEND LANDFILL – PHASE I
GROUNDWATER MONITORING REPORT
2nd SEMI-ANNUAL EVENT - 2015

SANTEK PROJECT NO. 200-1510.3

PREPARED BY:
SANTEK WASTE SERVICES
650 25TH STREET NW, SUITE 100
CLEVELAND, TN 37311

DECEMBER 2015

1.0 INTRODUCTION

In accordance with the Tennessee Department of Environment and Conservation's Solid Waste Processing and Disposal Rule 0400-11-01-.04(7), Santek Waste Services, Inc. (Santek) is submitting the groundwater monitoring report for the second semi-annual event for 2015 at the Matlock Bend Landfill - Phase I. The sampling and analytical were performed in accordance with the Tennessee Department of Environment and Conservation's Solid Waste Processing and Disposal Rules as well as the site's approved groundwater monitoring plan dated December 1996. The groundwater monitoring plan is incorporated in the landfill's Operations Plan. The site's groundwater monitoring network consists of MW-01, MW-1A, MW-02 and MW-03. Sampling and statistical analyses were performed by Santek. Santek contracted with Analytical Environmental Services, Inc. (AES) to perform all analytical testing.

1.1 SITE INFORMATION

Phase I of the Matlock Bend Landfill is located approximately five miles west of Loudon, TN, at latitude N 35° 44' 48" and longitude W 84° 24' 43". The site consists of 23 constructed acres of ridge-top and sloped hillside topography bordering Tennessee Highway 72 for approximately 250 feet extending northward 4,800 feet.

2.0 SAMPLING AND ANALYTICAL

The groundwater sampling event was performed on October 6 & 7, 2015. Samples were analyzed for Appendix I constituents, as well as the required additional 14 parameters. All samples were submitted to AES for analysis. A duplicate was obtained from MW-03. Field sampling logs are provided in Appendix A. Analytical results are provided in Appendix B.

3.0 STATISTICAL ANALYSIS

3.1 Statistical Analysis Method

Santek is submitting a control chart approach to satisfy the statistical analysis requirement. Well #03 is the upgradient (background) well. Wells #01, #1A and #02 are the downgradient (compliance) wells. The Appendix I analytical results for this sampling event are used to compare the compliance wells to the background well concentrations for each constituent elevated above detection limit. Parameters not detected above the reporting limits are not included in the control chart comparison. Parameters detected above the reporting limits are compared to the average background concentration. The mean (average) for each well is determined by using the actual analytical value if it exceeds the detection limit, or by using the method detection limit (MDL) if the result was a nondetect. If the average background concentration is greater than the results for the compliance well, then no significant increase is indicated. If the average background concentration is less than the results of the compliance well, then the Tennessee (TN) Regulatory Limits of the Tennessee Solid Waste regulations are used for additional comparison to indicate potentially elevated concentrations. Control charts are provided in Appendix C.

3.2 Statistical Analysis Summary

MW-01
There were no inorganic or organic constituents detected above the report limits during this event.

MW-1A
There were no inorganic or organic constituents detected above the report limits during this event.

MW-02
The control chart for MW-02 indicates zinc* is above the report limit and the background well's average. However, it is felt that the result of this constituent is not indicative of a release from the landfill, but rather attributable to local soil constituents.

MW-03
MW-03 is the upgradient (background) well.

4.0 FLOW DIRECTION AND RATES

Geological Summary:
Geologic information of Phase I is based on a Hydrogeologic Evaluation dated January 18, 1984, by G.N. Pruitt (TNDSWM). Phase I is located on a discontinuous, highly dissected upland with elevations ranging from approximately 865 feet (MSL) to 1,020 feet (MSL). The evaluation indicates a thick cover of silty-clayey soil which covers the majority of the site, the absence of shallow groundwater, and the absence of perennial springs and streams. No bedrock outcrops were viewed on site; however, an exposed dolomite limestone ledge resides east of the southeast property boundary. This rock exposure appears to originate from either the uppermost part of the Longview dolomite formation or the lower portion of the Newalla dolomite formation, both belonging to the Knox Group. Phase I is located in the Valley and Ridge physiographic region consisting of northeast/southwest trending valleys and ridges.

The overall groundwater flow of Phase I is towards the southwest and will eventually flow to the Tennessee River. The groundwater flow rate ranges from 2.07×10^{-3} ft/day at MW-1A to 3.12×10^{-3} ft/day at MW-02. Groundwater flow rate and direction have been determined for each well and are included in Appendix D. A groundwater potentiometric contour map is included in Appendix E.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The groundwater monitoring network at this site is adequately monitoring the uppermost aquifer and no changes are recommended at this time.

**Indicates TN Regulatory limit is not available.*

APPENDIX A

DATE: 10/7/15

FIELD SAMPLING LOG	WELL NO: MW-01
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 10/7/15 (Time) 9:55	Purge End: (Date) 10/7/15 (Time) 10:20
Purged by: Robert Hudson	
Depth Measurement Ref. Point* 830.87 ft	Well Csg. ID: 2"

Equipment Used to Measure (Make, Model, etc)

DTW Solinst pH Horiba Cond. Horiba T° Horiba .

Measure Well TD: 45.00 (-)Orig. DTW: 8.03 (=) Wtr. Col. Thick: 36.97 .
7.88 (Water level on 10/6/15)

2"=0.16
(x) 4"=0.65 Gals./ft. (=) 5.9 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 17.7 Total Purge Gals.
6"=1.47

GW elev. Ref. 830.87 ft.(-) DTW 7.88 ft. = 822.99 ft.

Purge/Sample Method: ☐ Pump (indicate type) _____.
☒ Bailer (indicate type) Poly/Disposable .

Decon. Method: Distilled Rinse
Purge Wtr. Containerized ? (N) Avg Purge Rate: _____gpm
Weather: Sunny (60's °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth to Wtr (ft)	Depth of Pump Intake (ft)	Temp (°C)	pH	Cond. (umhos) mS/cm	Turbidity (NTU)	Other	Comments
9:56		-			17.78	6.61	0.385	1.7		Clear
10:02		6			15.82	6.59	0.420	331		Cloudy
10:10		12			15.39	6.61	0.423	549		Murky
10:20		18			15.42	6.67	0.434	>1000		Muddy

Average Linear velocity $v = \frac{Ki}{n}$ Where

K= Hydraulic Conductivity (ft/min)
i = Gradient (ft/ft)
n = effective porosity

v=[K _____ ft/min. (x) GW elev. _____ ft. (-) GW elev. _____ ft] - _____
distance _____ ft
v= _____ ft./min. = _____ ft day

.18 Clay/Silt
. 20 Silt w/sand
.25 sand
.3 sand and gravel

Comments: Metals Sample Turbidity = 80.5 NTU's. VOC's taken on 10/7/15 @ 10:25 am. Metals taken on 10/7/15 @ 2:30 pm. Water level taken on 10/6/15.

*All Depths in Feet below Ref. Point on Wellhead Generally Top of Casing (TOC) DTW= Depth to Water

DATE: 10/6/15

FIELD SAMPLING LOG	WELL NO: MW-1A
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 10/6/15 (Time) 3:33	Purge End: (Date) 10/6/15 (Time) 3:51
Purged by: Robert Hudson	
Depth Measurement Ref. Point* 805.13 ft	Well Csg. ID: 2"

Equipment Used to Measure (Make, Model, etc)

DTW Solinst pH Horiba Cond. Horiba T° Horiba .

Measure Well TD: 38.00 (-)Orig. DTW: 14.08 (=) Wtr. Col. Thick: 23.92 .

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 3.8 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 11.4 Total Purge Gals.

GW elev. Ref. 805.13 ft.(-) DTW 14.08 ft. = 791.05 ft.

Purge/Sample Method: ☐ Pump (indicate type) _____.
☒ Bailer (indicate type) Poly/Disposable .

Decon. Method: Distilled Rinse
Purge Wtr. Containerized ? (N) Avg Purge Rate: _____gpm
Weather: Sunny (70's °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth to Wtr (ft)	Depth of Pump Intake (ft)	Temp (°C)	pH	Cond. (umhos) mS/cm	Turbidity (NTU)	Other	Comments
3:35		-			20.92	6.43	0.518	1.5		Clear
3:40		4			19.67	6.85	0.579	204		Cloudy
3:45		8			19.32	6.88	0.589	371		Murky
3:51		12			19.11	6.93	0.601	>1000		Muddy

Average Linear velocity $v = \frac{Ki}{n}$ Where

K= Hydraulic Conductivity (ft/min)
i = Gradient (ft/ft)
n = effective porosity

v=[K_____ft/min. (x) GW elev._____ft. (-) GW elev. _____ft] -_____ .18 Clay/Silt
distance_____ft . 20 Silt w/sand
.25 sand
.3 sand and gravel
v=_____ft./min. = _____ft day

Comments: Metals Sample Turbidity = 2.6 NTU's. VOC's taken on 10/6/15 @ 4:01 pm. Metals taken on 10/7/15 @ 2:15 pm. Allowed well to settle overnight.

*All Depths in Feet below Ref. Point on Wellhead Generally Top of Casing (TOC) DTW= Depth to Water

DATE: 10/6/15

FIELD SAMPLING LOG	WELL NO: MW-02
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 10/6/15 (Time) 2:00	Purge End: (Date) 10/6/15 (Time) 2:18
Purged by: Robert Hudson	
Depth Measurement Ref. Point* 825.20 ft	Well Csg. ID: 2"

Equipment Used to Measure (Make, Model, etc)

DTW Solinst pH Horiba Cond. Horiba T° Horiba .

Measure Well TD: 43.10 (-)Orig. DTW: 20.53 (=) Wtr. Col. Thick: 22.57 .

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 3.6 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 10.8 Total Purge Gals.

GW elev. Ref. 825.20 ft.(-) DTW 20.53 ft. = 804.67 ft.

Purge/Sample Method: ☐ Pump (indicate type) _____.
☒ Bailer (indicate type) Poly/Disposable .

Decon. Method: Distilled Rinse
Purge Wtr. Containerized ? (N) Avg Purge Rate: _____gpm
Weather: Sunny (80's °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth to Wtr (ft)	Depth of Pump Intake (ft)	Temp (°C)	pH	Cond. (umhos) mS/cm	Turbidity (NTU)	Other	Comments
2:01		-			21.22	5.09	0.194	7.1		Clear
2:07		4.0			18.53	4.92	0.055	55.2		Clear
2:14		7.5			18.03	5.05	0.050	626		Murky
2:18		9.0			17.89	5.09	0.049	>1000		Muddy, *purged dry

Average Linear velocity $v = \frac{Ki}{n}$ Where

*Purged dry at 9.0 gallons.

K= Hydraulic Conductivity (ft/min)
i = Gradient (ft/ft)
n = effective porosity

v=[K_____ft/min. (x) GW elev._____ft. (-) GW elev. _____ft] -_____
distance_____ft
v=_____ft./min. = _____ft day

.18 Clay/Silt
. 20 Silt w/sand
.25 sand
.3 sand and gravel

Comments: Metals Sample Turbidity = 18.3 NTU's. VOC's taken on 10/6/15 @ 2:30 pm. Metals taken on 10/7/15 @ 1:55 pm. Allowed well to settle overnight.

*All Depths in Feet below Ref. Point on Wellhead Generally Top of Casing (TOC) DTW= Depth to Water

DATE: 10/7/15

FIELD SAMPLING LOG	WELL NO: MW-03
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 10/7/15 (Time) 11:21	Purge End: (Date) 10/7/15 (Time) 11:35
Purged by: Robert Hudson	
Depth Measurement Ref. Point* 867.86 ft	Well Csg. ID: 2"

Equipment Used to Measure (Make, Model, etc)

DTW Solinst pH Horiba Cond. Horiba T° Horiba .

Measure Well TD: 41.60 (-)Orig. DTW: 17.42 (=) Wtr. Col. Thick: 24.18 .
17.71 (Water level on 10/6/15)

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 3.9 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 11.7 Total Purge Gals.

GW elev. Ref. 867.86 ft.(-) DTW 17.71 ft. = 850.15 ft.

Purge/Sample Method: ☐ Pump (indicate type) .
☒ Bailer (indicate type) Poly/Disposable .

Decon. Method: Distilled Rinse
Purge Wtr. Containerized ? (N) Avg Purge Rate: gpm
Weather: Sunny (70's °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth to Wtr (ft)	Depth of Pump Intake (ft)	Temp (°C)	pH	Cond. (umhos) mS/cm	Turbidity (NTU)	Other	Comments
11:22		-			17.47	4.99	0.064	7.4		Clear
11:28		4.0			16.57	4.96	0.065	126		Slightly cloudy
11:35		5.0			16.54	4.97	0.064	271		Cloudy, *purged dry

Average Linear velocity $v = \frac{Ki}{n}$ Where

*Purged dry at 5.0 gallons.

K= Hydraulic Conductivity (ft/min)
i = Gradient (ft/ft)
n = effective porosity

v=[K ft/min. (x) GW elev. ft. (-) GW elev. ft] - .18 Clay/Silt
distance ft .20 Silt w/sand
v= ft./min. = ft day .25 sand
.3 sand and gravel

Comments: Metals Sample Turbidity = 12.3 NTU's. VOC's taken on 10/7/15 @ 11:45 am. Metals taken on 10/7/15 @ 2:45 pm. Water level taken on 10/6/15. **Duplicate pulled here.

*All Depths in Feet below Ref. Point on Wellhead Generally Top of Casing (TOC) DTW= Depth to Water

APPENDIX B

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 04, 2015

Robert Hudson
Santek Environmental Inc.
650 25th Street NW, Suite 100
Cleveland TN 37311

TEL: (423) 476-9160
FAX: (423) 479-1952

RE: Matlock Bend LF 2nd Semi-Annual GW Event 2015

Dear Robert Hudson: Order No: 1510735

Analytical Environmental Services, Inc. received 5 samples on 10/8/2015 10:25:00 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 07/01/15-06/30/16.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

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.

CKanhai

Chantelle Kanhai
Project Manager

1510735

ANALYTICAL ENVIRONMENTAL SERVICES, INC

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

CHAIN OF CUSTODY

Work Order: ~~15106~~ MS 10/8/15

Date: [illegible] Page ___ of ___

COMPANY: Santek Waste Services, Inc.	ADDRESS: 650 25th Street NW, Suite 100, Cleveland TN 37311
PHONE: (423) 303-7101	FAX: (423) 479-1952
SAMPLED BY: R. Hudson	SIGNATURE: Robert T Hudson

ANALYSIS REQUESTED: Total Metals | TDS | [illegible] | [illegible] | App. I Metals | Dissolved Metals | App. I VOC | [illegible] | Ammonia | TOC | [illegible] | [illegible] | [illegible]

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

#	SAMPLE ID	DATE	TIME	Grab	Composite	Matrix (See codes)	1	2	3	4	5	6	7	8	9	10	11	12	13	REMARKS	No. of Containers
1	Trip Blank	[illegible]	[illegible]	X		[illegible]	X	X	X	X	X	X	X	X	X	X	X	–			[illegible]
2	MW-05	[illegible]	11:30	X		GW	X						X	X						5	8
3	↳	[illegible]	[illegible]	X		GW				X	X										[illegible]
4	MW-4R	[illegible]	[illegible]	X		GW	X						X	X							5
5	↳	[illegible]	[illegible]	X		GW				X	X										[illegible]
6	MW-02	[illegible]	2:20	X		GW	X	X				X	X	X	X	X	X	–			[illegible]
7	↳	10/7/15	1:55	X		GW			X	X	X										[illegible]
8	MW-14	10/8/15	4:01	X		GW	X	X				X	X	X	X	X					[illegible]
9	↳	10/7/15	2:15	X		GW	X	X	X	X	X										[illegible]
10								[illegible]	[illegible]												
11																					
12																					
13																					
14																					

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Robert T Hudson	[illegible]	1: COC via Fax	10/8/15
2:		2: [signature]	9:15
3:		3: received sample	10/8/15 10:25

PROJECT INFORMATION

PROJECT NAME: Matlock Bend LF 2nd Semi-annual

PROJECT #: [illegible]

SITE ADDRESS:

SEND REPORT TO: Robert Hudson

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: See Chantelle K. and Project History

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 SM+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Client:	Santek Environmental Inc.
Project:	Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab ID:	1510735

Case Narrative

A copy of the Chain of Custody (COC) was not received with the samples on 10/8/2015 at 10:25am. A copy was received via email on 10/8/2015 at 1:04pm.

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Soutelc. Work Order Number 1510735

Checklist completed by _____ 10/8/15
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? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.6° Cooler #2 3.4° 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 MG

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.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Analytical Environmental Services, Inc

Date: 4-Nov-15

Client: Santek Environmental Inc.
Project Name: Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab Order: 1510735

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1510735-001A	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510735-001B	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510735-001C	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Inorganic Anions by IC			10/08/2015
1510735-001C	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510735-001D	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Nitrogen, Ammonia (as N)		10/9/2015 1:00:00PM	10/09/2015
1510735-001D	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Chemical Oxygen Demand (COD)			10/12/2015
1510735-001D	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Total Organic Carbon by SM5310B			10/29/2015
1510735-001E	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510735-001F	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510735-001F	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510735-001F	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015
1510735-001G	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510735-002A	MW-02	10/6/2015 2:30:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510735-002B	MW-02	10/6/2015 2:30:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510735-002C	MW-02	10/6/2015 2:30:00PM	Groundwater	Inorganic Anions by IC			10/08/2015
1510735-002C	MW-02	10/6/2015 2:30:00PM	Groundwater	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510735-002D	MW-02	10/6/2015 2:30:00PM	Groundwater	Nitrogen, Ammonia (as N)		10/9/2015 1:00:00PM	10/09/2015
1510735-002D	MW-02	10/6/2015 2:30:00PM	Groundwater	Chemical Oxygen Demand (COD)			10/12/2015
1510735-002D	MW-02	10/6/2015 2:30:00PM	Groundwater	Total Organic Carbon by SM5310B			10/13/2015
1510735-002E	MW-02	10/6/2015 2:30:00PM	Groundwater	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510735-002F	MW-02	10/6/2015 2:30:00PM	Groundwater	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510735-003A	MW-02	10/7/2015 1:55:00PM	Groundwater	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510735-003A	MW-02	10/7/2015 1:55:00PM	Groundwater	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510735-003A	MW-02	10/7/2015 1:55:00PM	Groundwater	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015
1510735-004A	MW-1A	10/6/2015 4:01:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510735-004B	MW-1A	10/6/2015 4:01:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510735-004C	MW-1A	10/6/2015 4:01:00PM	Groundwater	Inorganic Anions by IC			10/08/2015
1510735-004C	MW-1A	10/6/2015 4:01:00PM	Groundwater	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510735-004D	MW-1A	10/6/2015 4:01:00PM	Groundwater	Nitrogen, Ammonia (as N)		10/9/2015 1:00:00PM	10/09/2015

Client: Santek Environmental Inc.
Project Name: Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab Order: 1510735

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1510735-004D	MW-1A	10/6/2015 4:01:00PM	Groundwater	Chemical Oxygen Demand (COD)			10/12/2015
1510735-004D	MW-1A	10/6/2015 4:01:00PM	Groundwater	Total Organic Carbon by SM5310B			10/13/2015
1510735-004E	MW-1A	10/6/2015 4:01:00PM	Groundwater	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510735-004F	MW-1A	10/6/2015 4:01:00PM	Groundwater	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510735-005A	MW-1A	10/7/2015 2:15:00PM	Groundwater	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510735-005A	MW-1A	10/7/2015 2:15:00PM	Groundwater	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510735-005A	MW-1A	10/7/2015 2:15:00PM	Groundwater	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 04, 2015

Robert Hudson
Santek Environmental Inc.
650 25th Street NW. Suite 100
Cleveland TN 37311

TEL: (423) 476-9160
FAX: (423) 479-1952

RE: Matlock Bend LF 2nd Semi-Annual GW Event 2015

Dear Robert Hudson: Order No: 1510676

Analytical Environmental Services, Inc. received 7 samples on 10/8/2015 10:35:00 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 07/01/15-06/30/16.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

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.

Chantelle Kanhai
Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

AES

3080 Presidential Drive, Atlanta GA 30340-3704

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: 1510676

Date: 10/7/15 Page 1 of 1

COMPANY: Santek Waste Services, Inc.

ADDRESS: 650 25th Street NW, Suite 100, Cleveland TN 37311

PHONE: (423) 303-7101

FAX: (423) 479-1952

SAMPLED BY: R. Hudson

SIGNATURE: Robert Hudson

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

ANALYSIS REQUESTED

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Inorganic Anions	TDS	Total Metals by ICP/MS	Total Mercury	App. I Metals	Dissolved Metals	App. I VOCs	Ammonia	TOC	COD	Cyanide	Micro-Extra VOCs	REMARKS	No # of Containers
1	Trip Blank	10/7/15	3:30	X		W	X	X	X	X	X	X	X	X	X	X	X	X		9
2	Duplicate	10/7/15		X		GW	X	X	X	X	X	X	X	X	X	X	X	X		9
3	MW-01	10/7/15	10:25	X		GW	X	X				X	X	X	X	X	X	X		8
4	↳	10/7/15	2:30	X		GW			X	X	X									1
5	MW-03	10/7/15	11:45	X		GW	X	X				X	X	X	X	X	X	X		8
6	↳	10/7/15	2:45	X		GW			X	X	X									1
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

PRESERVATION (See codes)

	RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1:	Robert Hudson	5pm 10/7/15	[signature]	10/8/15 10:20
2:				
3:				

PROJECT INFORMATION

PROJECT NAME: ~~London to~~ Matlock Bend LF 2nd Semi-

PROJECT #: Annual GW Event 2015

SITE ADDRESS:

SEND REPORT TO: Robert Hudson

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: See Chantelle K. and Project History

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.

~~Page 2 of 20~~

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: 4-Nov-15

Client:	Santek Environmental Inc.
Project:	Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab ID:	1510676

Case Narrative

Sample Receiving Nonconformance:

An extra set of Trip Blanks were provided but not listed on the Chain of Custody. Trip blank analyzed at no cost to the client.

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client SWWTEK Work Order Number 1510676

Checklist completed by Alana 10/8/2015
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? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.6°C Cooler #2 3.4°C 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 AD

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.

Analytical Environmental Services, Inc

Date: 4-Nov-15

Client: Santek Environmental Inc.
Project Name: Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab Order: 1510676

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1510676-001A	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510676-001B	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510676-001C	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	Inorganic Anions by IC			10/08/2015
1510676-001C	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510676-001D	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	Nitrogen, Ammonia (as N)		10/9/2015 10:40:00AM	10/12/2015
1510676-001D	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	Chemical Oxygen Demand (COD)			10/12/2015
1510676-001D	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	Total Organic Carbon by SM5310B			10/13/2015
1510676-001E	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510676-001F	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510676-001F	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510676-001F	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015
1510676-001G	TRIP BLANK	10/7/2015 3:30:00PM	Aqueous	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510676-002A	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510676-002B	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510676-002C	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	Inorganic Anions by IC			10/08/2015
1510676-002C	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510676-002D	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	Nitrogen, Ammonia (as N)		10/9/2015 10:40:00AM	10/12/2015
1510676-002D	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	Chemical Oxygen Demand (COD)			10/12/2015
1510676-002D	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	Total Organic Carbon by SM5310B			10/13/2015
1510676-002E	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510676-002F	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510676-002F	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510676-002F	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015
1510676-002G	DUPLICATE	10/7/2015 12:00:00AM	Groundwater	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510676-003A	MW-01	10/7/2015 10:25:00AM	Groundwater	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510676-003B	MW-01	10/7/2015 10:25:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510676-003C	MW-01	10/7/2015 10:25:00AM	Groundwater	Inorganic Anions by IC			10/08/2015
1510676-003C	MW-01	10/7/2015 10:25:00AM	Groundwater	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510676-003D	MW-01	10/7/2015 10:25:00AM	Groundwater	Nitrogen, Ammonia (as N)		10/9/2015 10:40:00AM	10/12/2015

Analytical Environmental Services, Inc

Date: 4-Nov-15

Client: Santek Environmental Inc.
Project Name: Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab Order: 1510676

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1510676-003D	MW-01	10/7/2015 10:25:00AM	Groundwater	Chemical Oxygen Demand (COD)			10/12/2015
1510676-003D	MW-01	10/7/2015 10:25:00AM	Groundwater	Total Organic Carbon by SM5310B			10/13/2015
1510676-003E	MW-01	10/7/2015 10:25:00AM	Groundwater	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510676-003F	MW-01	10/7/2015 10:25:00AM	Groundwater	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510676-004A	MW-01	10/7/2015 2:30:00PM	Groundwater	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510676-004A	MW-01	10/7/2015 2:30:00PM	Groundwater	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510676-004A	MW-01	10/7/2015 2:30:00PM	Groundwater	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015
1510676-005A	MW-03	10/7/2015 11:45:00AM	Groundwater	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510676-005B	MW-03	10/7/2015 11:45:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510676-005C	MW-03	10/7/2015 11:45:00AM	Groundwater	Inorganic Anions by IC			10/08/2015
1510676-005C	MW-03	10/7/2015 11:45:00AM	Groundwater	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510676-005D	MW-03	10/7/2015 11:45:00AM	Groundwater	Nitrogen, Ammonia (as N)		10/9/2015 10:40:00AM	10/12/2015
1510676-005D	MW-03	10/7/2015 11:45:00AM	Groundwater	Chemical Oxygen Demand (COD)			10/12/2015
1510676-005D	MW-03	10/7/2015 11:45:00AM	Groundwater	Total Organic Carbon by SM5310B			10/13/2015
1510676-005E	MW-03	10/7/2015 11:45:00AM	Groundwater	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510676-005F	MW-03	10/7/2015 11:45:00AM	Groundwater	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510676-006A	MW-03	10/7/2015 2:45:00PM	Groundwater	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510676-006A	MW-03	10/7/2015 2:45:00PM	Groundwater	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510676-006A	MW-03	10/7/2015 2:45:00PM	Groundwater	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015
1510676-007A	TRIP BLANK	10/8/2015 12:00:00AM	Aqueous	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-01
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 10:25:00 AM
Lab ID:	1510676-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	BRL	1.00		mg/L	R302042	1	10/13/2015 11:55	YS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	251	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214144	1	10/12/2015 11:44	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.200		ug/L	214231	1	10/12/2015 18:41	AW
1,2-Dibromoethane	BRL	0.050		ug/L	214231	1	10/12/2015 18:41	AW
Surr: 4-Bromofluorobenzene	107	64.7-140		%REC	214231	1	10/12/2015 18:41	AW
Inorganic Anions by IC E300.0								
Chloride	25.5	1.00		mg/L	R302070	1	10/08/2015 16:15	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 16:15	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 16:15	JW
Sulfate	5.43	1.00		mg/L	R302070	1	10/08/2015 16:15	JW
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	BRL	10.0		ug/L	214074	1	10/08/2015 20:35	TA
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	83.4	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 06:17	AR
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 06:17	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 06:17	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 06:17	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 06:17	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 06:17	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 06:17	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-01
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 10:25:00 AM
Lab ID:	1510676-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 06:17	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 06:17	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 06:17	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 06:17	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 06:17	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 06:17	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 06:17	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 06:17	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 06:17	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 06:17	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 06:17	AR
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 06:17	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 06:17	AR
Surr: 4-Bromofluorobenzene	96.3	70.6-123		%REC	214367	1	10/14/2015 06:17	AR
Surr: Dibromofluoromethane	96.4	78.7-124		%REC	214367	1	10/14/2015 06:17	AR
Surr: Toluene-d8	89.8	81.3-120		%REC	214367	1	10/14/2015 06:17	AR

Qualifiers:

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

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-01
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 2:30:00 PM
Lab ID:	1510676-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A					**(SW3005A)**			
Calcium	45700	100		ug/L	214184	1	10/13/2015 17:36	JS
Iron	106	100		ug/L	214184	1	10/13/2015 17:36	JS
Magnesium	26400	100		ug/L	214184	1	10/13/2015 17:36	JS
Potassium	2540	500		ug/L	214184	1	10/13/2015 17:36	JS
Sodium	10600	500		ug/L	214184	1	10/13/2015 17:36	JS
Mercury, Total SW7470A					**(SW7470A)**			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:09	CC
APPENDIX I METALS SW6020A					**(SW3005A)**			
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:36	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:36	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:36	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:36	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:36	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:36	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:36	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:36	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:36	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:36	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:36	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:36	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:36	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:36	JS
Zinc	BRL	0.0200		mg/L	214184	1	10/13/2015 17:36	JS

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-1A
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/6/2015 4:01:00 PM
Lab ID:	1510735-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	BRL	1.00		mg/L	R302042	1	10/13/2015 13:24	YS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	400	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214173	1	10/09/2015 13:30	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.201		ug/L	214231	1	10/12/2015 21:34	AW
1,2-Dibromoethane	BRL	0.050		ug/L	214231	1	10/12/2015 21:34	AW
Surr: 4-Bromofluorobenzene	110	64.7-140		%REC	214231	1	10/12/2015 21:34	AW
Inorganic Anions by IC E300.0								
Chloride	59.3	5.00		mg/L	R302070	5	10/08/2015 19:26	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 13:03	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 13:03	JW
Sulfate	26.1	1.00		mg/L	R302070	1	10/08/2015 13:03	JW
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	BRL	10.0		ug/L	214074	1	10/08/2015 21:25	TA
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	76.4	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 05:01	AR
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 05:01	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 05:01	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 05:01	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 05:01	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 05:01	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 05:01	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-1A
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/6/2015 4:01:00 PM
Lab ID:	1510735-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 05:01	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 05:01	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 05:01	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 05:01	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 05:01	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 05:01	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 05:01	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 05:01	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 05:01	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 05:01	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 05:01	AR
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 05:01	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 05:01	AR
Surr: 4-Bromofluorobenzene	94.2	70.6-123		%REC	214367	1	10/14/2015 05:01	AR
Surr: Dibromofluoromethane	96.6	78.7-124		%REC	214367	1	10/14/2015 05:01	AR
Surr: Toluene-d8	92.5	81.3-120		%REC	214367	1	10/14/2015 05:01	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-1A
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 2:15:00 PM
Lab ID:	1510735-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A					**(SW3005A)**			
Calcium	60600	100		ug/L	214184	1	10/13/2015 17:57	JS
Iron	BRL	100		ug/L	214184	1	10/13/2015 17:57	JS
Magnesium	24500	100		ug/L	214184	1	10/13/2015 17:57	JS
Potassium	8470	500		ug/L	214184	1	10/13/2015 17:57	JS
Sodium	27200	500		ug/L	214184	1	10/13/2015 17:57	JS
Mercury, Total SW7470A					**(SW7470A)**			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:17	CC
APPENDIX I METALS SW6020A					**(SW3005A)**			
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:57	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:57	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:57	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:57	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:57	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:57	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:57	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:57	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:57	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:57	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:57	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:57	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:57	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:57	JS
Zinc	BRL	0.0200		mg/L	214184	1	10/13/2015 17:57	JS

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-02
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/6/2015 2:30:00 PM
Lab ID:	1510735-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	BRL	1.00		mg/L	R302042	1	10/13/2015 13:04	YS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	62	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214173	1	10/09/2015 13:25	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.199		ug/L	214231	1	10/12/2015 21:05	AW
1,2-Dibromoethane	BRL	0.050		ug/L	214231	1	10/12/2015 21:05	AW
Surr: 4-Bromofluorobenzene	103	64.7-140		%REC	214231	1	10/12/2015 21:05	AW
Inorganic Anions by IC E300.0								
Chloride	2.77	1.00		mg/L	R302070	1	10/08/2015 12:49	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 12:49	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 12:49	JW
Sulfate	BRL	1.00		mg/L	R302070	1	10/08/2015 12:49	JW
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	96.6	10.0		ug/L	214074	1	10/08/2015 21:19	TA
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	28.1	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 03:45	AR
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 03:45	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 03:45	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 03:45	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 03:45	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 03:45	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 03:45	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR

Qualifiers:

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

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-02
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/6/2015 2:30:00 PM
Lab ID:	1510735-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				(SW5030B)				
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 03:45	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 03:45	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 03:45	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 03:45	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 03:45	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 03:45	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 03:45	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 03:45	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 03:45	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 03:45	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 03:45	AR
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 03:45	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 03:45	AR
Surr: 4-Bromofluorobenzene	95.5	70.6-123		%REC	214367	1	10/14/2015 03:45	AR
Surr: Dibromofluoromethane	94.6	78.7-124		%REC	214367	1	10/14/2015 03:45	AR
Surr: Toluene-d8	92.2	81.3-120		%REC	214367	1	10/14/2015 03:45	AR

Qualifiers:

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

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-02
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 1:55:00 PM
Lab ID:	1510735-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A					**(SW3005A)**			
Calcium	1540	100		ug/L	214184	1	10/13/2015 17:52	JS
Iron	414	100		ug/L	214184	1	10/13/2015 17:52	JS
Magnesium	1340	100		ug/L	214184	1	10/13/2015 17:52	JS
Potassium	2420	500		ug/L	214184	1	10/13/2015 17:52	JS
Sodium	2210	500		ug/L	214184	1	10/13/2015 17:52	JS
Mercury, Total SW7470A					**(SW7470A)**			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:15	CC
APPENDIX I METALS SW6020A					**(SW3005A)**			
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:52	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:52	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:52	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:52	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:52	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:52	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:52	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:52	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:52	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:52	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:52	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:52	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:52	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:52	JS
Zinc	0.318	0.0200		mg/L	214184	1	10/13/2015 17:52	JS

Qualifiers:

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

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 11:45:00 AM
Lab ID:	1510676-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	2.06	1.00		mg/L	R302042	1	10/13/2015 12:12	YS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	34	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214144	1	10/12/2015 11:47	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.196		ug/L	214231	1	10/12/2015 19:10	AW
1,2-Dibromoethane	BRL	0.049		ug/L	214231	1	10/12/2015 19:10	AW
Surr: 4-Bromofluorobenzene	98.7	64.7-140		%REC	214231	1	10/12/2015 19:10	AW
Inorganic Anions by IC E300.0								
Chloride	14.8	1.00		mg/L	R302070	1	10/08/2015 16:29	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 16:29	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 16:29	JW
Sulfate	1.77	1.00		mg/L	R302070	1	10/08/2015 16:29	JW
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	158	10.0		ug/L	214074	1	10/08/2015 20:41	TA
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	48.8	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 06:43	AR
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 06:43	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 06:43	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 06:43	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 11:45:00 AM
Lab ID:	1510676-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 06:43	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 06:43	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 06:43	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 06:43	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 06:43	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 06:43	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 06:43	AR
Surr: 4-Bromofluorobenzene	94.4	70.6-123		%REC	214367	1	10/14/2015 06:43	AR
Surr: Dibromofluoromethane	100	78.7-124		%REC	214367	1	10/14/2015 06:43	AR
Surr: Toluene-d8	95.6	81.3-120		%REC	214367	1	10/14/2015 06:43	AR

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- B Analyte detected in the associated method blank
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- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 2:45:00 PM
Lab ID:	1510676-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A					**(SW3005A)**			
Calcium	1220	100		ug/L	214184	1	10/13/2015 17:41	JS
Iron	BRL	100		ug/L	214184	1	10/13/2015 17:41	JS
Magnesium	692	100		ug/L	214184	1	10/13/2015 17:41	JS
Potassium	664	500		ug/L	214184	1	10/13/2015 17:41	JS
Sodium	10400	500		ug/L	214184	1	10/13/2015 17:41	JS
Mercury, Total SW7470A					**(SW7470A)**			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:11	CC
APPENDIX I METALS SW6020A					**(SW3005A)**			
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:41	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:41	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:41	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:41	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:41	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:41	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:41	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:41	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:41	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:41	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:41	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:41	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:41	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:41	JS
Zinc	BRL	0.0200		mg/L	214184	1	10/13/2015 17:41	JS

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015
Lab ID:	1510676-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	BRL	1.00		mg/L	R302042	1	10/13/2015 11:34	YS
Total Metals by ICP/MS SW6020A					**(SW3005A)**			
Calcium	1280	100		ug/L	214184	1	10/13/2015 17:31	JS
Iron	222	100		ug/L	214184	1	10/13/2015 17:31	JS
Magnesium	725	100		ug/L	214184	1	10/13/2015 17:31	JS
Potassium	730	500		ug/L	214184	1	10/13/2015 17:31	JS
Sodium	10500	500		ug/L	214184	1	10/13/2015 17:31	JS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	161	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1					**(E350.1)**			
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214144	1	10/12/2015 11:43	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011					**(SW8011)**			
1,2-Dibromo-3-chloropropane	BRL	0.200		ug/L	214231	1	10/12/2015 18:13	AW
1,2-Dibromoethane	BRL	0.050		ug/L	214231	1	10/12/2015 18:13	AW
Surr: 4-Bromofluorobenzene	110	64.7-140		%REC	214231	1	10/12/2015 18:13	AW
Mercury, Total SW7470A					**(SW7470A)**			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:08	CC
Inorganic Anions by IC E300.0								
Chloride	14.0	1.00		mg/L	R302070	1	10/08/2015 16:00	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 16:00	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 16:00	JW
Sulfate	1.61	1.00		mg/L	R302070	1	10/08/2015 16:00	JW
Dissolved Metals by ICP/MS SW6020A					**(SW3005A)**			
Manganese	161	10.0		ug/L	214074	1	10/08/2015 20:29	TA
Cyanide SW9014					**(SW9010C)**			
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	35.0	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B					**(SW5030B)**			
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 05:52	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015
Lab ID:	1510676-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 05:52	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 05:52	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 05:52	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 05:52	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 05:52	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 05:52	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 05:52	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 05:52	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015
Lab ID:	1510676-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 05:52	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 05:52	AR
Surr: 4-Bromofluorobenzene	93.1	70.6-123		%REC	214367	1	10/14/2015 05:52	AR
Surr: Dibromofluoromethane	96.4	78.7-124		%REC	214367	1	10/14/2015 05:52	AR
Surr: Toluene-d8	93.3	81.3-120		%REC	214367	1	10/14/2015 05:52	AR
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:31	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:31	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:31	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:31	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:31	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:31	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:31	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:31	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:31	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:31	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:31	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:31	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:31	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:31	JS
Zinc	0.0211	0.0200		mg/L	214184	1	10/13/2015 17:31	JS

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:30:00 PM
Lab ID:	1510676-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	BRL	1.00		mg/L	R302042	1	10/13/2015 11:15	YS
Total Metals by ICP/MS SW6020A					(SW3005A)			
Calcium	114	100		ug/L	214184	1	10/13/2015 17:21	JS
Iron	BRL	100		ug/L	214184	1	10/13/2015 17:21	JS
Magnesium	BRL	100		ug/L	214184	1	10/13/2015 17:21	JS
Potassium	BRL	500		ug/L	214184	1	10/13/2015 17:21	JS
Sodium	BRL	500		ug/L	214184	1	10/13/2015 17:21	JS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	11	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1					(E350.1)			
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214144	1	10/12/2015 11:42	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011					(SW8011)			
1,2-Dibromo-3-chloropropane	BRL	0.200		ug/L	214231	1	10/12/2015 17:44	AW
1,2-Dibromoethane	BRL	0.050		ug/L	214231	1	10/12/2015 17:44	AW
Surr: 4-Bromofluorobenzene	118	64.7-140		%REC	214231	1	10/12/2015 17:44	AW
Mercury, Total SW7470A					(SW7470A)			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:06	CC
Inorganic Anions by IC E300.0								
Chloride	BRL	1.00		mg/L	R302070	1	10/08/2015 15:45	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 15:45	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 15:45	JW
Sulfate	BRL	1.00		mg/L	R302070	1	10/08/2015 15:45	JW
Dissolved Metals by ICP/MS SW6020A					(SW3005A)			
Manganese	BRL	10.0		ug/L	214074	1	10/08/2015 20:23	TA
Cyanide SW9014					(SW9010C)			
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	23.4	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B					(SW5030B)			
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 05:27	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:30:00 PM
Lab ID:	1510676-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 05:27	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 05:27	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 05:27	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 05:27	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 05:27	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 05:27	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 05:27	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 05:27	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 05:27	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 05:27	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 05:27	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 05:27	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 05:27	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 05:27	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 05:27	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 05:27	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 05:27	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:30:00 PM
Lab ID:	1510676-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 05:27	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 05:27	AR
Surr: 4-Bromofluorobenzene	90.7	70.6-123		%REC	214367	1	10/14/2015 05:27	AR
Surr: Dibromofluoromethane	95.3	78.7-124		%REC	214367	1	10/14/2015 05:27	AR
Surr: Toluene-d8	93.2	81.3-120		%REC	214367	1	10/14/2015 05:27	AR
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:21	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:21	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:21	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:21	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:21	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:21	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:21	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:21	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:21	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:21	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:21	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:21	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:21	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:21	JS
Zinc	BRL	0.0200		mg/L	214184	1	10/13/2015 17:21	JS

Qualifiers:

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

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:45:00 PM
Lab ID:	1510735-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	BRL	1.00		mg/L	R303189	1	10/29/2015 11:33	YS
Total Metals by ICP/MS SW6020A				(SW3005A)				
Calcium	BRL	100		ug/L	214184	1	10/13/2015 17:47	JS
Iron	BRL	100		ug/L	214184	1	10/13/2015 17:47	JS
Magnesium	BRL	100		ug/L	214184	1	10/13/2015 17:47	JS
Potassium	BRL	500		ug/L	214184	1	10/13/2015 17:47	JS
Sodium	BRL	500		ug/L	214184	1	10/13/2015 17:47	JS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	29	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1				(E350.1)				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214173	1	10/09/2015 13:23	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				(SW8011)				
1,2-Dibromo-3-chloropropane	BRL	0.198		ug/L	214231	1	10/12/2015 20:36	AW
1,2-Dibromoethane	BRL	0.049		ug/L	214231	1	10/12/2015 20:36	AW
Surr: 4-Bromofluorobenzene	113	64.7-140		%REC	214231	1	10/12/2015 20:36	AW
Mercury, Total SW7470A				(SW7470A)				
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:13	CC
Inorganic Anions by IC E300.0								
Chloride	BRL	1.00		mg/L	R302070	1	10/08/2015 16:44	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 16:44	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 16:44	JW
Sulfate	BRL	1.00		mg/L	R302070	1	10/08/2015 16:44	JW
Dissolved Metals by ICP/MS SW6020A				(SW3005A)				
Manganese	BRL	10.0		ug/L	214074	1	10/08/2015 20:48	TA
Cyanide SW9014				(SW9010C)				
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	18.8	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B				(SW5030B)				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 03:19	AR

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: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:45:00 PM
Lab ID:	1510735-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 03:19	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 03:19	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 03:19	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 03:19	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 03:19	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 03:19	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 03:19	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 03:19	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR

Qualifiers:

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

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:45:00 PM
Lab ID:	1510735-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 03:19	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 03:19	AR
Surr: 4-Bromofluorobenzene	99.3	70.6-123		%REC	214367	1	10/14/2015 03:19	AR
Surr: Dibromofluoromethane	94.5	78.7-124		%REC	214367	1	10/14/2015 03:19	AR
Surr: Toluene-d8	91.2	81.3-120		%REC	214367	1	10/14/2015 03:19	AR
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:47	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:47	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:47	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:47	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:47	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:47	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:47	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:47	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:47	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:47	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:47	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:47	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:47	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:47	JS
Zinc	BRL	0.0200		mg/L	214184	1	10/13/2015 17:47	JS

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

APPENDIX C

LOUDON COUNTY
COMPLIANCE WELL
MONITORING WELL #01

INORGANIC	TN REGULATORY LIMITS	3-23-94	5-2-94	**7-13-94	10-13-94	12-1-94	3-2-95	10-30-95	4-12-96	11-2-96	3-21-97	9-20-97	05-19-98	10-29-98	3-16-99	9-15-99	03-23-00	09-05-00	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-23-04	9-22-04	4-11-05	9-29-05	3-28-06	9-15-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-2-09	10-2-09	4-7-10	10-5-10	1-5-11	10-5-11	3-15-12	10-3-12	3-28-13	9-25-13	3-25-14	9-24-14	4-1-15	10-7-15	MW-01 AVG	MW-03 AVG
Antimony	6	1	1	1	1	5.4	1	1	3	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	3.15	3.08
Arsenic	10	2	2	9.6	6.9	7.9	4	2	20	20	20	20	20	20	20	20	5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	37.48	38.48
Barium	2000	23	10	200	110	68	33	60	41	50	50	50	50	50	50	50	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	1397.60	1397.25
Beryllium	4	3	3	18	0.5	3	3	4	3	4	4	4	4	4	4	7	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.45	3.83
Cadmium	5	5	5	12	2.5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.24	5.02
Chromium	100	8.9	10	90	43	21	10	11	10	10	10	10	10	10	10	10	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	74.45	73.35
Cobalt	NA	10	10	78	32	10	10	10	10	10	10	10	10	10	10	10	28	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	12.18	14.16
Copper	NA	8.1	10	140	59	24	10	17	10	10	10	10	10	10	10	12	39	19.2	10	10	13.5	10.2	10.0	10.0	10.0	10.0	10.0	10.0	11.5	10.0	10.0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	15.07	21.16
Fluoride**	4	0.05	0.43	0.05	0.05	0.05	0.05	0.05	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	4	4	4	4	4	4	0.2	4.0	4.0	4.0	4.0	4.0	4.0	-	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.69	2.72
Lead	115	1	1	44	59	32	8	21	12	20	10	10	10	30	10	27	94	50	50	50	50	50	50	50	50	50	50	50	50	50	50	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	29.03	40.64
Mercury	2	0.3	*	2.4	0.69	0.44	0.2	0.5	0.2	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.87	1.59
Nickel	100	8.1	10	190	73	35	20	22	10	20	20	19	10	40	12.7	40	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	79.60	77.83
Selenium	50	2	2	2.5	2	2	2	2	20	20	20	20	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.51	10.50
Silver	$100	8	8	ND	8	8	8	8	5	5	5	5	5	5	5	5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	37.00	36.38
Thallium	2	1	1	2.8	1	1	1	1	2	4	2	2	2	2	2	2.33	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.94	2.09
Vanadium	NA	8.4	10	200	74	40	13	31	10	30	10	10	10	50	10	10	75	27.8	10	10	20.5	23.2	10	10	10	10	10	10	23.8	10.0	10.0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	19.72	13.73
Zinc	NA	110	42	1700	820	270	78	818	69	180	190	40	110	230	47.4	287	811	179	35.1	34.4	133	205	69.8	47.1	20	58.2	78.6	218.0	20.0	297.00	33.90	30.50	42.50	28.50	20	20	20.9	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	150.46	67.41

† = TREATMENT TECHNIQUE ACTION LEVEL
‡ = NATIONAL SECONDARY DRINKING WATER STANDARD
* PARAMETER NOT TESTED FOR
**RESAMPLE DATE
***ALL DATA IN UGL EXCEPT FLUORIDE (MGL)

ORGANIC	3-23-94	5-02-94	**7-13-94	10-13-94	12-1-94	3-02-95	10-30-95	4-12-96	11-2-96	3-21-97	9-20-97	05-19-98	10-29-98	3-16-99	9-15-99	03-23-00	9-6-00	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-23-04	9-22-04	4-11-05	9-29-05	3-28-06	9-15-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-2-09	10-1-09	4-6-10	10-5-10	1-4-11	10-4-11	3-14-12	10-2-12	3-27-13	9-24-13	3-24-14	9-23-14	3-31-15	10-7-15
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform, Tribromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane, Ethyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform, Trichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane, Chlorodibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane, DBCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Dichlorobenzene; 1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dichlorobenzene; 1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane; Ethylidene chloride, Ethylidene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane; Ethylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene; 1,1-Dichloroethene, Vinylidene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane; Propylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone; Methyl butyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl bromide; Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl chloride; Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene bromide; Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride; Dichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone; MEK; 2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl iodide; Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone, Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene; Tetrachloroethene, Perchloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane, Methylchloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene; Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane, CFC-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LOUDON COUNTY
COMPLIANCE WELL
MONITORING WELL #1A

INORGANIC	TN REGULATORY LIMITS	1-17-07	3-22-07	5-15-07	6-14-07	11-1-07	3-27-08	10-13-08	4-2-09	10-2-09	4-7-10	10-6-10	1-5-11	10-5-11	3-15-12	10-3-12	3-28-13	9-25-13	3-25-14	9-24-14	4-1-15	10-7-15	MW-1A AVG	MW-03 AVG
Antimony	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6.00	5.08
Arsenic	10	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50.00	38.48
Barium	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000.00	1397.25
Beryllium	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.00	3.83
Cadmium	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.00	5.02
Chromium	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.00	73.35
Cobalt	NA	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.00	14.16
Copper	NA	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.00	21.16
Fluoride***	4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.00	2.72
Lead	†15	50.0	50.0	50.0	50.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	21.67	40.94
Mercury	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00	1.59
Nickel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.00	77.83
Selenium	50	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.50
Silver	‡100	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50.00	36.38
Thallium	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00	2.09
Vanadium	NA	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.00	13.73
Zinc	NA	39.0	20.0	22.9	20.0	23.2	20.0	31.4	20.0	20.0	35.2	20.0	20.0	20.0	30.5	20.0	20.0	20.0	20.0	20.0	27.3	20.0	23.31	67.41

† = TREATMENT TECHNIQUE ACTION LEVEL
‡ = NATIONAL SECONDARY DRINKING WATER STANDARD
* PARAMETER NOT TESTED FOR
**RESAMPLE DATE
***ALL DATA IN UG/L EXCEPT FLUORIDE (MG/L)

ORGANIC	01-17-07	3-22-07	5-15-07	6-14-07	11-1-07	3-27-08	10-13-08	4-1-09	10-1-09	4-7-10	10-5-10	1-4-11	10-4-11	3-15-12	10-2-12	3-27-13	9-24-13	3-24-14	9-23-14	3-31-15	10-6-15
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform; Tribomomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane; Ethyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform; Trichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane; Chlorodibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Dichlorobenzene; 1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dichlorobenzene; 1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane; Ethylidene chloride; Ethylidene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane; Ethylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane; Propylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone; Methyl butyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl bromide; Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl chloride; Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene bromide; Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride; Dichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone; MEK; 2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl iodide; Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone; Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane; Methylchloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene; Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane; CFC-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LOUDON COUNTY
COMPLIANCE WELL
MONITORING WELL #92

ANDERSON	TN REGULATORY LIMITS	3-23-04	5-2-94	**7-13-94	10-18-94	12-1-94	3-2-95	10-30-95	4-12-96	11-2-96	3-21-97	8-20-97	05-19-98	10-29-98	3-15-99	9-15-99	01-23-03	9-6-00	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-28-04	9-22-04	4-11-05	9-29-05	3-28-06	9-15-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-2-09	10-2-09	4-7-10	10-5-10	1-6-11	10-5-11	3-15-12	10-3-12	3-26-13	9-25-13	3-25-14	9-24-14	4-1-15	10-7-15	MW-92 AVG	MW-93 AVG
Antimony	6	1	1	1	1	9	1	1	3	5	5	5	5	5	5	5	8	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5.23	5.06
Arsenic	10	2	2	4.4	7.6	4.6	23	2	20	20	20	20	50	20	20	20	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	39.42	38.48
Barium	2000	64	67	420	350	290	99	79	33	50	20	50	130	50	38.7	34	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	1412.65	1327.25
Beryllium	4	3	3	39	26	25	5	5	3	4	4	4	14	4	4	4	4	4	4	4	5.22	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	5.92	3.53
Cadmium	5	3.1	1.2	33	22	15	5	5	5	5	5	5	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6.05	5.02
Chromium	100	38	28	130	110	110	25	12	10	10	10	10	30	10	10	10	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	80.40	73.56
Cobalt	NA	13	13	69	64	46	10	10	10	10	10	10	30	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	13.31	14.16
Copper	NA	142	10	200	150	120	30	17	10	10	10	10	30	10	10	10	10	10	10	10	18.8	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	23.80	21.15
Fluoride**	4	0.09	0.28	0.05	0.05	0.05	0.05	0.05	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	4	4	4	4	4	4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.69	2.72
Lead	115	22	5.4	420	290	200	45	32	10	20	10	20	90	20	10	10	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	47.09	40.54
Mercury	2	0.2	*	1.6	2.5	0.2	0.2	0.2	0.2	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.68	1.59
Nickel	100	130	20	340	290	280	80	48	20	30	10	30	120	30	29.8	18	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	90.26	77.83
Selenium	50	2	2	2	2	2	2	2	10	20	20	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	22	10	10	10	10	10	10	10	10	10	10	10	10	10	10	13.50	13.50
Silver	1100	8	8	8	8	8	8	5	5	5	5	5	5	5	5	5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	39.58	36.38
Thallium	2	1	1	2.7	2.6	3.2	1	2	2	2	2	3	14	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.26	2.03
Vanadium	NA	14	14	250	200	180	48	24	10	20	10	10	70	10	10	10	10	10	10	10	11.5	24.2	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	29.54	13.73
Zinc	NA	553	143	8200	12000	9900	1780	1130	351	650	120	570	2430	260	322	235	453	197	169	151	570	639	224	258	140	284	208	583	221	297	254	280	299	238	223	262	262	251	68.2	243.0	256.0	264.0	243.0	267.0	271.0	290.0	271.0	273.0	318.0	1001.53	67.41

T = TREATMENT TECHNIQUE ACTION LEVEL
‡ = NATIONAL SECONDARY DRINKING WATER STANDARD
* PARAMETER NOT TESTED FOR
**RESAMPLE DATE
***ALL DATA IN UG/L EXCEPT FLUORIDE (MG/L)

ORGANIC	3-23-04	5-02-94	**7-13-94	10-18-94	12-1-94	3-02-95	10-30-95	4-12-96	11-2-96	3-21-97	8-20-97	05-19-98	10-29-98	3-15-99	9-15-99	01-23-03	9-6-00	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-28-04	9-22-04	4-11-05	9-29-05	3-28-06	9-15-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-2-09	10-2-09	4-7-10	10-5-10	1-6-11	10-5-11	3-15-12	10-3-12	3-26-13	9-25-13	3-25-14	9-24-14	4-1-15	10-6-15
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform; Tribromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane; Ethyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform; Trichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane; Chlorodibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane, DBCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Dichlorobenzene; 1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dichlorobenzene; 1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane; Ethylidene chloride; Ethylidene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane; Ethylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane; Propylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone; Methyl butyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl bromide; Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl chloride; Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene bromide; Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride; Dichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone; MEK; 2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl iodide; Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone; Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane; Methylchloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene; Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane; CFC-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LOUDON COUNTY
(UPGRADIENT) BACKGROUND WELL
MONITORING WELL #3

INORGANIC	IN REGULATORY LIMITS	3-23-94	5-2-94	**7-13-94	10-18-94	12-1-94	3-2-95	10-30-95	5-12-96	11-2-96	3-21-97	9-22-97	05-19-98	10-29-98	3-16-99	9-16-99	03-23-00	9-6-00	2-18-01	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-28-04	9-22-04	4-11-05	9-29-05	3-27-06	10-24-06	3-22-07	11-1-07	3-27-08	10-13-08	4-1-09	10-28-09	4-7-10	10-6-10	1-5-11	10-5-11	3-15-12	10-3-12	3-28-13	9-25-13	3-25-14	9-24-14	4-1-15	10-7-15	MW#3 AVG
Antimony	6	1	1	1	1	1	1	1	1	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5.08
Arsenic	10	3.2	2	8.8	7.8	3.2	10	2	20	20	20	20	20	20	20	20	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	33.43
Barium	2000	160	10	300	100	50	63	57	63	60	50	50	60	50	33.1	33	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	1397.25
Beryllium	4	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	3.83
Cadmium	5	4.4	5	6.6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.02
Chromium	100	27	10	42	32	10	10	10	10	10	10	10	10	10	10	10	100	100	100	100	100	150	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	73.25
Cobalt	NA	24	10	69	39	10	10	10	13	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	53.5	13.0	26.0	10.0	48.4	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	14.15
Copper	NA	43	10	150	150	28	10	10	25	10	10	10	10	10	10	10	10	10	10	10	10	13.6	18.0	10	26.4	13.0	21.5	10.0	43.8	50.0	50.0	10.0	17.0	13.0	10	10	10	10	10	10	10	10	10	10	10	10	10	21.16
Fluoride**	4	0.05	0.22	0.05	0.05	0.05	0.05	0.05	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	4	4	4	4	4	4	4	0.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	2.72
Lead	115	45	8.7	350	97	32	25	17	34	20	10	10	10	10	43	10	10	50	50	50	50	50	50	50	135	50	254	50.0	111.0	50.0	50.0	50.0	15.0	15.0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	40.94
Mercury	2	0.2	*	0.88	0.2	0.2	0.4	0.2	0.2	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.59
Nickel	100	33	10	100	57	23	20	12	20	19	10	10	10	20	50	11	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	77.83
Selenium	50	2	2	2	2	2	2	2	20	20	20	20	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.50
Silver	1100	8	8	8	8	8	8	8	5	5	5	5	5	5	5	5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	38.38
Thallium	2	1	1	2.4	1	1	1	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.09
Vanadium	NA	25	10	79	40	15	10	10	16	10	10	10	10	20	20	10	10	10	10	13.3	10	10	10	13	14.6	10	15.6	10.0	19.3	10.0	24.1	10.0	10.0	10.0	10.0	10.0	10	10	10	10	10	10	10	10	10	10	10	10	13.73
Zinc	NA	170	33	420	260	95	50	164	114	70	50	50	190	190	214	54	36	99.1	20	27.1	47.6	98.5	131	45.8	58.0	25.6	71.3	33.6	155.0	28.6	25.9	47.9	42.9	20.0	20.1	20.0	20.0	25.8	20.0	21.2	20.0	20.0	20.0	20.0	20.0	20.0	20.0	57.41

† = TREATMENT TECHNIQUE ACTION LEVEL
‡ = NATIONAL SECONDARY DRINKING WATER STANDARD
* PARAMETER NOT TESTED FOR
**RESAMPLE DATE
***ALL DATA IN UG/L EXCEPT FLUORIDE (MG/L)

ORGANIC	3-23-94	5-02-94	**7-13-94	10-18-94	12-1-94	3-02-95	10-30-95	5-12-96	11-2-96	3-21-97	9-22-97	05-19-98	10-29-98	3-16-99	9-16-99	03-23-00	9-6-00	2-18-01	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-28-04	9-22-04	4-11-05	9-29-05	3-27-06	10-24-06	3-22-07	11-1-07	3-27-08	10-13-08	4-1-09	10-28-09	4-7-10	10-6-10	1-5-11	10-5-11	3-15-12	10-3-12	3-28-13	9-25-13	3-25-14	9-24-14	4-1-15	10-7-15
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform, Tribromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane; Ethyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform; Trichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane; Chloradibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Dichlorobenzene; 1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dichlorobenzene; 1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane; Ethylidene chloride; Ethylidene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane; Ethylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	10	10	2	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane; Propylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone; Methyl butyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl bromide; Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl chloride; Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene bromide; Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride; Dichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone; MEK; 2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl iodide; Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone; Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane; Methylchloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene; Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane; CFC-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

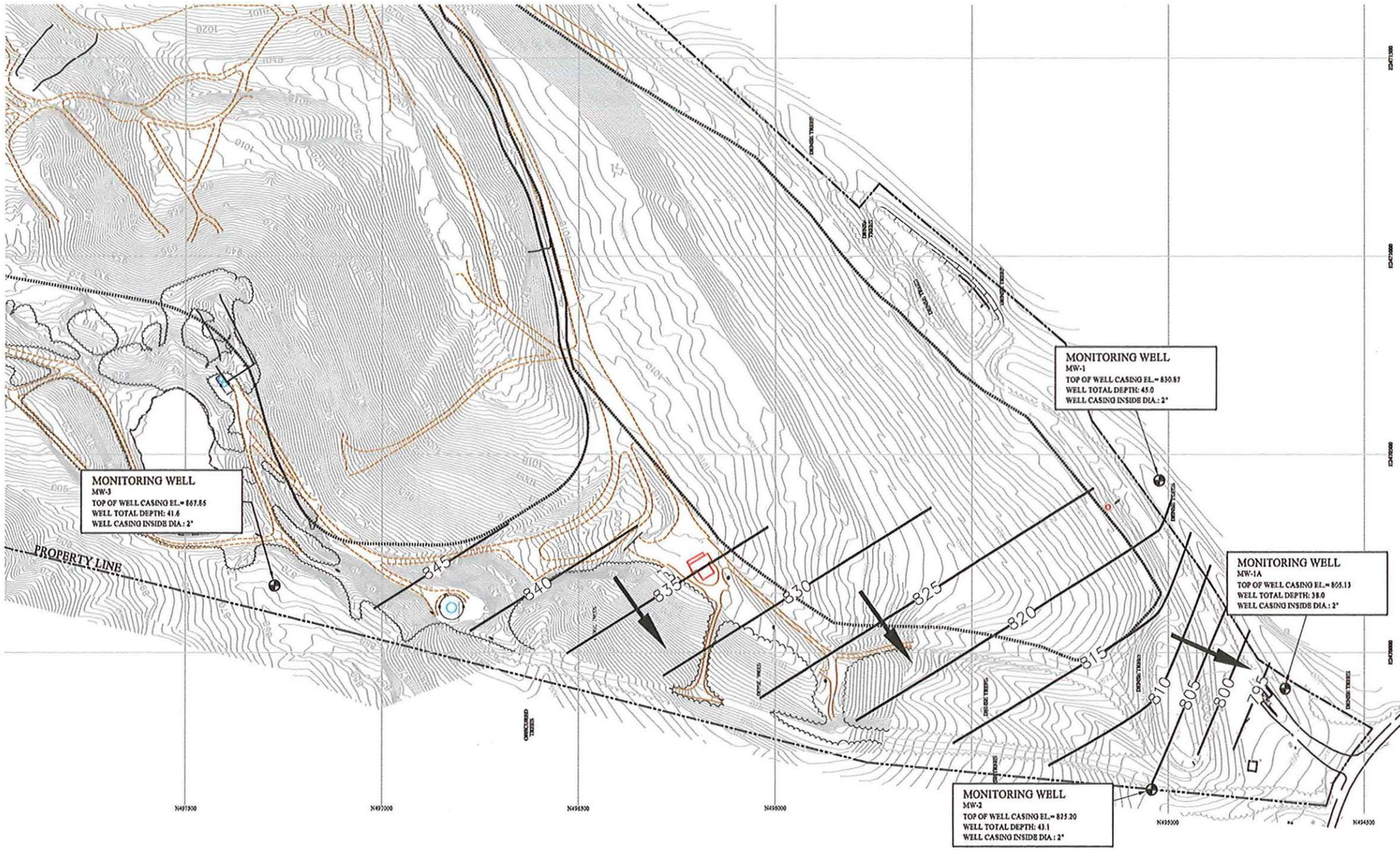
APPENDIX D

GROUNDWATER DATA
Matlock Bend Landfill (Phase I)
October 6, 2015

Well No.	Elev. Of TOC	Depth to GW (ft below TOC)	Water Elevation	Contour Elevation	Distance	Hydraulic Conductivity	Effective Porosity (n)	Hydraulic Gradient	Average Linear Velocity		Directions
									ft/min	ft/day	
MW-01	830.87	7.88	822.99	820	40	4.70E-06	0.18	7.48E-02	1.95E-06	2.81E-03	SW
MW-1A*	805.13	14.08	791.05	795	60	3.93E-06	0.18	6.58E-02	1.44E-06	2.07E-03	SW
MW-02	825.20	20.53	804.67	805	5	5.90E-06	0.18	6.60E-02	2.16E-06	3.12E-03	SW
MW-03	867.86	17.71	850.15	845	180	1.20E-05	0.18	2.86E-02	1.91E-06	2.75E-03	SW

*-The hydraulic conductivity for MW-1A is an average from monitoring wells MW-01, MW-02 and MW-03.

APPENDIX E



LEGEND:

- PROPERTY BOUNDARY
- 830 WATER TABLE CONTOURS (INFERRED)
- AERIAL CONTOUR
- ROAD
- WASTE MANAGEMENT UNIT BOUNDARY
- GROUNDWATER MONITORING WELL
- GROUNDWATER FLOW DIRECTION

NOTES:

1. POTENTIOMETRIC CONTOURS DEVELOPED FROM WATER ELEVATIONS TAKEN OCTOBER 6, 2015.
2. TOPOGRAPHIC CONTOURS SHOWN WERE PROVIDED BY SOUTHERN RESOURCES MAPPING CORP., NORTHPORT, ALABAMA. PHOTO DATED AUGUST 25, 2015.

GW.WELL NO.	WATER ELEV.
MW-1	822.99
MW-1A	791.05
MW-2	804.67
MW-3	850.15

R.O.N. VAIL
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00109716
STATE OF TENNESSEE
12/2/15

0' 150' 300' 450'

DATE	DRWN	CHCD	REVISION

2015 SEMI-ANNUAL (FALL) GROUNDWATER POTENTIOMETRIC CONTOUR MAP

MATLOCK BEND LANDFILL-PHASE I
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=300	
DATE: 10/30/15	
DRAWN BY: RH	
CHECKED BY: RH	
APPROVED BY: RV	
FILE: 1510-F1	
JOB NO 200-1510	

F-1
sheet number

G:\MGR\LOUDON\Rpt-Maps\1510-F1.dwg, 10/30/2015 8:36:30 AM, HP Designjet 4500 Printer (Copy 2)

MATLOCK BEND LANDFILL

PHASE II/IV

SANTEK
WasteServices
650 25th Street, N.W., Suite 100
Cleveland, Tennessee 37311
(423) 303-7101
Email: mail@santekenviro.com
Internet: www.santekenviro.com

December 2, 2015

Mr. Ryan Miller
Tennessee Department of Environment and Conservation
Division of Solid Waste Management
3711 Middlebrook Pike
Knoxville, TN 37921-5602

RE: Groundwater Monitoring Report – 2nd Semi-Annual Event
Matlock Bend Landfill – Phase II/IV Upgrade
SNL #53-103-0203

Dear Mr. Miller:

Please find enclosed a copy of the groundwater monitoring report generated from the second semi-annual groundwater event of 2015 at the Matlock Bend Landfill – Phase II/IV. This package includes data pertaining to site information, geologic summary, groundwater sampling, analytical laboratory reports, statistical analysis, and groundwater elevations and flow.

If you have any questions and/or comments, please feel free to call at (423) 303-7101.

Sincerely,

Robert Hudson
Environmental Compliance Coordinator

Ron E. Vail, P.E.
V.P. of Engineering
TN. Registration No. 109716

Enclosures

cc: Steve Field, Loudon County Solid Waste Department Chairman
Matt Dillard, Executive V.P. of Operations, Santek
Raymond Givens, Landfill Manager, Santek

MATLOCK BEND LANDFILL – PHASE II/IV UPGRADE
GROUNDWATER MONITORING REPORT
2nd SEMI-ANNUAL EVENT 2015

SANTEK PROJECT NO. 200-1510.4

PREPARED BY:
SANTEK WASTE SERVICES, INC.
650 25TH STREET NW, SUITE 100
CLEVELAND, TN 37311

DECEMBER 2015

1.0 INTRODUCTION

In accordance with the Tennessee Department of Environment and Conservation's Solid Waste Processing and Disposal Rule 0400-11-01-.04(7), Santek Waste Services, Inc. (Santek) is submitting the groundwater monitoring report for the second semi-annual event for 2015 at the Matlock Bend Landfill - Phase II/IV Upgrade. The sampling and analytical were performed in accordance with the Tennessee Department of Environment and Conservation's Solid Waste Processing and Disposal Rules as well as the site's approved groundwater monitoring plan dated December 1996. The groundwater monitoring plan is incorporated in the landfill's Operations Plan. The site's groundwater monitoring network consists of MW-03, MW-4R and MW-05. According to the letter from TDEC dated December 11, 2008, Santek replaced MW-04 with MW-4R in the groundwater detection monitoring network. MW-04 is no longer being monitored. Historic results for MW-04 were taken between 11/2/96 through 3/27/08 and are included in the MW-4R control chart. Santek performed sampling and statistical analyses. Santek contracted with Analytical Environmental Services, Inc. (AES) to perform all analytical testing.

1.1 SITE INFORMATION

Phase II/IV Upgrade is located along the northwest border of Phase I as a portion of the Matlock Bend Landfill. The area is approximately five miles west of Loudon, TN, on Tennessee Highway 72, at latitude N 35° 44' 48" and longitude W 84° 24' 43".

2.0 SAMPLING AND ANALYTICAL

The groundwater sampling event was performed on October 6 & 7, 2015. Samples were analyzed for Appendix I constituents. All samples were submitted to AES for analysis. A duplicate sample was obtained from MW-03. Field sampling logs are provided in Appendix A. Analytical results are provided in Appendix B.

3.0 STATISTICAL ANALYSIS

3.1 Statistical Analysis Method

Santek is submitting a control chart approach to satisfy the statistical analysis requirement. Well #4R is the upgradient (background) well. Wells #03 and #05 are the downgradient (compliance) wells. The Appendix I analytical results for this sampling event are used to compare the compliance wells to the background well concentrations for each constituent elevated above detection limit. Parameters not detected above the reporting limits are not included in the control chart comparison. Parameters detected above the reporting limits are compared to the average background concentration. The mean (average) for each well is determined by using the actual analytical value if it exceeds the detection limit, or by using the method detection limit (MDL) if the result was a nondetect. If the average background concentration is greater than the results for the compliance wells, then no significant increase is indicated. If the average background concentration is less than

the results for the compliance well, then the Tennessee (TN) Regulatory Limits of the Tennessee Solid Waste regulations are used for additional comparison to indicate potentially elevated concentrations. Control charts are provided in Appendix C.

3.2 Statistical Analysis Summary

MW-03
There were no inorganic or organic constituents detected above the report limits during this event.

MW-4R
MW-4R is the upgradient (background) well.

MW-05
The control chart for MW-05 indicates zinc* is above the report limit. However, the result of this constituent does not exceed the background well's average which establishes the groundwater protection standards at this well.

4.0 FLOW DIRECTION AND RATES

Geological Summary:
Geologic information for Phase II/IV is based on a Hydrogeologic Investigation Report prepared by Theta Engineering, Inc. dated January 11, 1996. Phase II/IV is located in the Valley and Ridge physiographic region consisting commonly of northeast/southwest trending valleys and ridges. This area consists of discontinuous, highly dissected upland with elevations ranging from approximately 865 feet to 1,020 feet. Bedrock formations include the Copper Ridge Dolomite Formation and the Longview Dolomite Formation, both of which belong to the Knox Group. The area is dominantly covered by silty-clayey soil originating from the Fullerton, Clarksville, and Nolichucky Series.

Groundwater flow direction of Phase II/IV locally flows towards the northwest and will ultimately flow to the Tennessee River. The groundwater flow rate ranges from 2.88×10^{-3} ft/day at MW-03 to 7.61×10^{-3} ft/day at MW-05. Groundwater flow rate and direction have been determined for each well and are included in Appendix D. A groundwater potentiometric contour map is included in Appendix E.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The groundwater monitoring network at this site is adequately monitoring the uppermost aquifer and no changes are recommended at this time.

**Indicates TN Regulatory limit is not available.*

APPENDIX A

DATE: 10/7/15

FIELD SAMPLING LOG	WELL NO: MW-03
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 10/7/15 (Time) 11:21	Purge End: (Date) 10/7/15 (Time) 11:35
Purged by: Robert Hudson	
Depth Measurement Ref. Point* 867.86 ft	Well Csg. ID: 2"

Equipment Used to Measure (Make, Model, etc)

DTW Solinst pH Horiba Cond. Horiba T° Horiba .

Measure Well TD: 41.60 (-)Orig. DTW: 17.42 (=) Wtr. Col. Thick: 24.18 .
17.71 (Water level on 10/6/15)

2"=0.16
(x) 4"=0.65 Gals./ft. (=) 3.9 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 11.7 Total Purge Gals.
6"=1.47

GW elev. Ref. 867.86 ft.(-) DTW 17.71 ft. = 850.15 ft.

Purge/Sample Method: ☐ Pump (indicate type) _____.
☒ Bailer (indicate type) Poly/Disposable .

Decon. Method: Distilled Rinse
Purge Wtr. Containerized ? (N) Avg Purge Rate: _____gpm
Weather: Sunny (70's °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth to Wtr (ft)	Depth of Pump Intake (ft)	Temp (°C)	pH	Cond. (umhos) mS/cm	Turbidity (NTU)	Other	Comments
11:22		-			17.47	4.99	0.064	7.4		Clear
11:28		4.0			16.57	4.96	0.065	126		Slightly cloudy
11:35		5.0			16.54	4.97	0.064	271		Cloudy, *purged dry

Average Linear velocity $v = \frac{Ki}{n}$ Where

*Purged dry at 5.0 gallons.

K= Hydraulic Conductivity (ft/min)
i = Gradient (ft/ft)
n = effective porosity

v=[K_____ft/min. (x) GW elev._____ft. (-) GW elev. _____ft] -_____
distance_____ft

v=_____ft./min. = _____ft day

.18 Clay/Silt
.20 Silt w/sand
.25 sand
.3 sand and gravel

Comments: Metals Sample Turbidity = 12.3 NTU's. VOC's taken on 10/7/15 @ 11:45 am. Metals taken on 10/7/15 @ 2:45 pm. Water level taken on 10/6/15. **Duplicate pulled here.

*All Depths in Feet below Ref. Point on Wellhead Generally Top of Casing (TOC) DTW= Depth to Water

DATE: 10/6/15

FIELD SAMPLING LOG	WELL NO: MW-4R
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 10/6/15 (Time) 12:00	Purge End: (Date) 10/6/15 (Time) 12:08
Purged by: Robert Hudson	
Depth Measurement Ref. Point* 992.32 ft	Well Csg. ID: 2"

Equipment Used to Measure (Make, Model, etc)

DTW Solinst pH Horiba Cond. Horiba T° Horiba .

Measure Well TD: 106.50 (-)Orig. DTW: 102.02 (=) Wtr. Col. Thick: 4.48 .

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 0.7 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 2.1 Total Purge Gals.

GW elev. Ref. 992.32 ft.(-) DTW 102.02 ft. = 890.30 ft.

Purge/Sample Method: ☐ Pump (indicate type) _____.
☒ Bailer (indicate type) Poly/Disposable .

Decon. Method: Distilled Rinse
Purge Wtr. Containerized ? (N) Avg Purge Rate: _____gpm
Weather: Sunny (70's °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth to Wtr (ft)	Depth of Pump Intake (ft)	Temp (°C)	pH	Cond. (umhos) mS/cm	Turbidity (NTU)	Other	Comments
12:01		-			18.50	6.94	0.221	18.1		Clear
12:05		0.8			17.68	6.99	0.217	>1000		Muddy
12:08		1.3			17.34	6.97	0.215	>1000		Muddy, *purged dry

Average Linear velocity $v = \frac{Ki}{n}$ Where

Purged dry at 1.3 gallons

K= Hydraulic Conductivity (ft/min)
i = Gradient (ft/ft)
n = effective porosity

v=[K_____ft/min. (x) GW elev._____ft. (-) GW elev. _____ft] -_____ distance_____ft

v=_____ft./min. = _____ft day

.18 Clay/Silt
.20 Silt w/sand
.25 sand
.3 sand and gravel

Comments: Metals Sample Turbidity = 120 NTU's. VOC's taken on 10/6/15 @ 12:14 pm. Metals taken on 10/7/15 @ 12:10 pm. Allowed well to settle overnight.

*All Depths in Feet below Ref. Point on Wellhead Generally Top of Casing (TOC) DTW= Depth to Water

DATE: 10/6/15

FIELD SAMPLING LOG	WELL NO: MW-05
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:

Purge Start: (Date) 10/6/15 (Time) 10:13 Purge End: (Date) 10/6/15 (Time) 11:21

Purged by: Robert Hudson

Depth Measurement Ref. Point* 936.84 ft Well Csg. ID: 2"

Equipment Used to Measure (Make, Model, etc)

DTW Solinst pH Horiba Cond. Horiba T° Horiba .

Measure Well TD: 172.71 (-)Orig. DTW: 100.95 (=) Wtr. Col. Thick: 71.76 .

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 11.5 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 34.5 Total Purge Gals.

GW elev. Ref. 936.84 ft.(-) DTW 100.95 ft. = 835.89 ft.

Purge/Sample Method: ☐ Pump (indicate type) _____.
☒ Bailer (indicate type) Poly/Disposable .

Decon. Method: Distilled Rinse
Purge Wtr. Containerized ? (N) Avg Purge Rate: _____gpm
Weather: Sunny (60's °F)

Actual Time	Elapsed Time	Vol. Purged (Gals)	Depth to Wtr (ft)	Depth of Pump Intake (ft)	Temp (°C)	pH	Cond. (umhos) mS/cm	Turbidity (NTU)	Other	Comments
10:14		-			17.13	7.72	0.209	19.4		Clear
10:36		11.5			16.93	7.87	0.208	229		Cloudy
10:58		23.0			16.90	7.84	0.206	541		Murky
11:21		34.5			17.10	7.89	0.205	360		Very cloudy

Average Linear velocity $v = \frac{Ki}{n}$ Where

K= Hydraulic Conductivity (ft/min)
i = Gradient (ft/ft)
n = effective porosity

v=[K_____ft/min. (x) GW elev._____ft. (-) GW elev. _____ft] - _____ .18 Clay/Silt
distance_____ft .20 Silt w/sand
.25 sand
.3 sand and gravel
v=_____ft./min. = _____ft day

Comments: Metals Sample Turbidity = 35.0 NTU's. VOC's taken on 10/6/15 @ 11:30 am. Metals taken on 10/7/15 @ 10:50 am. Allowed well to settle overnight.

*All Depths in Feet below Ref. Point on Wellhead Generally Top of Casing (TOC) DTW= Depth to Water

APPENDIX B

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 21, 2015

Will Martin
Santek Environmental Inc.
650 25th Street NW, Suite 100
Cleveland TN 37311

TEL: (423) 476-9160
FAX: (423) 479-1952

RE: Matlock Bend LF 2nd Semi-Annual GW Event 2015

Dear Will Martin: Order No: 1510737

Analytical Environmental Services, Inc. received 5 samples on 10/8/2015 10:25:00 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 07/01/15-06/30/16.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

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.

CKanhai

Chantelle Kanhai
Project Manager

1510737 MS 10/8/15 ~~1510755~~

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: ~~1510~~6 MS 10/8/15

Page ____ of ____

COMPANY: [illegible]

ADDRESS: [illegible]

PHONE: (4[illegible]) 3[illegible]-7101

FAX: [illegible]

SAMPLED BY: [illegible]

SIGNATURE: [illegible]

ANALYSIS REQUESTED

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	1	2	3	4	5	6	7	8	9	10	REMARKS	# of Containers
1	[illegible] Blank	[illegible]	[illegible]	X		[illegible]	X	X	X	X	X	X	X	X	X	X		[illegible]
2	MW-05	[illegible]	11:30	X		[illegible]	X						X	X				[illegible]
3	↳	[illegible]	[illegible]	X		[illegible]				X	X							
4	MW-4R	[illegible]	[illegible]	X		[illegible]	X						X	X				[illegible]
5	↳	[illegible]	[illegible]	X		GW				X	X							
6	MW-02	[illegible]	[illegible]	X		[illegible]	X	X				X	X	X	X	X		[illegible]
7	↳	[illegible]	1:55	X		[illegible]			X	X	X							
8	MW-1A	[illegible]	[illegible]	X		[illegible]	X	X				X	X	X	X	X		[illegible]
9	↳	[illegible]	[illegible]	X		[illegible]	X	X	X	X	X							
10																		
11																		
12																		
13																		
14																		

PRESERVATION (See codes)

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: [illegible]		1: COC via fax	10/8/15
2:		2: [signature]	.015
3:		3: received sample	10/8/15 10:25

PROJECT INFORMATION

PROJECT NAME: [illegible]

PROJECT #: [illegible]

SITE ADDRESS:

SEND REPORT TO: [illegible]

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: [illegible]

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:	Santek Environmental Inc.
Project:	Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab ID:	1510737

Case Narrative

A copy of the Chain of Custody (COC) was not received with the samples 10/8/2015 10:25am. A copy was received via email on 10/8/2015 at 1:04PM.

Sample Receiving Nonconformance:

A Trip Blank was provided but not listed on the Chain of Custody. Trip blank analyzed at no cost to the client.

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Savtek Work Order Number 1510737

Checklist completed by _____ 10/8/15
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? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.4° 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 MS

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.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

November 04, 2015

Robert Hudson
Santek Environmental Inc.
650 25th Street NW, Suite 100
Cleveland TN 37311

TEL: (423) 476-9160
FAX: (423) 479-1952

RE: Matlock Bend LF 2nd Semi-Annual GW Event 2015

Dear Robert Hudson: Order No: 1510735

Analytical Environmental Services, Inc. received 5 samples on 10/8/2015 10:25:00 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 07/01/15-06/30/16.
-AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Inorganics), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

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.

CKKanhai

Chantelle Kanhai
Project Manager

1510735

ANALYTICAL ENVIRONMENTAL SERVICES, INC

AES

3080 Presidential Drive, Atlanta GA 30340-3704

TEL.: (770) 457-8177 / TOLL-FREE (800) 972-4889 / FAX: (770) 457-8188

CHAIN OF CUSTODY

Work Order: ~~15106~~ MS 10/8/15

Date: [illegible] Page ___ of ___

COMPANY: Santek Waste Services, Inc.

ADDRESS: 650 25th Street NW, Suite 100, Cleveland TN 37311

PHONE: (423) 303-7101

FAX: (423) 479-1952

SAMPLED BY: R. Hudson

SIGNATURE: Robert T Hudson

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

ANALYSIS REQUESTED / PRESERVATION (See codes)

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	ANALYSIS REQUESTED	REMARKS	No. of Containers
1	Field Blank	[illegible]	9:15	X		GW	X X X X X X X X X X X X		[illegible]
2	MW-05	10/8/15	11:30	X		GW	X X X	5	[illegible]
3	↳	10/7/15	12:50	X		GW	X X		[illegible]
4	MW-4R	10/8/15	12:14	X		GW	X X X		[illegible]
5	↳	10/7/15	[illegible]	X		GW	X X		[illegible]
6	MW-02	10/8/15	2:20	X		GW	X X X X X X X X X		[illegible]
7	↳	10/7/15	1:55	X		GW	X X X		[illegible]
8	MW-14	10/8/15	4:01	X		GW	X X X X X X X X		[illegible]
9	↳	10/7/15	2:15	X		GW	X X X X X		[illegible]
10									
11									
12									
13									
14									

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Robert T Hudson	[illegible]	1: COC via FedEx	10/8/15
2:		2: [signature]	915
3:		3: received sample	10/8/15 10:25

PROJECT INFORMATION

PROJECT NAME: Matlock Bend LF 2nd Semi-annual

PROJECT #: [illegible]

SITE ADDRESS:

SEND REPORT TO: Robert T Hudson

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: See Chantelle Keaney Project History

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:	Santek Environmental Inc.
Project:	Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab ID:	1510735

Case Narrative

A copy of the Chain of Custody (COC) was not received with the samples on 10/8/2015 at 10:25am. A copy was received via email on 10/8/2015 at 1:04pm.

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Sentek. Work Order Number 1510735

Checklist completed by _____ 10/8/15
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? (0°≤6°C)* Yes ✓ No __

Cooler #1 3.6° Cooler #2 3.4° 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 MG

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.

\\Aes_server\I\Sample Receipt\My Documents\COCs and pH Adjustment Sheet\Sample_Cooler_Recipt_Checklist_Rev1.rtf

Analytical Environmental Services, Inc

Date: 4-Nov-15

Client: Santek Environmental Inc.
Project Name: Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab Order: 1510735

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1510735-001A	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510735-001B	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510735-001C	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Inorganic Anions by IC			10/08/2015
1510735-001C	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510735-001D	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Nitrogen, Ammonia (as N)		10/9/2015 1:00:00PM	10/09/2015
1510735-001D	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Chemical Oxygen Demand (COD)			10/12/2015
1510735-001D	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Total Organic Carbon by SM5310B			10/29/2015
1510735-001E	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510735-001F	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510735-001F	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510735-001F	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015
1510735-001G	EQUIP BLANK	10/7/2015 3:45:00PM	Aqueous	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510735-002A	MW-02	10/6/2015 2:30:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510735-002B	MW-02	10/6/2015 2:30:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510735-002C	MW-02	10/6/2015 2:30:00PM	Groundwater	Inorganic Anions by IC			10/08/2015
1510735-002C	MW-02	10/6/2015 2:30:00PM	Groundwater	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510735-002D	MW-02	10/6/2015 2:30:00PM	Groundwater	Nitrogen, Ammonia (as N)		10/9/2015 1:00:00PM	10/09/2015
1510735-002D	MW-02	10/6/2015 2:30:00PM	Groundwater	Chemical Oxygen Demand (COD)			10/12/2015
1510735-002D	MW-02	10/6/2015 2:30:00PM	Groundwater	Total Organic Carbon by SM5310B			10/13/2015
1510735-002E	MW-02	10/6/2015 2:30:00PM	Groundwater	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510735-002F	MW-02	10/6/2015 2:30:00PM	Groundwater	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510735-003A	MW-02	10/7/2015 1:55:00PM	Groundwater	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510735-003A	MW-02	10/7/2015 1:55:00PM	Groundwater	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510735-003A	MW-02	10/7/2015 1:55:00PM	Groundwater	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015
1510735-004A	MW-1A	10/6/2015 4:01:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		10/13/2015 11:25:00PM	10/14/2015
1510735-004B	MW-1A	10/6/2015 4:01:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		10/12/2015 10:01:25AM	10/12/2015
1510735-004C	MW-1A	10/6/2015 4:01:00PM	Groundwater	Inorganic Anions by IC			10/08/2015
1510735-004C	MW-1A	10/6/2015 4:01:00PM	Groundwater	Residue, Dissolved (TDS) by SM2540C		10/8/2015 4:00:00PM	10/08/2015
1510735-004D	MW-1A	10/6/2015 4:01:00PM	Groundwater	Nitrogen, Ammonia (as N)		10/9/2015 1:00:00PM	10/09/2015

Analytical Environmental Services, Inc

Date: 4-Nov-15

Client: Santek Environmental Inc.
Project Name: Matlock Bend LF 2nd Semi-Annual GW Event 2015
Lab Order: 1510735

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1510735-004D	MW-1A	10/6/2015 4:01:00PM	Groundwater	Chemical Oxygen Demand (COD)			10/12/2015
1510735-004D	MW-1A	10/6/2015 4:01:00PM	Groundwater	Total Organic Carbon by SM5310B			10/13/2015
1510735-004E	MW-1A	10/6/2015 4:01:00PM	Groundwater	Cyanide		10/13/2015 12:00:00PM	10/13/2015
1510735-004F	MW-1A	10/6/2015 4:01:00PM	Groundwater	Dissolved Metals by ICP/MS		10/8/2015 3:57:00PM	10/08/2015
1510735-005A	MW-1A	10/7/2015 2:15:00PM	Groundwater	APPENDIX I METALS		10/12/2015 1:23:00PM	10/13/2015
1510735-005A	MW-1A	10/7/2015 2:15:00PM	Groundwater	Total Metals by ICP/MS		10/12/2015 1:23:00PM	10/13/2015
1510735-005A	MW-1A	10/7/2015 2:15:00PM	Groundwater	TOTAL MERCURY		10/13/2015 10:30:00AM	10/13/2015

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 11:45:00 AM
Lab ID:	1510676-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	2.06	1.00		mg/L	R302042	1	10/13/2015 12:12	YS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	34	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1					(E350.1)			
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214144	1	10/12/2015 11:47	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011					(SW8011)			
1,2-Dibromo-3-chloropropane	BRL	0.196		ug/L	214231	1	10/12/2015 19:10	AW
1,2-Dibromoethane	BRL	0.049		ug/L	214231	1	10/12/2015 19:10	AW
Surr: 4-Bromofluorobenzene	98.7	64.7-140		%REC	214231	1	10/12/2015 19:10	AW
Inorganic Anions by IC E300.0								
Chloride	14.8	1.00		mg/L	R302070	1	10/08/2015 16:29	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 16:29	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 16:29	JW
Sulfate	1.77	1.00		mg/L	R302070	1	10/08/2015 16:29	JW
Dissolved Metals by ICP/MS SW6020A					(SW3005A)			
Manganese	158	10.0		ug/L	214074	1	10/08/2015 20:41	TA
Cyanide SW9014					(SW9010C)			
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	48.8	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B					(SW5030B)			
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 06:43	AR
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 06:43	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 06:43	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 06:43	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 11:45:00 AM
Lab ID:	1510676-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 06:43	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 06:43	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 06:43	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 06:43	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 06:43	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 06:43	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 06:43	AR
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 06:43	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 06:43	AR
Surr: 4-Bromofluorobenzene	94.4	70.6-123		%REC	214367	1	10/14/2015 06:43	AR
Surr: Dibromofluoromethane	100	78.7-124		%REC	214367	1	10/14/2015 06:43	AR
Surr: Toluene-d8	95.6	81.3-120		%REC	214367	1	10/14/2015 06:43	AR

Qualifiers:

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

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 2:45:00 PM
Lab ID:	1510676-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				(SW3005A)				
Calcium	1220	100		ug/L	214184	1	10/13/2015 17:41	JS
Iron	BRL	100		ug/L	214184	1	10/13/2015 17:41	JS
Magnesium	692	100		ug/L	214184	1	10/13/2015 17:41	JS
Potassium	664	500		ug/L	214184	1	10/13/2015 17:41	JS
Sodium	10400	500		ug/L	214184	1	10/13/2015 17:41	JS
Mercury, Total SW7470A				(SW7470A)				
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:11	CC
APPENDIX I METALS SW6020A				(SW3005A)				
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:41	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:41	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:41	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:41	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:41	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:41	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:41	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:41	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:41	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:41	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:41	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:41	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:41	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:41	JS
Zinc	BRL	0.0200		mg/L	214184	1	10/13/2015 17:41	JS

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015
Lab ID:	1510676-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	BRL	1.00		mg/L	R302042	1	10/13/2015 11:34	YS
Total Metals by ICP/MS SW6020A				(SW3005A)				
Calcium	1280	100		ug/L	214184	1	10/13/2015 17:31	JS
Iron	222	100		ug/L	214184	1	10/13/2015 17:31	JS
Magnesium	725	100		ug/L	214184	1	10/13/2015 17:31	JS
Potassium	730	500		ug/L	214184	1	10/13/2015 17:31	JS
Sodium	10500	500		ug/L	214184	1	10/13/2015 17:31	JS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	161	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1				(E350.1)				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214144	1	10/12/2015 11:43	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				(SW8011)				
1,2-Dibromo-3-chloropropane	BRL	0.200		ug/L	214231	1	10/12/2015 18:13	AW
1,2-Dibromoethane	BRL	0.050		ug/L	214231	1	10/12/2015 18:13	AW
Surr: 4-Bromofluorobenzene	110	64.7-140		%REC	214231	1	10/12/2015 18:13	AW
Mercury, Total SW7470A				(SW7470A)				
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:08	CC
Inorganic Anions by IC E300.0								
Chloride	14.0	1.00		mg/L	R302070	1	10/08/2015 16:00	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 16:00	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 16:00	JW
Sulfate	1.61	1.00		mg/L	R302070	1	10/08/2015 16:00	JW
Dissolved Metals by ICP/MS SW6020A				(SW3005A)				
Manganese	161	10.0		ug/L	214074	1	10/08/2015 20:29	TA
Cyanide SW9014				(SW9010C)				
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	35.0	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B				(SW5030B)				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 05:52	AR

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015
Lab ID:	1510676-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 05:52	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 05:52	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 05:52	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 05:52	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 05:52	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 05:52	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 05:52	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 05:52	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 05:52	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 05:52	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015
Lab ID:	1510676-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				(SW5030B)				
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 05:52	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 05:52	AR
Surr: 4-Bromofluorobenzene	93.1	70.6-123		%REC	214367	1	10/14/2015 05:52	AR
Surr: Dibromofluoromethane	96.4	78.7-124		%REC	214367	1	10/14/2015 05:52	AR
Surr: Toluene-d8	93.3	81.3-120		%REC	214367	1	10/14/2015 05:52	AR
APPENDIX I METALS SW6020A				(SW3005A)				
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:31	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:31	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:31	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:31	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:31	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:31	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:31	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:31	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:31	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:31	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:31	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:31	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:31	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:31	JS
Zinc	0.0211	0.0200		mg/L	214184	1	10/13/2015 17:31	JS

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:** 21-Oct-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-4R
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/6/2015 12:14:00 PM
Lab ID:	1510737-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.198		ug/L	214231	1	10/12/2015 20:08	AW
1,2-Dibromoethane	BRL	0.050		ug/L	214231	1	10/12/2015 20:08	AW
Surr: 4-Bromofluorobenzene	102	64.7-140		%REC	214231	1	10/12/2015 20:08	AW
Inorganic Anions by IC E300.0								
Fluoride	BRL	4.00		mg/L	R301978	1	10/12/2015 13:02	JW
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 08:00	AR
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 08:00	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 08:00	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 08:00	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 08:00	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 08:00	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 08:00	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 08:00	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 08:00	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 08:00	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 08:00	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR

Qualifiers:

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

Analytical Environmental Services, Inc Date: 21-Oct-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-4R
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/6/2015 12:14:00 PM
Lab ID:	1510737-003	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 08:00	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 08:00	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 08:00	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 08:00	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 08:00	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 08:00	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 08:00	AR
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 08:00	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 08:00	AR
Surr: 4-Bromofluorobenzene	90.9	70.6-123		%REC	214367	1	10/14/2015 08:00	AR
Surr: Dibromofluoromethane	100	78.7-124		%REC	214367	1	10/14/2015 08:00	AR
Surr: Toluene-d8	95	81.3-120		%REC	214367	1	10/14/2015 08:00	AR

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:** 21-Oct-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-4R
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 12:10:00 PM
Lab ID:	1510737-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Mercury, Total SW7470A					**(SW7470A)**			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:21	CC
APPENDIX I METALS SW6020A					**(SW3005A)**			
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 18:07	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 18:07	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 18:07	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 18:07	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 18:07	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 18:07	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 18:07	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 18:07	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 18:07	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 18:07	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 18:07	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 18:07	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 18:07	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 18:07	JS
Zinc	0.0216	0.0200		mg/L	214184	1	10/13/2015 18:07	JS

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 21-Oct-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-05
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/6/2015 11:30:00 AM
Lab ID:	1510737-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.200		ug/L	214231	1	10/12/2015 19:39	AW
1,2-Dibromoethane	BRL	0.050		ug/L	214231	1	10/12/2015 19:39	AW
Surr: 4-Bromofluorobenzene	110	64.7-140		%REC	214231	1	10/12/2015 19:39	AW
Inorganic Anions by IC E300.0								
Fluoride	BRL	4.00		mg/L	R301978	1	10/12/2015 12:47	JW
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 07:34	AR
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 07:34	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 07:34	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 07:34	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 07:34	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 07:34	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 07:34	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 07:34	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 07:34	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 07:34	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 07:34	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 21-Oct-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-05
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/6/2015 11:30:00 AM
Lab ID:	1510737-001	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 07:34	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 07:34	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 07:34	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 07:34	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 07:34	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 07:34	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 07:34	AR
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 07:34	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 07:34	AR
Surr: 4-Bromofluorobenzene	89.2	70.6-123		%REC	214367	1	10/14/2015 07:34	AR
Surr: Dibromofluoromethane	97.8	78.7-124		%REC	214367	1	10/14/2015 07:34	AR
Surr: Toluene-d8	96.2	81.3-120		%REC	214367	1	10/14/2015 07:34	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 21-Oct-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-05
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 10:50:00 AM
Lab ID:	1510737-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Mercury, Total SW7470A					**(SW7470A)**			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:19	CC
APPENDIX I METALS SW6020A					**(SW3005A)**			
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 18:02	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 18:02	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 18:02	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 18:02	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 18:02	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 18:02	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 18:02	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 18:02	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 18:02	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 18:02	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 18:02	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 18:02	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 18:02	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 18:02	JS
Zinc	0.0256	0.0200		mg/L	214184	1	10/13/2015 18:02	JS

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: 21-Oct-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/8/2015
Lab ID:	1510737-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 08:25	AR
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 08:25	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 08:25	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 08:25	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 08:25	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 08:25	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 08:25	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 08:25	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 08:25	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 08:25	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 08:25	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 08:25	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 08:25	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 08:25	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 08:25	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 08:25	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 08:25	AR

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 21-Oct-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/8/2015
Lab ID:	1510737-005	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 08:25	AR
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 08:25	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 08:25	AR
Surr: 4-Bromofluorobenzene	90.3	70.6-123		%REC	214367	1	10/14/2015 08:25	AR
Surr: Dibromofluoromethane	97.3	78.7-124		%REC	214367	1	10/14/2015 08:25	AR
Surr: Toluene-d8	94	81.3-120		%REC	214367	1	10/14/2015 08:25	AR

Qualifiers:

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

Analytical Environmental Services, Inc Date: 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:45:00 PM
Lab ID:	1510735-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	BRL	1.00		mg/L	R303189	1	10/29/2015 11:33	YS
Total Metals by ICP/MS SW6020A					(SW3005A)			
Calcium	BRL	100		ug/L	214184	1	10/13/2015 17:47	JS
Iron	BRL	100		ug/L	214184	1	10/13/2015 17:47	JS
Magnesium	BRL	100		ug/L	214184	1	10/13/2015 17:47	JS
Potassium	BRL	500		ug/L	214184	1	10/13/2015 17:47	JS
Sodium	BRL	500		ug/L	214184	1	10/13/2015 17:47	JS
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	29	1		mg/L	214134	1	10/08/2015 16:00	JS
Nitrogen, Ammonia (as N) E350.1					(E350.1)			
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	214173	1	10/09/2015 13:23	FS
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011					(SW8011)			
1,2-Dibromo-3-chloropropane	BRL	0.198		ug/L	214231	1	10/12/2015 20:36	AW
1,2-Dibromoethane	BRL	0.049		ug/L	214231	1	10/12/2015 20:36	AW
Surr: 4-Bromofluorobenzene	113	64.7-140		%REC	214231	1	10/12/2015 20:36	AW
Mercury, Total SW7470A					(SW7470A)			
Mercury	BRL	0.00200		mg/L	214297	1	10/13/2015 14:13	CC
Inorganic Anions by IC E300.0								
Chloride	BRL	1.00		mg/L	R302070	1	10/08/2015 16:44	JW
Fluoride	BRL	4.00		mg/L	R302070	1	10/08/2015 16:44	JW
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R302070	1	10/08/2015 16:44	JW
Sulfate	BRL	1.00		mg/L	R302070	1	10/08/2015 16:44	JW
Dissolved Metals by ICP/MS SW6020A					(SW3005A)			
Manganese	BRL	10.0		ug/L	214074	1	10/08/2015 20:48	TA
Cyanide SW9014					(SW9010C)			
Cyanide, Total	BRL	0.200		mg/L	214280	1	10/13/2015 16:00	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	18.8	10.0		mg/L	R301957	1	10/12/2015 16:45	CH
APPENDIX I VOLATILE ORGANICS SW8260B					(SW5030B)			
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
1,1,1-Trichloroethane	BRL	200		ug/L	214367	1	10/14/2015 03:19	AR

Qualifiers:

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- B Analyte detected in the associated method blank
- > Greater than Result value
- E Estimated (value above quantitation range)
- S Spike Recovery outside limits due to matrix
- Narr See case narrative
- NC Not confirmed
- < Less than Result value
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Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:45:00 PM
Lab ID:	1510735-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
1,1,2-Trichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
1,1-Dichloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
1,1-Dichloroethene	BRL	7.0		ug/L	214367	1	10/14/2015 03:19	AR
1,2,3-Trichloropropane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
1,2-Dichlorobenzene	BRL	600		ug/L	214367	1	10/14/2015 03:19	AR
1,2-Dichloroethane	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
1,2-Dichloropropane	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
1,4-Dichlorobenzene	BRL	75		ug/L	214367	1	10/14/2015 03:19	AR
2-Butanone	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
2-Hexanone	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
4-Methyl-2-pentanone	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Acetone	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Acrylonitrile	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Benzene	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Bromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Bromodichloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Bromoform	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Bromomethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Carbon disulfide	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Carbon tetrachloride	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Chlorobenzene	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Chloroethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Chloroform	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Chloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
cis-1,2-Dichloroethene	BRL	70		ug/L	214367	1	10/14/2015 03:19	AR
cis-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Dibromochloromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Dibromomethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Ethylbenzene	BRL	700		ug/L	214367	1	10/14/2015 03:19	AR
Iodomethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Methylene chloride	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Styrene	BRL	100		ug/L	214367	1	10/14/2015 03:19	AR
Tetrachloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Toluene	BRL	1000		ug/L	214367	1	10/14/2015 03:19	AR
trans-1,2-Dichloroethene	BRL	100		ug/L	214367	1	10/14/2015 03:19	AR
trans-1,3-Dichloropropene	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Trichloroethene	BRL	5.0		ug/L	214367	1	10/14/2015 03:19	AR
Trichlorofluoromethane	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR
Vinyl acetate	BRL	10		ug/L	214367	1	10/14/2015 03:19	AR

Qualifiers:

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- BRL Below reporting limit
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Analytical Environmental Services, Inc **Date:** 4-Nov-15

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP BLANK
Project Name:	Matlock Bend LF 2nd Semi-Annual GW Event 2015	**Collection Date:**	10/7/2015 3:45:00 PM
Lab ID:	1510735-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
Vinyl chloride	BRL	2.0		ug/L	214367	1	10/14/2015 03:19	AR
Xylenes, Total	BRL	10000		ug/L	214367	1	10/14/2015 03:19	AR
Surr: 4-Bromofluorobenzene	99.3	70.6-123		%REC	214367	1	10/14/2015 03:19	AR
Surr: Dibromofluoromethane	94.5	78.7-124		%REC	214367	1	10/14/2015 03:19	AR
Surr: Toluene-d8	91.2	81.3-120		%REC	214367	1	10/14/2015 03:19	AR
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	214184	1	10/13/2015 17:47	JS
Arsenic	BRL	0.0500		mg/L	214184	1	10/13/2015 17:47	JS
Barium	BRL	2.00		mg/L	214184	1	10/13/2015 17:47	JS
Beryllium	BRL	0.00400		mg/L	214184	1	10/13/2015 17:47	JS
Cadmium	BRL	0.00500		mg/L	214184	1	10/13/2015 17:47	JS
Chromium	BRL	0.100		mg/L	214184	1	10/13/2015 17:47	JS
Cobalt	BRL	0.0100		mg/L	214184	1	10/13/2015 17:47	JS
Copper	BRL	0.0100		mg/L	214184	1	10/13/2015 17:47	JS
Lead	BRL	0.0150		mg/L	214184	1	10/13/2015 17:47	JS
Nickel	BRL	0.100		mg/L	214184	1	10/13/2015 17:47	JS
Selenium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:47	JS
Silver	BRL	0.0500		mg/L	214184	1	10/13/2015 17:47	JS
Thallium	BRL	0.00200		mg/L	214184	1	10/13/2015 17:47	JS
Vanadium	BRL	0.0100		mg/L	214184	1	10/13/2015 17:47	JS
Zinc	BRL	0.0200		mg/L	214184	1	10/13/2015 17:47	JS

Qualifiers:

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APPENDIX C

LOUDOUN COUNTY
COOKELLWOOD WELL
MONITORING WELL #03

| PARAMETER | UNITS | 3-25-88 | 5-24-91 | 7-23-96 | 9-25-96 | 12-30-96 | 3-25-97 | 6-18-97 | 9-16-97 | 12-29-97 | 3-26-98 | 6-18-98 | 9-16-98 | 12-29-98 | 3-26-99 | 6-18-99 | 9-16-99 | 12-29-99 | 3-26-00 | 6-19-00 | 9-18-00 | 12-29-00 | 3-26-01 | 6-19-01 | 9-18-01 | 12-29-01 | 3-26-02 | 6-19-02 | 9-18-02 | 12-29-02 | 3-26-03 | 6-19-03 | 9-18-03 | 12-29-03 | 3-26-04 | 6-19-04 | 9-18-04 | 12-29-04 | 3-26-05 | 6-19-05 | 9-18-05 | 12-29-05 | 3-26-06 | 6-19-06 | 9-18-06 | 12-29-06 | 3-26-07 | 6-19-07 | 9-18-07 | 12-29-07 | 3-26-08 | 6-19-08 | 9-18-08 | 12-29-08 | 3-26-09 | 6-19-09 | 9-18-09 | 12-29-09 | 3-26-10 | 6-19-10 | 9-18-10 | 12-29-10 | 3-26-11 | 6-19-11 | 9-18-11 | 12-29-11 | 3-26-12 | 6-19-12 | 9-18-12 | 12-29-12 | 3-26-13 | 6-19-13 | 9-18-13 | 12-29-13 | 3-26-14 | 6-19-14 | 9-18-14 | 12-29-14 | 3-26-15 | 6-19-15 | 9-18-15 | 12-29-15 | 3-26-16 | 6-19-16 | 9-18-16 | 12-29-16 | 3-26-17 | 6-19-17 | 9-18-17 | 12-29-17 | 3-26-18 | 6-19-18 | 9-18-18 | 12-29-18 | 3-26-19 | 6-19-19 | 9-18-19 | 12-29-19 | 3-26-20 | 6-19-20 | 9-18-20 | 12-29-20 | 3-26-21 | 6-19-21 | 9-18-21 | 12-29-21 | 3-26-22 | 6-19-22 | 9-18-22 | 12-29-22 | 3-26-23 | 6-19-23 | 9-18-23 | 12-29-23 | 3-26-24 | 6-19-24 | 9-18-24 | 12-29-24 | 3-26-25 | 6-19-25 | 9-18-25 | 12-29-25 | 3-26-26 | 6-19-26 | 9-18-26 | 12-29-26 | 3-26-27 |
|---|---|---

LOUDON COUNTY
BACKGROUND WELL
MONITORING WELL #4R

INORGANIC	TN REGULATORY LIMITS	11-2-95	12-13-95	12-19-96	12-30-96	3-21-97	10-10-97	05-19-98	11-5-98	3-16-99	9-15-99	03-23-00	2-10-01	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-23-04	9-22-04	4-11-05	9-29-05	3-27-06	10-04-06	1-3-07	3-22-07	11-1-07	3-27-08	6-25-08	8-20-08	10-2-08	10-13-08	4-2-09	10-2-09	4-7-10	10-6-10	1-5-11	10-5-11	3-15-12	10-3-12	3-21-13	9-25-13	3-25-14	9-24-14	4-1-15	10-7-15	MW-4R AVG.
Antimony	6	5	13	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	DRY	6	6	DRY	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5.95
Arsenic	10	130	40	60	50	20	20	20	30	20	20	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	DRY	50	50	DRY	50	50	50	59	50	50	50	50	50	50	50	50	50	50	50	50	47.55
Barium	2000	120	50	90	60	40	20	20	50	20.5	20	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	DRY	2000	2000	DRY	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	1956.60
Beryllium	4	54	16	40	25	14	4	4	11	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	DRY	4	4	DRY	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	7.09
Cadmium	5	6	5	5	7	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	DRY	5	5	DRY	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.07
Chromium	100	130	50	80	40	30	10	10	30	10	10	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	DRY	100	100	DRY	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	89.35
Cobalt	NA	70	30	50	30	20	10	10	20	10	10	10	10	10	10	10	10	10	10	10	10	10	20.6	DRY	10	10	DRY	50.5	10	10	10	10	10	30.1	10.0	10.0	10.0	14.0	10.0	10.0	10.0	10.3	10.0	10.0	10.0	10.0	29.6	10.0	15.73
Copper	NA	140	50	90	60	30	20	10	30	10	10	10	10	10	10	10	10	10	10	10	10	10	10	DRY	10	10	DRY	14	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	18.05
Fluoride*	4	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	4	4	4	DRY	4	4	0.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	DRY	4	4	DRY	4	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.03
Lead	115	200	70	140	80	60	20	10	60	17.9	10	50	58.8	50	50	50	50	50	50	50	50	50	50	50.6	50.0	DRY	50	50	DRY	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	39.37
Mercury	2	1	1	1	1	1	1	1	1	1	0.5	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	DRY	2	2	DRY	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1.78
Nickel	100	310	110	210	120	90	30	20	90	21.3	10	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	DRY	100	100	DRY	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.20
Selenium	50	20	20	20	20	20	20	20	20	20	20	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	DRY	10	10	DRY	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	12.27
Silver	$100	5	6	5	5	5	5	5	5	5	5	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	DRY	50	50	DRY	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	39.60
Thallium	2	18	9	17	9	6	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	DRY	2	2	DRY	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3.11
Vanadium	NA	200	70	130	80	50	10	10	60	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	DRY	10	10	DRY	10	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	22.05
Zinc	NA	1950	700	1370	760	490	330	240	520	58	50	120	128	79.4	230.0	149.0	309.0	57.4	91.0	37.3	20.0	58.7	144.0	78.2	DRY	68.7	61.1	DRY	43.9	32.1	54.3	29.0	66.0	83.9	109.0	29.4	20.0	74.8	41.3	29.0	32.0	62.4	20.0	24.1	28.4	53.3	21.6	203.77

*ALL DATA IN UGL EXCEPT FLUORIDE (MGL)
t = TREATMENT TECHNIQUE ACTION LEVEL
s = NATIONAL SECONDARY DRINKING WATER STANDARD
Note: Results from 11-2-95 to 3-27-08 were taken from MW-04. MW-04 was replaced by MW-4R.

ORGANIC	11-2-95	12-13-95	12-19-96	12-30-96	3-21-97	10-10-97	05-19-98	11-5-98	3-16-99	9-15-99	03-23-00	2-10-01	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-23-04	9-22-04	4-11-05	9-29-05	3-27-06	10-04-06	1-3-07	3-22-07	11-1-07	3-27-08	6-25-08	8-20-08	8-29-08	8-29-08	4-1-09	10-1-09	4-6-10	10-5-10	1-4-11	10-4-11	3-14-12	10-2-12	3-27-13	9-24-13	3-24-14	9-23-14	3-31-15	10-8-15
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform, Tribromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform, Trichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane, Chlorodibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane, DBCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Dichlorobenzene, 1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dichlorobenzene, 1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane, Ethylidene chloride, Ethylidene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane, Ethylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene, 1,1-Dichloroethene, Vinylidene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene, cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene, trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane, Propylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone, Methyl butyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl bromide, Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl chloride, Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene bromide, Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride, Dichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone, MEK, 2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl iodide, Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone, Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene, Tetrachloroethene, Perchloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane, Methylchloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene, Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane, CFC-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	DRY	ND	ND	DRY	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

LOUDON COUNTY
COMPLIANCE WELL
MONITORING WELL #05

INORGANIC	TN REGULATORY LIMITS	2-10-01	4-25-01	6-13-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-28-04	9-22-04	4-11-05	9-29-05	3-27-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-1-09	10-2-09	4-7-10	10-6-10	10-6-10	1-5-11	10-5-11	3-15-12	10-3-12	3-28-13	9-25-13	3-25-14	9-24-14	4-1-15	10-7-15	MW-05 AVG.	MW-4R AVG.
Antimony	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6.00	5.95
Arsenic	10	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50.00	47.95
Barium	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000.00	1556.60
Beryllium	4	4	8.62	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4.14	7.09
Cadmium	5	5	5.35	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5.01	5.07
Chromium	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.00	86.38
Cobalt	NA	10	25.1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.48	15.73
Copper	NA	10	11.5	10	10	21.4	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.40	18.05
Fluoride*	4	4	4	4	4	4	4	0.2	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.88	3.03
Lead	†15	50	77.4	50	50	50	50	50	50	50	50	50	50	50	50	50	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	31.74	39.37
Thallium	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00	1.76
Nickel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.00	100.26
Selenium	50	10	10	50	50	50	50	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	14.85	12.27
Silver	‡100	50	50	10	10	10	10	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	45.15	39.80
Thallium	2	2	3.65	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.05	3.11
Vanadium	NA	10	10	10	10	27.1	17.7	10	10	10	11.9	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.81	22.05
Zinc	NA	258	693	361	260	360	288	231	20	20	195	91.4	109.0	116.0	61.2	64.7	138.0	39.9	91.0	88.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	114.27	203.77

*ALL DATA IN UGL EXCEPT FLUORIDE (MG/L)
† = TREATMENT TECHNIQUE ACTION LEVEL
‡ = NATIONAL SECONDARY DRINKING WATER STANDARD

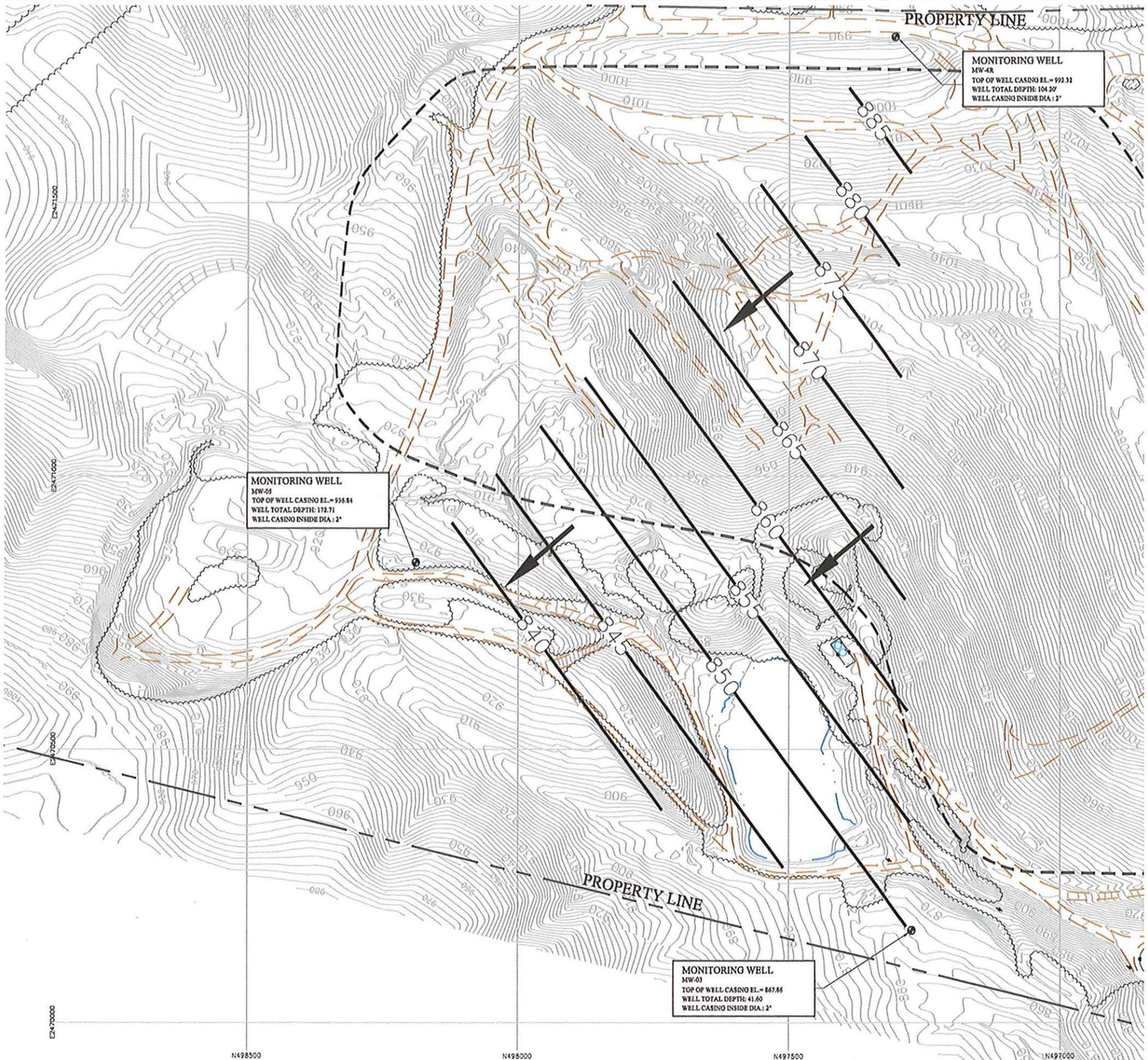
ORGANIC	2-10-01	4-25-01	6-13-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-28-04	9-22-04	4-11-05	9-29-05	3-27-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-1-09	10-1-09	4-6-10	10-5-10	10-5-10	1-4-11	10-4-11	3-14-12	10-2-12	3-27-13	9-24-13	3-24-14	9-23-14	3-31-15	10-6-15
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NO	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acrylonitrile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromochloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromodichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bromoform; Tribromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	18	ND	27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon tetrachloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane; Ethyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform; Trichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane; Chlorodibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromo-3-chloropropane; DBCP	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dibromoethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
o-Dichlorobenzene; 1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
p-Dichlorobenzene; 1,4-dichlorobenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,4-Dichloro-2-butene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane; Ethylidene chloride; Ethylidene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane; Ethylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-Dichloroethylene; 1,1-Dichloroethene; Vinylidene chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,2-Dichloroethylene; cis-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethylene; trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane; Propylene dichloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
2-Hexanone; Methyl butyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl bromide; Bromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl chloride; Chloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene bromide; Dibromomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene chloride; Dichloromethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl ethyl ketone; MEK; 2-Butanone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methyl iodide; Iodomethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
4-Methyl-2-Pentanone; Methyl isobutyl ketone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Styrene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethylene; Tetrachloroethene; Perchloroethylene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane; Methylchloroform	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichloroethylene; Trichloroethene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane; CFC-11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,3-Trichloropropane	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl acetate	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Vinyl chloride	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylenes	ND	ND	ND	ND	NO	ND									ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

APPENDIX D

GROUNDWATER DATA
Matlock Bend Landfill (Phase II/IV)
October 6, 2015

Well No.	Elev. Of TOC	Depth to GW (ft below TOC)	Water Elevation	Contour Elevation	Distance	Hydraulic Conductivity	Effective Porosity (n)	Hydraulic Gradient	Average Linear Velocity		Directions
									ft/min	ft/day	
MW-03	867.86	17.71	850.15	850	5	1.20E-05	0.18	3.00E-02	2.00E-06	2.88E-03	NW
MW-4R*	992.32	102.02	890.30	885	125	1.90E-05	0.18	4.24E-02	4.48E-06	6.44E-03	NW
MW-05	936.84	100.95	835.89	840	95	2.20E-05	0.18	4.33E-02	5.29E-06	7.61E-03	NW

*-Hydraulic conductivity for MW-4R is from MW-04



LEGEND:

- PROPERTY BOUNDARY
- 880 WATER TABLE CONTOURS (INFERRED)
- 950 AERIAL INDEX CONTOUR
- AERIAL CONTOUR
- ROAD
- GROUNDWATER MONITORING WELL
- GROUNDWATER FLOW DIRECTION
- PERMITTED LIMITS OF WASTE

NOTES:

1. POTENTIOMETRIC CONTOURS DEVELOPED FROM WATER ELEVATIONS TAKEN OCTOBER 6, 2015.
2. TOPOGRAPHIC CONTOURS SHOWN WERE PROVIDED BY SOUTHERN RESOURCES MAPPING CORP., NORTHPORT, ALABAMA, DATED AUGUST 25, 2015.

G.W. WELL NO.	WATER ELEV.
MW-03	850.15
MW-4R	890.30
MW-05	835.89

RON VAIL REGISTERED ENGINEER AGRICULTURE COMMERCE No. 00109716 STATE OF TENNESSEE 12/2/15

0' 100' 200' 300'

DATE	DRWN	CHKD	REVISION

2015 SEMI-ANNUAL (FALL) GROUNDWATER POTENTIOMETRIC CONTOUR MAP

MATLOCK BEND LANDFILL-PHASE II / IV
LOUDON COUNTY, TENNESSEE

SANTEK ENVIRONMENTAL
650 25TH STREET NW
SUITE 100
CLEVELAND, TENNESSEE

SCALE: 1"=200'	
DATE: 10/29/15	
DRAWN BY: RVI	
CHECKED BY: RVI	
APPROVED BY: RV	
FILE: 1510F2	
JOB NO: 200-1510	

F-2
sheet number

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