MATLOCK BEND LANDFILL – PHASE I & PHASE II/IV UPGRADE
GROUNDWATER MONITORING REPORT
2nd SEMI-ANNUAL EVENT - 2014

SANTEK PROJECT NO. 200-1410.3 & 200-1410.4

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

NOVEMBER 2014

SANTEK
WasteServices

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

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

November 19, 2014

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 2014 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,

Will Martin
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
Robert D. Burnette, P.E., Executive V.P. of Engineering, Santek
Matt Dillard, Executive V.P. of Operations, Santek
Levi Higdon, 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 - 2014

SANTEK PROJECT NO. 200-1410.3

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

NOVEMBER 2014

1.0 INTRODUCTION

In accordance with the Tennessee Department of Environment and Conservation's Solid Waste Processing and Disposal Rule 1200-1-7-.04(7), Santek Environmental (Santek) is submitting the groundwater monitoring report for the second semi-annual event for 2014 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 September 23 & 24, 2014. 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-1A. 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 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 Appendix I limits from pages .01-17, 18 of the 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 wells 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 1.82×10^{-3} ft/day at MW-1A to 3.16×10^{-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 Appendix I limit is not available.*

APPENDIX A

DATE: 9/23/14

FIELD SAMPLING LOG	WELL NO: MW-01
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 9/23/14 (Time) 3:25	Purge End: (Date) 9/23/14 (Time) 3:50
Purged by: Robert	
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: 14.55 (=) Wtr. Col. Thick: 30.45 .

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 4.9 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 14.7 Total Purge Gals.

GW elev. Ref. 830.87 ft.(-) DTW 14.55 ft. = 816.32 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
3:26		-			21.22	6.64	0.395	11.4		Clear
3:33		5.0			18.41	6.63	0.399	794		Muddy
3:42		10.0			17.99	6.67	0.406	979		Muddy
3:50		15.0			17.89	6.61	0.410	>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 = 5.6 NTU's. VOC's taken on 9/23/14 @ 3:50 p.m. Metals taken on 9/24/14 @ 12:10 p.m. Allowed well to settle overnight.

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

DATE: 9/23/14

FIELD SAMPLING LOG	WELL NO: MW-1A
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 9/23/14 (Time) 2:27	Purge End: (Date) 9/23/14 (Time) 2:49
Purged by: Robert	
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: 16.58 (=) Wtr. Col. Thick: 21.42 .

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 3.4 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 10.2 Total Purge Gals.

GW elev. Ref. 805.13 ft.(-) DTW 16.58 ft. = 788.55 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
2:27		-			22.60	6.60	0.621	1.1		Clear
2:34		3.5			20.73	6.75	0.596	60.2		Clear
2:39		7.0			18.83	6.86	0.639	97.9		Clear
2:43		9.0			18.43	6.91	0.647	151		Cloudy
2:49		10.5			18.81	6.92	0.637	220		Cloudy, suspended sediment

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
v=_____ft./min. = _____ft day .25 sand
.3 sand and gravel

Comments: Metals Sample Turbidity = 1.8 NTU's. VOC's taken on 9/23/14 @ 2:50 p.m. Metals taken on 9/24/14 @ 11:59 a.m. Allowed well to settle overnight. *Duplicate taken here.

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

DATE: 9/24/14

FIELD SAMPLING LOG	WELL NO: MW-02
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:

Purge Start: (Date) 9/24/14 (Time) 9:52 Purge End: (Date) 9/24/14 (Time) 10:08

Purged by: Robert

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: 22.90 (=) Wtr. Col. Thick: 20.20 .
22.86 (Water level on 9/23/14)

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 3.2 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 9.6 Total Purge Gals.

GW elev. Ref. 825.20 ft.(-) DTW 22.86 ft. = 802.34 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
9:53		-			16.40	5.14	0.077	2.9		Clear
10:00		3.5			16.06	4.84	0.050	82.0		Clear
10:05		6.5			15.81	4.94	0.048	441		Cloudy/murky
10:08		8.0			15.75	5.07	0.048	>1000		Muddy, *purged dry

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

*Purged dry at 8.0 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 = 10.6 NTU's. VOC's taken on 9/24/14 @ 10:12 a.m. Metals taken on 9/24/14 @ 12:20 p.m. Water level taken on 9/23/14.

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

DATE: 9/24/14

FIELD SAMPLING LOG	WELL NO: MW-03
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 9/24/14 (Time) 10:42	Purge End: (Date) 9/24/14 (Time) 10:53
Purged by: Robert	
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: 19.80 (=) Wtr. Col. Thick: 21.80 .
19.76 (water level on 9/23/14)

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 3.5 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 10.5 Total Purge Gals.

GW elev. Ref. 867.86 ft.(-) DTW 19.76 ft. = 848.10 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
10:43		-			16.50	4.98	0.067	6.1		Clear
10:48		3.5			16.19	4.96	0.064	65.7		Clear
10:53		4.8			16.17	4.96	0.063	295		Cloudy, *purged dry

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

*Purged dry at 4.8 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 = 8.4 NTU's. VOC's taken on 9/24/14 @ 11:00 a.m. Metals taken on 9/24/14 @ 12:40 p.m. Water level taken on 9/23/14.

*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 10, 2014

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

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

RE: Loudon Co. (Matlock Bend) LF 2nd Semi-Annual

Dear Will Martin: Order No: 1409M69

Analytical Environmental Services, Inc. received 6 samples on 9/25/2014 10:15:00 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 07/01/14-06/30/15.
-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 09/01/15.

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

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

Chantelle Kanhai
Project Manager

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: 1409M69

Date: 9/24/14 Page 1 of 1

COMPANY:	ADDRESS:
Santek Waste Services, Inc	6502 5th Street NW, Suite 100, Cleveland, TN 37311
PHONE: (423) 303-7107	FAX: (423) 479-1952
SAMPLED BY: R. Hudson	SIGNATURE: Robert Hudson

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)
1	MW-03	9/24/14	11:00	X		GW
2	↳	9/24/14	12:40	X		GW
3	MW-1A	9/23/14	2:50	X		GW
4	↳	9/24/14	11:59	X		GW
5	Duplicate	9/23/14		X		GW
6	↳	9/24/14		X		GW
7						
8						
9						
10						
11						
12						
13						
14						

ANALYSIS REQUESTED (PRESERVATION (See codes))

#	Inorganic Anions by IC	TDS	Total Metals	Total Mercury	App. I Metals	Dissolved Metals	App. II Metals	Micro-Ext. Volatiles	Nitrogen, Ammonia	TOC	COD	Cyanide
1	X	X			X	X	X	X	X	X	X	X
2	X	X	X	X	X							
3	X	X				X	X	X	X	X	X	X
4			X	X	X							
5	X	X				X	X	X	X	X	X	X
6			X	X	X							

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

No # of Containers

REMARKS

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Robert Hudson	9/24/14 5pm	1:	9/25/14 10:15
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: Loudon Co. (Matlock Bend) LF 2nd Semi-
PROJECT #: Annual GW Event 2014
SITE ADDRESS:
SEND REPORT TO: Will Martin
INVOICE TO: (IF DIFFERENT FROM ABOVE)
QUOTE #: PO#:

SPECIAL INSTRUCTIONS/COMMENTS: See Chantelle K. and Project History

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

RECEIPT
Total # of Containers

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

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

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

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

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc

Date: 10-Oct-14

Client: Santek Environmental Inc.
Project: Loudon Co. (Matlock Bend) LF 2nd Semi-Annual
Lab ID: 1409M69

Case Narrative

The collection times were not listed on the COC for sample "Duplicate". Based on the matching collection dates, the collection times were logged in using the same collection times provided for sample "MW-1A".

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Santek Work Order Number 1409M69

Checklist completed by Joana Pacurar 9/25/14
Signature Date

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

Shipping container/cooler in good condition?	Yes ✓	No __	Not Present __
Custody seals intact on shipping container/cooler?	Yes __	No __	Not Present ✓
Custody seals intact on sample bottles?	Yes __	No __	Not Present ✓
Container/Temp Blank temperature in compliance? (0°≤6°C)*	Yes ✓	No __	

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

Chain of custody present?	Yes ✓	No __
Chain of custody signed when relinquished and received?	Yes ✓	No __
Chain of custody agrees with sample labels?	Yes ✓	No __
Samples in proper container/bottle?	Yes ✓	No __
Sample containers intact?	Yes ✓	No __
Sufficient sample volume for indicated test?	Yes ✓	No __
All samples received within holding time?	Yes ✓	No __
Was TAT marked on the COC?	Yes ✓	No __
Proceed with Standard TAT as per project history?	Yes __	No __ Not Applicable ✓
Water - VOA vials have zero headspace? No VOA vials submitted __	Yes ✓	No __
Water - pH acceptable upon receipt?	Yes ✓	No __ Not Applicable __

Adjusted? _____ Checked by JP

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

Client: Santek Environmental Inc.
Project: Loudon Co. (Matlock Bend) LF 2nd Semi-Annual
Lab Order: 1409M69

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1409M69-001A	MW-03	9/24/2014 11:00:00AM	Groundwater	APPENDIX I VOLATILE ORGANICS		09/30/2014	09/30/2014
1409M69-001B	MW-03	9/24/2014 11:00:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		09/29/2014	09/30/2014
1409M69-001C	MW-03	9/24/2014 11:00:00AM	Groundwater	Inorganic Anions by IC			09/25/2014
1409M69-001C	MW-03	9/24/2014 11:00:00AM	Groundwater	Residue, Dissolved (TDS) by SM2540C		09/29/2014	09/29/2014
1409M69-001D	MW-03	9/24/2014 11:00:00AM	Groundwater	Dissolved Metals by ICP/MS		10/01/2014	10/01/2014
1409M69-001E	MW-03	9/24/2014 11:00:00AM	Groundwater	Nitrogen, Ammonia (as N)			10/01/2014
1409M69-001E	MW-03	9/24/2014 11:00:00AM	Groundwater	Chemical Oxygen Demand (COD)			09/30/2014
1409M69-001E	MW-03	9/24/2014 11:00:00AM	Groundwater	Total Organic Carbon by SM5310B			09/30/2014
1409M69-001F	MW-03	9/24/2014 11:00:00AM	Groundwater	Cyanide		09/26/2014	09/26/2014
1409M69-002A	MW-03	9/24/2014 12:40:00PM	Groundwater	APPENDIX I METALS		09/29/2014	10/01/2014
1409M69-002A	MW-03	9/24/2014 12:40:00PM	Groundwater	Total Metals by ICP/MS		09/29/2014	10/01/2014
1409M69-002A	MW-03	9/24/2014 12:40:00PM	Groundwater	TOTAL MERCURY		09/29/2014	09/29/2014
1409M69-003A	MW-1A	9/23/2014 2:50:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		09/30/2014	09/30/2014
1409M69-003B	MW-1A	9/23/2014 2:50:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		09/29/2014	09/30/2014
1409M69-003C	MW-1A	9/23/2014 2:50:00PM	Groundwater	Inorganic Anions by IC			09/25/2014
1409M69-003C	MW-1A	9/23/2014 2:50:00PM	Groundwater	Residue, Dissolved (TDS) by SM2540C		09/29/2014	09/29/2014
1409M69-003D	MW-1A	9/23/2014 2:50:00PM	Groundwater	Dissolved Metals by ICP/MS		10/01/2014	10/01/2014
1409M69-003E	MW-1A	9/23/2014 2:50:00PM	Groundwater	Nitrogen, Ammonia (as N)			10/01/2014
1409M69-003E	MW-1A	9/23/2014 2:50:00PM	Groundwater	Chemical Oxygen Demand (COD)			09/30/2014
1409M69-003E	MW-1A	9/23/2014 2:50:00PM	Groundwater	Total Organic Carbon by SM5310B			09/30/2014
1409M69-003F	MW-1A	9/23/2014 2:50:00PM	Groundwater	Cyanide		09/26/2014	09/26/2014
1409M69-004A	MW-1A	9/24/2014 11:59:00AM	Groundwater	APPENDIX I METALS		09/29/2014	10/01/2014
1409M69-004A	MW-1A	9/24/2014 11:59:00AM	Groundwater	Total Metals by ICP/MS		09/29/2014	10/01/2014
1409M69-004A	MW-1A	9/24/2014 11:59:00AM	Groundwater	TOTAL MERCURY		09/29/2014	09/29/2014
1409M69-005A	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		09/30/2014	09/30/2014
1409M69-005B	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		09/29/2014	09/30/2014
1409M69-005C	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Inorganic Anions by IC			09/25/2014
1409M69-005C	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Residue, Dissolved (TDS) by SM2540C		09/29/2014	09/29/2014
1409M69-005D	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Dissolved Metals by ICP/MS		10/01/2014	10/01/2014

Analytical Environmental Services, Inc

Date: 10-Oct-14

Client:	Santek Environmental Inc.
Project:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual
Lab Order:	1409M69

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1409M69-005E	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Nitrogen, Ammonia (as N)			10/01/2014
1409M69-005E	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Chemical Oxygen Demand (COD)			09/30/2014
1409M69-005E	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Total Organic Carbon by SM5310B			09/30/2014
1409M69-005F	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Cyanide		09/26/2014	09/26/2014
1409M69-006A	DUPLICATE	9/24/2014 11:59:00AM	Groundwater	APPENDIX I METALS		09/29/2014	10/01/2014
1409M69-006A	DUPLICATE	9/24/2014 11:59:00AM	Groundwater	Total Metals by ICP/MS		09/29/2014	10/01/2014
1409M69-006A	DUPLICATE	9/24/2014 11:59:00AM	Groundwater	TOTAL MERCURY		09/29/2014	09/29/2014

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

AES

October 10, 2014

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

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

RE: Loudon Co. (Matlock Bend) LF 2nd Semi-Annual

Dear Will Martin: Order No: 1409N05

Analytical Environmental Services, Inc. received 6 samples on 9/25/2014 10:15:00 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 07/01/14-06/30/15.
-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 09/01/15.

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

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

CRKanhai

Chantelle Kanhai
Project Manager

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: 409N05

Date: 9/24/14 Page 1 of 1

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

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Fluoride, Anions by IC	TDS	Total Metals by ICP/MS	Total Mercury	App. IV Metals by ICP/MS	Dissolved Metals	App. IV VOC's	Misc. Ext. VOC's	Nitrogen, Ammonia	TOC	COD	Cyanide	REMARKS	No # of Containers
	ANALYSIS REQUESTED / PRESERVATION (See codes)																			
1	Trip Blank	9/24/14	2:45	X		W	X	X	X	X	X	X	X	X	X	X	X	X		9
2	~~Equip. Blank~~ Equip. Blank	9/24/14	3:00	X		W	X	X	X	X	X	X	X	X	X	X	X	X		9
3	MW-01	9/23/14	3:50	X		GW	X	X				X	X	X	X	X	X	X		8
4	↳	9/24/14	12:10	X		GW			X	X	X									1
5	MW-02	9/24/14	10:12	X		GW	X	X				X	X	X	X	X	X	X		8
6	↳	9/24/14	12:20	X		GW			X	X	X									1
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

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

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Robert Hudson	9/24/14 5pm	1: [signature] MCJ	9/25/14 10:15
2:		2:	
3:		3:	

SPECIAL INSTRUCTIONS/COMMENTS: See Chantelle K. and Project History

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

PROJECT INFORMATION

PROJECT NAME: Loudon Co. (Matlock Bend) LF 2nd Semi-

PROJECT #: Annual GW Event 2014

SITE ADDRESS:

SEND REPORT TO: Will Martin

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

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

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+I = Hydrochloric acid + ice I = Ice only N = Nitric acid S+I = Sulfuric acid + ice S/M+I = Sodium Bisulfate/Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Santek Work Order Number 1409N05

Checklist completed by MRC 9/25/14
Signature Date

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

Shipping container/cooler in good condition?	Yes ✓	No __	Not Present __
Custody seals intact on shipping container/cooler?	Yes ✓	No __	Not Present __
Custody seals intact on sample bottles?	Yes __	No __	Not Present ✓
Container/Temp Blank temperature in compliance? (0°≤6°C)*	Yes ✓	No __	

Cooler #1 2.4 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 MTC

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

Analytical Environmental Services, Inc **Date:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-01
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/23/2014 3:50:00 PM
Lab ID:	1409N05-003	**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	R276883	1	09/30/2014 20:48	JM
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	403	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:20	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.208		ug/L	196924	1	09/30/2014 04:52	SH
1,2-Dibromoethane	BRL	0.052		ug/L	196924	1	09/30/2014 04:52	SH
Surr: 4-Bromofluorobenzene	114	60-120		%REC	196924	1	09/30/2014 04:52	SH
Inorganic Anions by IC E300.0								
Chloride	23.0	2.00		mg/L	R276614	2	09/25/2014 13:44	YS
Fluoride	BRL	4.00		mg/L	R276614	1	09/25/2014 12:58	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276614	1	09/25/2014 12:58	YS
Sulfate	2.20	1.00		mg/L	R276614	1	09/25/2014 12:58	YS
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	BRL	10.0		ug/L	197033	1	10/01/2014 21:10	MR
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	197077	1	10/01/2014 15:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	15.6	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
1,1,1-Trichloroethane	BRL	200		ug/L	197080	1	10/01/2014 20:32	GK
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 20:32	GK
1,1-Dichloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
1,1-Dichloroethene	BRL	7.0		ug/L	197080	1	10/01/2014 20:32	GK
1,2,3-Trichloropropane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
1,2-Dichlorobenzene	BRL	600		ug/L	197080	1	10/01/2014 20:32	GK
1,2-Dichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 20:32	GK
1,2-Dichloropropane	BRL	5.0		ug/L	197080	1	10/01/2014 20:32	GK
1,4-Dichlorobenzene	BRL	75		ug/L	197080	1	10/01/2014 20:32	GK
2-Butanone	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-01
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/23/2014 3:50:00 PM
Lab ID:	1409N05-003	**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	197080	1	10/01/2014 20:32	GK
4-Methyl-2-pentanone	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Acetone	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Acrylonitrile	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Benzene	BRL	5.0		ug/L	197080	1	10/01/2014 20:32	GK
Bromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Bromodichloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Bromoform	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Bromomethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Carbon disulfide	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Carbon tetrachloride	BRL	5.0		ug/L	197080	1	10/01/2014 20:32	GK
Chlorobenzene	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Chloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Chloroform	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Chloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
cis-1,2-Dichloroethene	BRL	70		ug/L	197080	1	10/01/2014 20:32	GK
cis-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Dibromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Dibromomethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Ethylbenzene	BRL	700		ug/L	197080	1	10/01/2014 20:32	GK
Iodomethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Methylene chloride	BRL	5.0		ug/L	197080	1	10/01/2014 20:32	GK
Styrene	BRL	100		ug/L	197080	1	10/01/2014 20:32	GK
Tetrachloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 20:32	GK
Toluene	BRL	1000		ug/L	197080	1	10/01/2014 20:32	GK
trans-1,2-Dichloroethene	BRL	100		ug/L	197080	1	10/01/2014 20:32	GK
trans-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Trichloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 20:32	GK
Trichlorofluoromethane	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Vinyl acetate	BRL	10		ug/L	197080	1	10/01/2014 20:32	GK
Vinyl chloride	BRL	2.0		ug/L	197080	1	10/01/2014 20:32	GK
Xylenes, Total	BRL	10000		ug/L	197080	1	10/01/2014 20:32	GK
Surr: 4-Bromofluorobenzene	88.4	66.2-120		%REC	197080	1	10/01/2014 20:32	GK
Surr: Dibromofluoromethane	99.5	79.5-121		%REC	197080	1	10/01/2014 20:32	GK
Surr: Toluene-d8	102	77-117		%REC	197080	1	10/01/2014 20:32	GK

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-01
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 12:10:00 PM
Lab ID:	1409N05-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A					(SW3005A)			
Calcium	52700	100		ug/L	196901	1	10/01/2014 14:32	MR
Iron	427	100		ug/L	196901	1	10/01/2014 14:32	MR
Magnesium	29800	100		ug/L	196901	1	10/01/2014 14:32	MR
Potassium	2610	500		ug/L	196901	1	10/02/2014 17:45	MR
Sodium	8960	500		ug/L	196901	1	10/01/2014 14:32	MR
Mercury, Total SW7470A					(SW7470A)			
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:51	CG
APPENDIX I METALS SW6020A					(SW3005A)			
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:32	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:32	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:32	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:32	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:32	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:32	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/02/2014 17:45	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:32	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:32	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:32	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:32	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:32	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:32	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:32	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 14:32	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-1A
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/23/2014 2:50:00 PM
Lab ID:	1409M69-003	**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	R276883	1	09/30/2014 19:41	JM
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	514	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:16	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.204		ug/L	196924	1	09/30/2014 02:59	SH
1,2-Dibromoethane	BRL	0.051		ug/L	196924	1	09/30/2014 02:59	SH
Surr: 4-Bromofluorobenzene	111	60-120		%REC	196924	1	09/30/2014 02:59	SH
Inorganic Anions by IC E300.0								
Chloride	55.4	2.00		mg/L	R276589	2	09/25/2014 13:05	YS
Fluoride	BRL	4.00		mg/L	R276589	1	09/25/2014 11:36	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276589	1	09/25/2014 11:36	YS
Sulfate	19.2	1.00		mg/L	R276589	1	09/25/2014 11:36	YS
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	17.5	10.0		ug/L	197033	1	10/01/2014 20:13	MR
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	196886	1	09/26/2014 14:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	BRL	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
1,1,1-Trichloroethane	BRL	200		ug/L	196989	1	09/30/2014 06:10	NH
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 06:10	NH
1,1-Dichloroethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
1,1-Dichloroethene	BRL	7.0		ug/L	196989	1	09/30/2014 06:10	NH
1,2,3-Trichloropropane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
1,2-Dichlorobenzene	BRL	600		ug/L	196989	1	09/30/2014 06:10	NH
1,2-Dichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 06:10	NH
1,2-Dichloropropane	BRL	5.0		ug/L	196989	1	09/30/2014 06:10	NH
1,4-Dichlorobenzene	BRL	75		ug/L	196989	1	09/30/2014 06:10	NH
2-Butanone	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH

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
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- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-1A
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/23/2014 2:50:00 PM
Lab ID:	1409M69-003	**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	196989	1	09/30/2014 06:10	NH
4-Methyl-2-pentanone	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Acetone	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Acrylonitrile	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Benzene	BRL	5.0		ug/L	196989	1	09/30/2014 06:10	NH
Bromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Bromodichloromethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Bromoform	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Bromomethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Carbon disulfide	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Carbon tetrachloride	BRL	5.0		ug/L	196989	1	09/30/2014 06:10	NH
Chlorobenzene	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Chloroethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Chloroform	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Chloromethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
cis-1,2-Dichloroethene	BRL	70		ug/L	196989	1	09/30/2014 06:10	NH
cis-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Dibromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Dibromomethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Ethylbenzene	BRL	700		ug/L	196989	1	09/30/2014 06:10	NH
Iodomethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Methylene chloride	BRL	5.0		ug/L	196989	1	09/30/2014 06:10	NH
Styrene	BRL	100		ug/L	196989	1	09/30/2014 06:10	NH
Tetrachloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 06:10	NH
Toluene	BRL	1000		ug/L	196989	1	09/30/2014 06:10	NH
trans-1,2-Dichloroethene	BRL	100		ug/L	196989	1	09/30/2014 06:10	NH
trans-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Trichloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 06:10	NH
Trichlorofluoromethane	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Vinyl acetate	BRL	10		ug/L	196989	1	09/30/2014 06:10	NH
Vinyl chloride	BRL	2.0		ug/L	196989	1	09/30/2014 06:10	NH
Xylenes, Total	BRL	10000		ug/L	196989	1	09/30/2014 06:10	NH
Surr: 4-Bromofluorobenzene	86.2	66.2-120		%REC	196989	1	09/30/2014 06:10	NH
Surr: Dibromofluoromethane	105	79.5-121		%REC	196989	1	09/30/2014 06:10	NH
Surr: Toluene-d8	98.2	77-117		%REC	196989	1	09/30/2014 06:10	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-1A
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 11:59:00 AM
Lab ID:	1409M69-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				(SW3005A)				
Calcium	66200	100		ug/L	196901	1	10/01/2014 14:01	MR
Iron	438	100		ug/L	196901	1	10/01/2014 14:01	MR
Magnesium	28500	100		ug/L	196901	1	10/01/2014 14:01	MR
Potassium	7600	500		ug/L	196901	1	10/01/2014 19:41	MR
Sodium	25800	500		ug/L	196901	1	10/01/2014 14:01	MR
Mercury, Total SW7470A				(SW7470A)				
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:41	CG
APPENDIX I METALS SW6020A				(SW3005A)				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:01	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:01	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:01	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:01	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:01	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:01	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/01/2014 19:41	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:01	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:01	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:01	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:01	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:01	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:01	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:01	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 14:01	MR

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: 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/23/2014 2:50:00 PM
Lab ID:	1409M69-005	**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	R276883	1	09/30/2014 19:59	JM
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	539	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:17	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.203		ug/L	196924	1	09/30/2014 03:27	SH
1,2-Dibromoethane	BRL	0.051		ug/L	196924	1	09/30/2014 03:27	SH
Surr: 4-Bromofluorobenzene	113	60-120		%REC	196924	1	09/30/2014 03:27	SH
Inorganic Anions by IC E300.0								
Chloride	57.9	2.00		mg/L	R276589	2	09/25/2014 13:20	YS
Fluoride	BRL	4.00		mg/L	R276589	1	09/25/2014 11:51	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276589	1	09/25/2014 11:51	YS
Sulfate	19.6	1.00		mg/L	R276589	1	09/25/2014 11:51	YS
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	17.2	10.0		ug/L	197033	1	10/01/2014 20:19	MR
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	196886	1	09/26/2014 14:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	BRL	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
1,1,1-Trichloroethane	BRL	200		ug/L	196989	1	09/30/2014 06:38	NH
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 06:38	NH
1,1-Dichloroethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
1,1-Dichloroethene	BRL	7.0		ug/L	196989	1	09/30/2014 06:38	NH
1,2,3-Trichloropropane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
1,2-Dichlorobenzene	BRL	600		ug/L	196989	1	09/30/2014 06:38	NH
1,2-Dichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 06:38	NH
1,2-Dichloropropane	BRL	5.0		ug/L	196989	1	09/30/2014 06:38	NH
1,4-Dichlorobenzene	BRL	75		ug/L	196989	1	09/30/2014 06:38	NH
2-Butanone	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/23/2014 2:50:00 PM
Lab ID:	1409M69-005	**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	196989	1	09/30/2014 06:38	NH
4-Methyl-2-pentanone	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Acetone	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Acrylonitrile	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Benzene	BRL	5.0		ug/L	196989	1	09/30/2014 06:38	NH
Bromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Bromodichloromethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Bromoform	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Bromomethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Carbon disulfide	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Carbon tetrachloride	BRL	5.0		ug/L	196989	1	09/30/2014 06:38	NH
Chlorobenzene	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Chloroethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Chloroform	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Chloromethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
cis-1,2-Dichloroethene	BRL	70		ug/L	196989	1	09/30/2014 06:38	NH
cis-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Dibromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Dibromomethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Ethylbenzene	BRL	700		ug/L	196989	1	09/30/2014 06:38	NH
Iodomethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Methylene chloride	BRL	5.0		ug/L	196989	1	09/30/2014 06:38	NH
Styrene	BRL	100		ug/L	196989	1	09/30/2014 06:38	NH
Tetrachloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 06:38	NH
Toluene	BRL	1000		ug/L	196989	1	09/30/2014 06:38	NH
trans-1,2-Dichloroethene	BRL	100		ug/L	196989	1	09/30/2014 06:38	NH
trans-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Trichloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 06:38	NH
Trichlorofluoromethane	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Vinyl acetate	BRL	10		ug/L	196989	1	09/30/2014 06:38	NH
Vinyl chloride	BRL	2.0		ug/L	196989	1	09/30/2014 06:38	NH
Xylenes, Total	BRL	10000		ug/L	196989	1	09/30/2014 06:38	NH
Surr: 4-Bromofluorobenzene	84.8	66.2-120		%REC	196989	1	09/30/2014 06:38	NH
Surr: Dibromofluoromethane	106	79.5-121		%REC	196989	1	09/30/2014 06:38	NH
Surr: Toluene-d8	98.4	77-117		%REC	196989	1	09/30/2014 06:38	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	DUPLICATE
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 11:59:00 AM
Lab ID:	1409M69-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				(SW3005A)				
Calcium	64600	100		ug/L	196901	1	10/01/2014 14:08	MR
Iron	BRL	100		ug/L	196901	1	10/01/2014 14:08	MR
Magnesium	27800	100		ug/L	196901	1	10/01/2014 14:08	MR
Potassium	7300	500		ug/L	196901	1	10/01/2014 19:47	MR
Sodium	24500	500		ug/L	196901	1	10/01/2014 14:08	MR
Mercury, Total SW7470A				(SW7470A)				
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:43	CG
APPENDIX I METALS SW6020A				(SW3005A)				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:08	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:08	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:08	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:08	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:08	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:08	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/01/2014 19:47	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:08	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:08	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:08	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:08	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:08	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:08	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:08	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 14:08	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-02
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 10:12:00 AM
Lab ID:	1409N05-005	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	1.84	1.00		mg/L	R276883	1	09/30/2014 21:03	JM
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	109	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:21	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.202		ug/L	196924	1	09/30/2014 05:48	SH
1,2-Dibromoethane	BRL	0.051		ug/L	196924	1	09/30/2014 05:48	SH
Surr: 4-Bromofluorobenzene	114	60-120		%REC	196924	1	09/30/2014 05:48	SH
Inorganic Anions by IC E300.0								
Chloride	2.67	1.00		mg/L	R276614	1	09/25/2014 13:13	YS
Fluoride	BRL	4.00		mg/L	R276614	1	09/25/2014 13:13	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276614	1	09/25/2014 13:13	YS
Sulfate	BRL	1.00		mg/L	R276614	1	09/25/2014 13:13	YS
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	105	10.0		ug/L	197033	1	10/01/2014 21:16	MR
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	197077	1	10/01/2014 15:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	BRL	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
1,1,1-Trichloroethane	BRL	200		ug/L	197080	1	10/01/2014 21:49	GK
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 21:49	GK
1,1-Dichloroethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
1,1-Dichloroethene	BRL	7.0		ug/L	197080	1	10/01/2014 21:49	GK
1,2,3-Trichloropropane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
1,2-Dichlorobenzene	BRL	600		ug/L	197080	1	10/01/2014 21:49	GK
1,2-Dichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 21:49	GK
1,2-Dichloropropane	BRL	5.0		ug/L	197080	1	10/01/2014 21:49	GK
1,4-Dichlorobenzene	BRL	75		ug/L	197080	1	10/01/2014 21:49	GK
2-Butanone	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-02
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 10:12:00 AM
Lab ID:	1409N05-005	**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	197080	1	10/01/2014 21:49	GK
4-Methyl-2-pentanone	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Acetone	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Acrylonitrile	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Benzene	BRL	5.0		ug/L	197080	1	10/01/2014 21:49	GK
Bromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Bromodichloromethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Bromoform	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Bromomethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Carbon disulfide	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Carbon tetrachloride	BRL	5.0		ug/L	197080	1	10/01/2014 21:49	GK
Chlorobenzene	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Chloroethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Chloroform	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Chloromethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
cis-1,2-Dichloroethene	BRL	70		ug/L	197080	1	10/01/2014 21:49	GK
cis-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Dibromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Dibromomethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Ethylbenzene	BRL	700		ug/L	197080	1	10/01/2014 21:49	GK
Iodomethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Methylene chloride	BRL	5.0		ug/L	197080	1	10/01/2014 21:49	GK
Styrene	BRL	100		ug/L	197080	1	10/01/2014 21:49	GK
Tetrachloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 21:49	GK
Toluene	BRL	1000		ug/L	197080	1	10/01/2014 21:49	GK
trans-1,2-Dichloroethene	BRL	100		ug/L	197080	1	10/01/2014 21:49	GK
trans-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Trichloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 21:49	GK
Trichlorofluoromethane	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Vinyl acetate	BRL	10		ug/L	197080	1	10/01/2014 21:49	GK
Vinyl chloride	BRL	2.0		ug/L	197080	1	10/01/2014 21:49	GK
Xylenes, Total	BRL	10000		ug/L	197080	1	10/01/2014 21:49	GK
Surr: 4-Bromofluorobenzene	84.5	66.2-120		%REC	197080	1	10/01/2014 21:49	GK
Surr: Dibromofluoromethane	95.4	79.5-121		%REC	197080	1	10/01/2014 21:49	GK
Surr: Toluene-d8	100	77-117		%REC	197080	1	10/01/2014 21:49	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-02
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 12:20:00 PM
Lab ID:	1409N05-006	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				**(SW3005A)**				
Calcium	1710	100		ug/L	196901	1	10/01/2014 14:38	MR
Iron	BRL	100		ug/L	196901	1	10/01/2014 14:38	MR
Magnesium	1380	100		ug/L	196901	1	10/01/2014 14:38	MR
Potassium	2450	500		ug/L	196901	1	10/02/2014 17:51	MR
Sodium	2210	500		ug/L	196901	1	10/01/2014 14:38	MR
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:53	CG
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:38	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:38	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:38	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:38	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:38	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:38	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/02/2014 17:51	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:38	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:38	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:38	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:38	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:38	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:38	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:38	MR
Zinc	0.271	0.0200		mg/L	196901	1	10/01/2014 14:38	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 11:00:00 AM
Lab ID:	1409M69-001	**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	R276883	1	09/30/2014 19:26	JM
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	71	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:15	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.203		ug/L	196924	1	09/30/2014 02:31	SH
1,2-Dibromoethane	BRL	0.051		ug/L	196924	1	09/30/2014 02:31	SH
Surr: 4-Bromofluorobenzene	118	60-120		%REC	196924	1	09/30/2014 02:31	SH
Inorganic Anions by IC E300.0								
Chloride	13.8	1.00		mg/L	R276589	1	09/25/2014 11:22	YS
Fluoride	BRL	4.00		mg/L	R276589	1	09/25/2014 11:22	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276589	1	09/25/2014 11:22	YS
Sulfate	1.40	1.00		mg/L	R276589	1	09/25/2014 11:22	YS
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	150	10.0		ug/L	197033	1	10/01/2014 19:42	MR
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	196886	1	09/26/2014 14:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	BRL	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
1,1,1-Trichloroethane	BRL	200		ug/L	196989	1	09/30/2014 04:46	NH
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
1,1-Dichloroethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
1,1-Dichloroethene	BRL	7.0		ug/L	196989	1	09/30/2014 04:46	NH
1,2,3-Trichloropropane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
1,2-Dichlorobenzene	BRL	600		ug/L	196989	1	09/30/2014 04:46	NH
1,2-Dichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
1,2-Dichloropropane	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
1,4-Dichlorobenzene	BRL	75		ug/L	196989	1	09/30/2014 04:46	NH
2-Butanone	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH

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: 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 11:00:00 AM
Lab ID:	1409M69-001	**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	196989	1	09/30/2014 04:46	NH
4-Methyl-2-pentanone	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Acetone	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Acrylonitrile	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Benzene	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Bromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Bromodichloromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Bromoform	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Bromomethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Carbon disulfide	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Carbon tetrachloride	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Chlorobenzene	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Chloroethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Chloroform	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Chloromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
cis-1,2-Dichloroethene	BRL	70		ug/L	196989	1	09/30/2014 04:46	NH
cis-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Dibromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Dibromomethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Ethylbenzene	BRL	700		ug/L	196989	1	09/30/2014 04:46	NH
Iodomethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Methylene chloride	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Styrene	BRL	100		ug/L	196989	1	09/30/2014 04:46	NH
Tetrachloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Toluene	BRL	1000		ug/L	196989	1	09/30/2014 04:46	NH
trans-1,2-Dichloroethene	BRL	100		ug/L	196989	1	09/30/2014 04:46	NH
trans-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Trichloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Trichlorofluoromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Vinyl acetate	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Vinyl chloride	BRL	2.0		ug/L	196989	1	09/30/2014 04:46	NH
Xylenes, Total	BRL	10000		ug/L	196989	1	09/30/2014 04:46	NH
Surr: 4-Bromofluorobenzene	86.2	66.2-120		%REC	196989	1	09/30/2014 04:46	NH
Surr: Dibromofluoromethane	104	79.5-121		%REC	196989	1	09/30/2014 04:46	NH
Surr: Toluene-d8	98.6	77-117		%REC	196989	1	09/30/2014 04:46	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 12:40:00 PM
Lab ID:	1409M69-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				(SW3005A)				
Calcium	1270	100		ug/L	196901	1	10/01/2014 13:17	MR
Iron	BRL	100		ug/L	196901	1	10/01/2014 13:17	MR
Magnesium	620	100		ug/L	196901	1	10/01/2014 19:15	MR
Potassium	651	500		ug/L	196901	1	10/01/2014 19:15	MR
Sodium	10100	500		ug/L	196901	1	10/01/2014 13:17	MR
Mercury, Total SW7470A				(SW7470A)				
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:39	CG
APPENDIX I METALS SW6020A				(SW3005A)				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 13:17	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 13:17	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 13:17	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 13:17	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 13:17	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 13:17	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/01/2014 19:15	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 13:17	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 13:17	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 13:17	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 13:17	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 13:17	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 13:17	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 13:17	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 13:17	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 2:45:00 PM
Lab ID:	1409N05-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	1.98	1.00		mg/L	R276883	1	09/30/2014 20:19	JM
Total Metals by ICP/MS SW6020A					(SW3005A)			
Calcium	BRL	100		ug/L	196901	1	10/01/2014 19:52	MR
Iron	BRL	100		ug/L	196901	1	10/01/2014 14:14	MR
Magnesium	BRL	100		ug/L	196901	1	10/01/2014 14:14	MR
Potassium	BRL	500		ug/L	196901	1	10/01/2014 14:14	MR
Sodium	BRL	500		ug/L	196901	1	10/01/2014 14:14	MR
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	28	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1					(E350.1)			
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:18	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011					(SW8011)			
1,2-Dibromo-3-chloropropane	BRL	0.207		ug/L	196924	1	09/30/2014 03:55	SH
1,2-Dibromoethane	BRL	0.052		ug/L	196924	1	09/30/2014 03:55	SH
Surr: 4-Bromofluorobenzene	111	60-120		%REC	196924	1	09/30/2014 03:55	SH
Mercury, Total SW7470A					(SW7470A)			
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:44	CG
Inorganic Anions by IC E300.0								
Chloride	BRL	1.00		mg/L	R276614	1	09/25/2014 13:28	YS
Fluoride	BRL	4.00		mg/L	R276614	1	09/25/2014 13:28	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276614	1	09/25/2014 13:28	YS
Sulfate	BRL	1.00		mg/L	R276614	1	09/25/2014 13:28	YS
Dissolved Metals by ICP/MS SW6020A					(SW3005A)			
Manganese	BRL	10.0		ug/L	197033	1	10/01/2014 20:57	MR
Cyanide SW9014					(SW9010C)			
Cyanide, Total	BRL	0.200		mg/L	196886	1	09/26/2014 14:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	BRL	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B					(SW5030B)			
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
1,1,1-Trichloroethane	BRL	200		ug/L	197080	1	10/01/2014 19:42	GK

Qualifiers:

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

Analytical Environmental Services, Inc **Date:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 2:45:00 PM
Lab ID:	1409N05-001	**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	197080	1	10/01/2014 19:42	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
1,1-Dichloroethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
1,1-Dichloroethene	BRL	7.0		ug/L	197080	1	10/01/2014 19:42	GK
1,2,3-Trichloropropane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
1,2-Dichlorobenzene	BRL	600		ug/L	197080	1	10/01/2014 19:42	GK
1,2-Dichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
1,2-Dichloropropane	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
1,4-Dichlorobenzene	BRL	75		ug/L	197080	1	10/01/2014 19:42	GK
2-Butanone	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
2-Hexanone	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
4-Methyl-2-pentanone	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Acetone	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Acrylonitrile	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Benzene	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Bromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Bromodichloromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Bromoform	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Bromomethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Carbon disulfide	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Carbon tetrachloride	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Chlorobenzene	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Chloroethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Chloroform	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Chloromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
cis-1,2-Dichloroethene	BRL	70		ug/L	197080	1	10/01/2014 19:42	GK
cis-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Dibromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Dibromomethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Ethylbenzene	BRL	700		ug/L	197080	1	10/01/2014 19:42	GK
Iodomethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Methylene chloride	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Styrene	BRL	100		ug/L	197080	1	10/01/2014 19:42	GK
Tetrachloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Toluene	BRL	1000		ug/L	197080	1	10/01/2014 19:42	GK
trans-1,2-Dichloroethene	BRL	100		ug/L	197080	1	10/01/2014 19:42	GK
trans-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Trichloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Trichlorofluoromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Vinyl acetate	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 2:45:00 PM
Lab ID:	1409N05-001	**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	197080	1	10/01/2014 19:42	GK
Xylenes, Total	BRL	10000		ug/L	197080	1	10/01/2014 19:42	GK
Surr: 4-Bromofluorobenzene	93.8	66.2-120		%REC	197080	1	10/01/2014 19:42	GK
Surr: Dibromofluoromethane	98.3	79.5-121		%REC	197080	1	10/01/2014 19:42	GK
Surr: Toluene-d8	94.8	77-117		%REC	197080	1	10/01/2014 19:42	GK
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:14	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:14	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:14	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:14	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:14	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:14	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/01/2014 19:52	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:14	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:14	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:14	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:14	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:14	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:14	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:14	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 14:14	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP. BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 3:00:00 PM
Lab ID:	1409N05-002	**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	R276883	1	09/30/2014 20:32	JM
Total Metals by ICP/MS SW6020A					(SW3005A)			
Calcium	BRL	100		ug/L	196901	1	10/01/2014 14:26	MR
Iron	BRL	100		ug/L	196901	1	10/01/2014 14:26	MR
Magnesium	BRL	100		ug/L	196901	1	10/01/2014 14:26	MR
Potassium	BRL	500		ug/L	196901	1	10/01/2014 14:26	MR
Sodium	BRL	500		ug/L	196901	1	10/01/2014 14:26	MR
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	19	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1					(E350.1)			
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:19	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011					(SW8011)			
1,2-Dibromo-3-chloropropane	BRL	0.199		ug/L	196924	1	09/30/2014 04:24	SH
1,2-Dibromoethane	BRL	0.050		ug/L	196924	1	09/30/2014 04:24	SH
Surr: 4-Bromofluorobenzene	111	60-120		%REC	196924	1	09/30/2014 04:24	SH
Mercury, Total SW7470A					(SW7470A)			
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:11	CG
Inorganic Anions by IC E300.0								
Chloride	BRL	1.00		mg/L	R276614	1	09/25/2014 12:43	YS
Fluoride	BRL	4.00		mg/L	R276614	1	09/25/2014 12:43	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276614	1	09/25/2014 12:43	YS
Sulfate	BRL	1.00		mg/L	R276614	1	09/25/2014 12:43	YS
Dissolved Metals by ICP/MS SW6020A					(SW3005A)			
Manganese	BRL	10.0		ug/L	197033	1	10/01/2014 21:03	MR
Cyanide SW9014					(SW9010C)			
Cyanide, Total	BRL	0.200		mg/L	196886	1	09/26/2014 14:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	11.1	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B					(SW5030B)			
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
1,1,1-Trichloroethane	BRL	200		ug/L	197080	1	10/01/2014 20:07	GK

Qualifiers:

- * Value exceeds maximum contaminant level
- BRL Below reporting limit
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- NC Not confirmed
- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP. BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 3:00:00 PM
Lab ID:	1409N05-002	**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	197080	1	10/01/2014 20:07	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
1,1-Dichloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
1,1-Dichloroethene	BRL	7.0		ug/L	197080	1	10/01/2014 20:07	GK
1,2,3-Trichloropropane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
1,2-Dichlorobenzene	BRL	600		ug/L	197080	1	10/01/2014 20:07	GK
1,2-Dichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
1,2-Dichloropropane	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
1,4-Dichlorobenzene	BRL	75		ug/L	197080	1	10/01/2014 20:07	GK
2-Butanone	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
2-Hexanone	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
4-Methyl-2-pentanone	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Acetone	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Acrylonitrile	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Benzene	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Bromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Bromodichloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Bromoform	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Bromomethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Carbon disulfide	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Carbon tetrachloride	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Chlorobenzene	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Chloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Chloroform	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Chloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
cis-1,2-Dichloroethene	BRL	70		ug/L	197080	1	10/01/2014 20:07	GK
cis-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Dibromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Dibromomethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Ethylbenzene	BRL	700		ug/L	197080	1	10/01/2014 20:07	GK
Iodomethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Methylene chloride	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Styrene	BRL	100		ug/L	197080	1	10/01/2014 20:07	GK
Tetrachloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Toluene	BRL	1000		ug/L	197080	1	10/01/2014 20:07	GK
trans-1,2-Dichloroethene	BRL	100		ug/L	197080	1	10/01/2014 20:07	GK
trans-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Trichloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Trichlorofluoromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Vinyl acetate	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK

Qualifiers:

- * Value exceeds maximum contaminant level
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- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
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- > Greater than Result value
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- S Spike Recovery outside limits due to matrix
- Narr See case narrative
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- < Less than Result value
- J Estimated value detected below Reporting Limit

Analytical Environmental Services, Inc **Date:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP. BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 3:00:00 PM
Lab ID:	1409N05-002	**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	197080	1	10/01/2014 20:07	GK
Xylenes, Total	BRL	10000		ug/L	197080	1	10/01/2014 20:07	GK
Surr: 4-Bromofluorobenzene	83.9	66.2-120		%REC	197080	1	10/01/2014 20:07	GK
Surr: Dibromofluoromethane	92.2	79.5-121		%REC	197080	1	10/01/2014 20:07	GK
Surr: Toluene-d8	99.4	77-117		%REC	197080	1	10/01/2014 20:07	GK
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:26	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:26	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:26	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:26	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:26	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:26	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/02/2014 17:30	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:26	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:26	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:26	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:26	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:26	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:26	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:26	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 14:26	MR

Qualifiers:

- `*` Value exceeds maximum contaminant level
- BRL Below reporting limit
- H Holding times for preparation or analysis exceeded
- N Analyte not NELAC certified
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- > Greater than Result value
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- 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

APPENDIX C

LOUDON COUNTY
COMPLIANCE WELL
MONITORING WELL #01

INORGANIC	APPENDIX I LIMITS	3-23-94	6-2-94	**7-13-94	10-18-94	12-1-94	3-2-95	10-30-95	4-12-96	11-2-96	3-21-97	9-20-97	05-19-98	10-29-98	3-16-99	9-16-99	03-23-00	09-06-00	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	8-10-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-2-09	10-7-09	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	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	5.12	5.04
Arsenic	50	2	2	9.4	8.9	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	36.84	37.93
Barium	2000	23	19	260	110	68	33	80	41	50	80	30	30	50	55	130	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	1371.41	1371.05
Beryllium	4	3	3	18	9.5	3	3	3	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	4.47	3.83
Cadmium	5	5	5	19	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	5.25	5.02
Chromium	100	8.5	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	73.34	72.20
Cobalt	NA	10	10	78	30	10	10	10	10	10	10	10	10	10	10	10	29	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	12.27	14.35
Copper	NA	8.1	10	140	59	24	10	17	10	10	10	10	10	10	10	12	30	19.2	10	10	13.5	10.2	10.0	10.0	10.0	10.0	10.0	11.6	10.0	10.0	10.0	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	15.29	21.65
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	4	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	2.63	2.66
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	29.64	42.07
Mercury	2	0.3	*	2.4	0.83	0.44	0.2	0.5	0.2	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	1.65	1.57
Nickel	100	8.1	10	190	73	35	20	20	22	10	20	20	10	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	78.71	76.87
Selenium	10	2	2	2.5	2	2	2	2	2	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	10.63	10.52
Silver	50	8	8	ND	8	8	8	8	6	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	39.42	35.78
Thallium	2	1	1	2.6	1	1	1	1	2	2	2	2	2	2	2	2.35	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	1.93	2.10
Vanadium	NA	8.4	10	200	74	40	13	31	10	30	10	10	10	30	10	10	75	27.8	10	10	20.5	23.2	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	10	20.15	13.89
Zinc	15000	110	42	1700	620	270	78	518	83	180	190	40	110	290	47.4	287	611	178	35.1	34.4	133	205	69.8	47.1	20	56.2	78.5	218.0	20.0	267.00	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	156.14	69.47

† = 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	6-02-94	**7-13-94	10-18-94	12-1-94	3-02-95	10-30-95	4-12-96	11-2-96	3-21-97	9-20-97	05-19-98	10-29-98	3-16-99	9-16-99	03-23-00	9-6-00	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-28-04	9-22-04	4-11-05	9-29-05	3-28-06	8-10-06	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	1-4-11	10-4-11	3-14-12	10-2-12	3-27-13	9-24-13	3-24-14	9-23-14
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	APPENDIX I 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	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	6.00	5.04
Arsenic	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50.00	37.98
Barium	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000.00	1371.05
Beryllium	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	5.00	5.02
Chromium	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.00	72.20
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	10.00	14.35
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	10.00	21.65
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	4.00	2.66
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	22.37	42.07
Mercury	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00	1.57
Nickel	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.00	76.87
Selenium	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10.00	10.52
Silver	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50.00	35.78
Thallium	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.00	2.10
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	10.00	13.89
Zinc	‡5000	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	23.27	69.47

† = 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
Acetone	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
Benzene	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
Bromodichloromethane	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
Carbon disulfide	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
Chlorobenzene	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
Chloroform; Trichloromethane	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
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
1,2-Dibromoethane	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
p-Dichlorobenzene; 1,4-Dichlorobenzene	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
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
1,2-Dichloroethane; Ethylene dichloride	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
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
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
1,2-Dichloropropane; Propylene dichloride	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
trans-1,3-Dichloropropene	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
2-Hexanone; Methyl butyl ketone	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
Methyl chloride; Chloromethane	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
Methylene chloride; Dichloromethane	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
Methyl iodide; Iodomethane	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
Styrene	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
1,1,2,2-Tetrachloroethane	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
Toluene	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
1,1,2-Trichloroethane	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
Trichlorofluoromethane; CFC-11	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
Vinyl acetate	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
Xylenes	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 #02

INORGANIC	APPENDIX I LIMITS	3-23-84	6-2-84	**7-13-84	10-17-84	12-1-84	3-2-85	10-30-85	4-12-86	11-2-86	2-21-87	9-23-87	05-19-88	10-25-88	3-15-89	8-16-89	03-23-90	9-4-90	4-25-91	9-18-91	4-17-92	9-30-92	4-21-93	9-30-93	4-28-94	9-22-94	4-11-95	9-29-95	3-28-96	8-15-96	10-04-96	3-27-97	11-1-97	3-27-98	10-13-98	4-2-99	10-2-99	4-7-10	10-4-10	1-6-11	10-5-11	3-15-12	10-3-12	3-25-13	9-25-13	3-26-14	9-24-14	MW-02 AVG	MW-03 AVG
Antimony	6	1	1	1	1	1	1	1	3	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	5.20	5.04
Arsenic	50	2	2	4.4	7.6	4.6	2.1	2	20	20	20	20	80	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	39.03	37.59
Barium	2000	84	67	420	350	290	99	79	38	50	20	50	130	50	36.7	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	1347.12	1311.66
Beryllium	4	3	3	39	22	25	5	5	4	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	6.00	3.83
Cadmium	5	3.1	1.2	33	22	15	5	5	5	5	5	5	8	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	6.08	5.02
Chromium	100	36	26	130	110	110	25	12	10	10	10	10	40	10	10	10	100	100	100	100	120	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	79.54	72.20
Cobalt	NA	10	10	59	44	45	10	10	10	10	10	10	30	10	10	10	13	13	10	13	10	13	10	13	10	13	10	13	10	13	10	13	10	13	10	13	10	13	10	13	10	13	10	13	13.66	14.35
Copper	NA	140	13	200	150	120	33	17	10	10	10	10	60	10	10	10	10	10	12	10	15.7	15.8	10	13	10	13	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	24.40	21.65
Fluoride***	4	0.05	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	0.29	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	2.63	2.66
Lead	115	22	8.4	420	290	200	65	32	10	20	10	20	90	20	10	10	50	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	43.49	42.07
Mercury	2	0.2	*	1.6	2.6	0.2	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	1.65	1.57
Nickel	100	130	20	340	290	250	80	40	20	30	10	30	120	30	20	20	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	99.23	78.87
Selenium	10	2	2	2	2	2	2	2	20	20	20	20	20	20	20	20	10	10	10	10	13	10	10	13	10	13	10	13	10	13	10	13	10	10	10	13	10	13	10	13	10	10	10	10	13.52	10.51
Silver	50	6	6	6	6	6	5	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	35.78	35.79
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	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.27	2.10
Vanadium	NA	14	14	260	200	190	43	24	10	20	10	13	70	10	10	10	10	13	10	10	11.5	24.2	10	10	10	13	10	10	10	13	10	10	10	10	10	13	10	10	10	10	10	10	10	10	26.21	13.89
Zinc	15000	540	140	8200	12000	9900	1760	1130	351	653	120	570	2430	240	322	285	455	167	143	181	570	659	224	256	140	284	206	559	221	247	264	280	299	236	223	262	262	261	64.2	243.0	256.0	206.0	243.0	287.0	271.0	269.0	271.0	1032.22	59.47

† = 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	3-23-84	6-02-84	**7-13-84	10-17-84	12-1-84	3-02-85	10-30-85	4-12-86	11-2-86	3-2-87	9-23-87	05-19-88	10-25-88	3-15-89	8-16-89	03-23-90	9-4-90	4-25-91	9-18-91	4-17-92	9-30-92	4-21-93	9-30-93	4-28-94	9-22-94	4-11-95	9-29-95	3-28-96	8-15-96	10-04-96	3-27-97	11-1-97	3-27-98	10-13-98	4-2-99	10-1-99	4-7-10	10-4-10	1-4-11	10-4-11	3-15-12	10-3-12	3-25-13	9-25-13	3-26-14	9-24-14
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
trans-1,4-Dichloro-2-buten	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

LOUDON COUNTY
(UPGRADIENT) BACKGROUND WELL
MONITORING WELL #03

INORGANIC	APPENDIX LIMITS	3-27-84	6-2-84	**7-11-84	10-10-84	12-1-84	3-5-85	10-30-85	4-12-86	11-5-86	3-31-87	9-29-87	05-19-88	10-25-88	3-16-89	9-11-89	03-23-90	8-8-90	2-19-91	4-25-91	9-18-91	4-17-92	9-30-92	4-21-93	9-30-93	4-25-94	9-27-94	4-11-95	9-29-95	3-27-96	10-04-96	3-27-97	10-13-97	4-1-98	10-2-98	4-7-99	10-6-99	1-4-00	10-6-00	3-16-01	10-3-01	3-28-02	9-25-02	3-25-03	9-26-03	MW-03 AVG
Antimony	6	1	1	1	1	1	1	1	4	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	5.04
Arsenic	50	3.2	2	8.6	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	37.92
Barium	2000	149	10	300	100	50	40	57	63	40	50	30	60	50	39.1	39	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	1371.05
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	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	5.02
Chromium	100	27	10	42	32	10	10	10	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	72.20
Cobalt	NA	24	10	68	39	10	10	10	13	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	50.5	10.0	26.0	10.0	45.4	10.0	10.0	10.0	10.0	10.0	10	10	10	10	10	10	10	10	10	10	14.35
Copper	NA	43	10	150	160	26	10	10	25	10	10	10	10	20	10	10	10	20.4	10	10	13.6	18.0	10	26.4	10.0	23.6	10.0	43.8	50.0	50.0	10.0	10.0	10	10	10	10	10	10	10	10	10	10	10	10	10	21.65
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	0.20	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	2.66
Lead	115	45	8.7	350	97	32	25	17	34	20	10	10	10	42	10	10	50	50	50	50	50	50	50	135	50	95.4	50.0	10	111.0	50.0	50.0	50.0	15.0	15.0	15	15	15	15	15	15	15	15	15	15	15	42.07
Mercury	2	0.2	*	0.68	0.2	0.2	0.4	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	1.57
Nickel	100	33	10	100	57	23	20	12	20	10	10	10	20	50	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	76.87
Selenium	10	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	10.52
Silver	50	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	35.78
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	2.10
Vanadium	NA	26	10	73	40	15	10	10	16	10	10	10	20	20	10	10	10	13.3	10	10	10	14.6	10	15.6	10.0	16.3	10.0	24.1	10.0	10.0	10.0	10.0	10	10	10	10	10	10	10	10	10	10	10	10	13.69
Zinc	15000	170	33	420	240	95	50	164	114	70	50	50	190	150	244	54	36	99.1	20	27.1	47.8	98.6	131	45.8	93.0	26.6	71.3	33.6	155.0	28.6	29.9	47.0	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	69.47

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

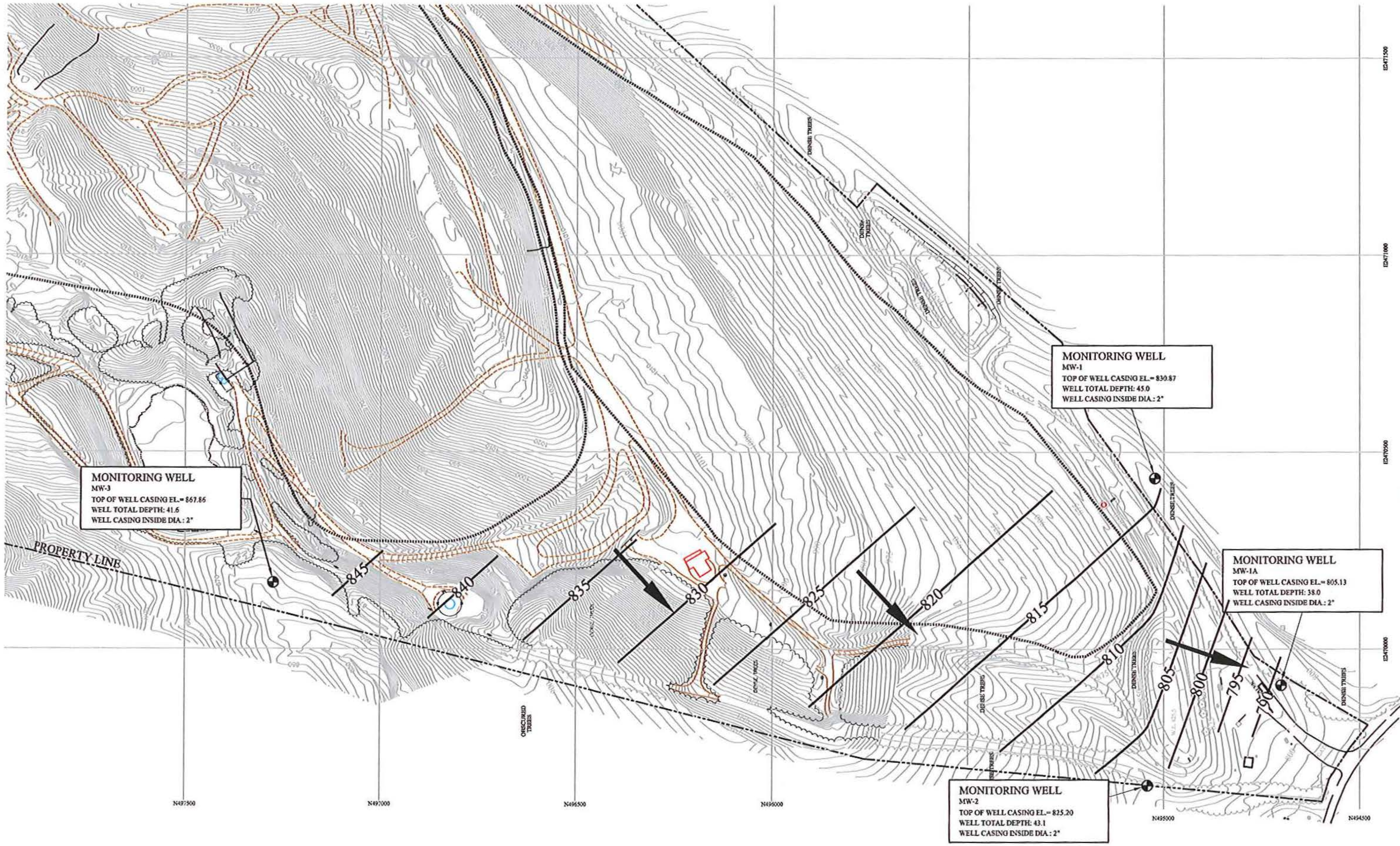
ORGANIC	2-23-94	5-2-94	**7-13-94	10-18-94	12-1-94	3-07-95	10-30-95	4-12-96	11-5-96	3-31-97	9-29-97	05-19-98	10-25-98	3-16-99	9-15-99	03-23-00	8-8-00	2-19-01	4-25-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-25-04	9-27-04	4-11-05	9-29-05	3-27-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-1-09	10-1-09	4-7-10	10-6-10	1-4-11	10-6-11	3-16-12	10-3-12	3-28-13	9-25-13	3-25-14	9-24-14
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
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
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
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
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
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
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
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
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
Chloroethane, Ethyl chloride	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
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
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
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
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
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
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
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
1,1-Dichloroethane; Ethylidene chloride; Ethylidene dichloride	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

APPENDIX D

GROUNDWATER DATA
Matlock Bend Landfill (Phase I)
September 23, 2014

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	14.55	816.32	815	20	4.70E-06	0.18	6.60E-02	1.72E-06	2.48E-03	SW
MW-1A*	805.13	16.58	788.55	790	25	3.93E-06	0.18	5.80E-02	1.27E-06	1.82E-03	SW
MW-02	825.20	22.86	802.34	800	35	5.90E-06	0.18	6.69E-02	2.19E-06	3.16E-03	SW
MW-03	867.86	19.76	848.10	845	120	1.20E-05	0.18	2.58E-02	1.72E-06	2.48E-03	SW

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



LEGEND:

- PROPERTY BOUNDARY
- 842 — 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 SEPTEMBER 23, 2014.
2. TOPOGRAPHIC CONTOURS SHOWN WERE PROVIDED BY CONTINENTAL AERIAL SURVEYS, ALCOA, TENNESSEE PHOTO DATED SEPTEMBER 18, 2014.

GW.WELL NO.	WATER ELEV.
MW-1	816.32
MW-1A	788.55
MW-2	802.34
MW-3	848.10

RON VAIL REGISTERED ENGINEER AGRICULTURE COMMERCE No. 00109716 STATE OF TENNESSEE 11/19/14

0' 150' 300' 450'

DATE	DRWN	CHKD	REVISION

2014 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: 11/4/14
DRAWN BY: RH
CHECKED BY: WM
APPROVED BY: RV
FILE: 1410-F1
JOB NO. 200-1410

F-1

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

November 19, 2014

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 2014 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,

Will Martin
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
Robert D. Burnette, P.E., Executive V.P. of Engineering, Santek
Matt Dillard, Executive V.P. of Operations, Santek
Levi Higdon, Landfill Manager, Santek

MATLOCK BEND LANDFILL

PHASE II/IV

MATLOCK BEND LANDFILL – PHASE II/IV UPGRADE
GROUNDWATER MONITORING REPORT
2nd SEMI-ANNUAL EVENT 2014

SANTEK PROJECT NO. 200-1410.4

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

NOVEMBER 2014

1.0 INTRODUCTION

In accordance with the Tennessee Department of Environment and Conservation's Solid Waste Processing and Disposal Rule 1200-1-7-.04(7), Santek Waste Services, Inc. (Santek) is submitting the groundwater monitoring report for the second semi-annual event for 2014 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 September 23 & 24, 2014. Samples were analyzed for Appendix I constituents. All samples were submitted to AES for analysis. 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 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 Appendix I limits from pages .01-17,18 of the 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
There were no inorganic or organic constituents detected above the report limits during this event.

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 4.05×10^{-3} ft/day at MW-03 to 7.92×10^{-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 Appendix I limit is not available.*

APPENDIX A

DATE: 9/24/14

FIELD SAMPLING LOG	WELL NO: MW-03
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 9/24/14 (Time) 10:42	Purge End: (Date) 9/24/14 (Time) 10:53
Purged by: Robert	
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: 19.80 (=) Wtr. Col. Thick: 21.80 .
19.76 (water level on 9/23/14)

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 3.5 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 10.5 Total Purge Gals.

GW elev. Ref. 867.86 ft.(-) DTW 19.76 ft. = 848.10 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
10:43		-			16.50	4.98	0.067	6.1		Clear
10:48		3.5			16.19	4.96	0.064	65.7		Clear
10:53		4.8			16.17	4.96	0.063	295		Cloudy, *purged dry

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

*Purged dry at 4.8 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 = 8.4 NTU's. VOC's taken on 9/24/14 @ 11:00 a.m. Metals taken on 9/24/14 @ 12:40 p.m. Water level taken on 9/23/14.

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

DATE: 9/23/14

FIELD SAMPLING LOG	WELL NO: MW-4R
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 9/23/14 (Time) 12:13	Purge End: (Date) 9/23/14 (Time) 12:23
Purged by: Robert	
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: 100.50 (=) Wtr. Col. Thick: 6.00 .

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 1.0 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 3.0 Total Purge Gals.

GW elev. Ref. 992.32 ft.(-) DTW 100.50 ft. = 891.82 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
12:14		-			17.79	7.17	0.183	20.7		Clear
12:18		1.0			17.14	7.09	0.193	310		Murky
12:23		1.5			16.94	7.15	0.195	>1000		Muddy, *purged dry

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

Purged dry at 1.5 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 = 19.9 NTU's. VOC's taken on 9/23/14 @ 12:24 p.m. Metals taken on 9/24/14 @ 11:40 a.m. Allowed well to settle overnight.

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

DATE: 9/23/14

FIELD SAMPLING LOG	WELL NO: MW-05
Location: Loudon County	Site: Matlock Bend
Client/Operator: Santek Waste Services, Inc.	Project No:
Purge Start: (Date) 9/23/14 (Time) 10:23	Purge End: (Date) 9/23/14 (Time) 11:34
Purged by: Robert	
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: 102.29 (=) Wtr. Col. Thick: 70.42 .

(x) 2"=0.16 4"=0.65 6"=1.47 Gals./ft. (=) 11.3 Gals./Csg. Vol. (x) 3 Csg. Vol. (=) 33.9 Total Purge Gals.

GW elev. Ref. 936.84 ft.(-) DTW 102.29 ft. = 834.55 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
10:26		-			16.80	7.19	0.225	7.3		Clear
10:48		11.5			18.49	7.85	0.216	129		Cloudy
11:11		23.0			18.16	7.97	0.211	184		Cloudy
11:23		28.5			17.94	8.00	0.215	226		Cloudy
11:34		34.0			17.61	7.99	0.216	243		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 = 21.1 NTU's. VOC's taken on 9/23/14 @ 11:35 a.m. Metals taken on 9/24/14 @ 11:27 a.m. 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 10, 2014

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

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

RE: Loudon Co. LF (Matlock Bend) 2nd Semi-Annual GW Ev

Dear Will Martin: Order No: 1409N07

Analytical Environmental Services, Inc. received 4 samples on 9/25/2014 10:15:00 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 07/01/14-06/30/15.
-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 09/01/15.

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

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

Chantelle Kanhai
Project Manager

3080 Presidential Drive • Atlanta, Georgia 30340 • Tel: 770.457.8177 • Fax: 770.457.8188 • Toll Free: 800.972.4889
www.aesatlanta.com

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

CHAIN OF CUSTODY

Work Order: 1409N07

Date: 9/24/14 Page 1 of 1

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

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	ANALYSIS REQUESTED: App. I Metals	Total Mercury	Inorganic Anions by IC	App. I VOC's	Micro-Ext. VOC's	PRESERVATION (See codes)	REMARKS	No # of Containers
1	MW-4R	9/23/14	12:24	X		GW			X	X	X			5
2	↳	9/24/14	11:40	X		GW	X	X						1
3	MW-05	9/23/14	11:35	X		GW			X	X	X			5
4	↳	9/24/14	11:27	X		GW	X	X						1
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														

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

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Robert Hudson	9/24/14 5pm	1: [signature]	9/25/14 10:15
2:		2:	
3:		3:	

PROJECT INFORMATION
PROJECT NAME: Loudon Co. LF (Matlock Bend) 2nd Semi-
PROJECT #: Annual GW Event 2014
SITE ADDRESS:
SEND REPORT TO: Will Morton
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.

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.

Sample/Cooler Receipt Checklist

Client Sentek Work Order Number 1409N07

Checklist completed by [signature] 9/25/14
Signature Date

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

Shipping container/cooler in good condition?	Yes ✓	No __	Not Present __
Custody seals intact on shipping container/cooler?	Yes __	No __	Not Present ✓
Custody seals intact on sample bottles?	Yes __	No __	Not Present ✓
Container/Temp Blank temperature in compliance? (0°≤6°C)*	Yes ✓	No __	

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

Chain of custody present?	Yes ✓	No __
Chain of custody signed when relinquished and received?	Yes ✓	No __
Chain of custody agrees with sample labels?	Yes ✓	No __
Samples in proper container/bottle?	Yes ✓	No __
Sample containers intact?	Yes ✓	No __
Sufficient sample volume for indicated test?	Yes ✓	No __
All samples received within holding time?	Yes ✓	No __
Was TAT marked on the COC?	Yes ✓	No __
Proceed with Standard TAT as per project history?	Yes __	No __ Not Applicable ✓
Water - VOA vials have zero headspace?	No VOA vials submitted __	Yes ✓ No __
Water - pH acceptable upon receipt?	Yes ✓	No __ Not Applicable __

Adjusted? _____ Checked by 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

Analytical Environmental Services, Inc

Date: 10-Oct-14

Client: Santek Environmental Inc.
Project: Loudon Co. LF (Matlock Bend) 2nd Semi-Annual G\
Lab Order: 1409N07

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1409N07-001A	MW-4R	9/23/2014 12:24:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		09/30/2014	09/30/2014
1409N07-001B	MW-4R	9/23/2014 12:24:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		09/29/2014	09/30/2014
1409N07-001C	MW-4R	9/23/2014 12:24:00PM	Groundwater	Inorganic Anions by IC			09/26/2014
1409N07-002A	MW-4R	9/24/2014 11:40:00AM	Groundwater	APPENDIX I METALS		09/29/2014	10/01/2014
1409N07-002A	MW-4R	9/24/2014 11:40:00AM	Groundwater	APPENDIX I METALS		09/29/2014	10/02/2014
1409N07-002A	MW-4R	9/24/2014 11:40:00AM	Groundwater	TOTAL MERCURY		09/29/2014	09/29/2014
1409N07-003A	MW-05	9/23/2014 11:35:00AM	Groundwater	APPENDIX I VOLATILE ORGANICS		09/30/2014	09/30/2014
1409N07-003B	MW-05	9/23/2014 11:35:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		09/29/2014	09/30/2014
1409N07-003C	MW-05	9/23/2014 11:35:00AM	Groundwater	Inorganic Anions by IC			09/26/2014
1409N07-004A	MW-05	9/24/2014 11:27:00AM	Groundwater	APPENDIX I METALS		09/29/2014	10/01/2014
1409N07-004A	MW-05	9/24/2014 11:27:00AM	Groundwater	APPENDIX I METALS		09/29/2014	10/02/2014
1409N07-004A	MW-05	9/24/2014 11:27:00AM	Groundwater	TOTAL MERCURY		09/29/2014	09/29/2014

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 10, 2014

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

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

RE: Loudon Co. (Matlock Bend) LF 2nd Semi-Annual

Dear Will Martin: Order No: 1409M69

Analytical Environmental Services, Inc. received 6 samples on 9/25/2014 10:15:00 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 07/01/14-06/30/15.
-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 09/01/15.

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

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

Chantelle Kanhai
Project Manager

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: 1409M69

Date: 9/24/14 Page 1 of 1

COMPANY: Santek Waste Services, Inc

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

PHONE: (423) 303-7107

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 / PRESERVATION (See codes)

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Inorganic Anions by IC	TDS	Total Metals	Total Mercury	App. I Metals	Dissolved Metals	App. I VOCs	Micro-Bact.	Nitrogen, Ammonia	TOC	COD	Cyanide		REMARKS	No # of Containers
1	MW-03	9/24/14	11:00	X		GW	X	X			X	X	X	X	X	X	X	X			
2	↳	9/24/14	12:40	X		GW			X	X	X										
3	MW-1A	9/23/14	2:50	X		GW	X	X				X	X	X	X	X	X	X			
4	↳	9/24/14	11:59	X		GW			X	X	X										
5	Duplicate	9/23/14		X		GW	X	X				X	X	X	X	X	X	X			
6	↳	9/24/14		X		GW			X	X	X										
7																					
8																					
9																					
10																					
11																					
12																					
13																					
14																					

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Robert Hudson	9/24/14 5pm	1: [signature]	9/25/14 10:15
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: Loudon Co. (Matlock Bend) LF 2nd Semi-

PROJECT #: Annual GW Event 2014

SITE ADDRESS:

SEND REPORT TO: Will Martin

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 (circled) / / VIA:

IN / / VIA:

CLIENT FedEx (circled) 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:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual
Lab ID:	1409M69

Case Narrative

The collection times were not listed on the COC for sample "Duplicate". Based on the matching collection dates, the collection times were logged in using the same collection times provided for sample "MW-1A".

Analytical Environmental Services, Inc.

Sample/Cooler Receipt Checklist

Client Santek Work Order Number 1409M69

Checklist completed by Joana Pacurar 9/25/14
Signature Date

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

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

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

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

Container/Temp Blank temperature in compliance? (0°≤6°C)* Yes ✓ No __

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

Chain of custody present? Yes ✓ No __

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

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

Samples in proper container/bottle? Yes ✓ No __

Sample containers intact? Yes ✓ No __

Sufficient sample volume for indicated test? Yes ✓ No __

All samples received within holding time? Yes ✓ No __

Was TAT marked on the COC? Yes ✓ No __

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

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

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

Adjusted? _____ Checked by JF

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

Client: Santek Environmental Inc.
Project: Loudon Co. (Matlock Bend) LF 2nd Semi-Annual
Lab Order: 1409M69

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1409M69-001A	MW-03	9/24/2014 11:00:00AM	Groundwater	APPENDIX I VOLATILE ORGANICS		09/30/2014	09/30/2014
1409M69-001B	MW-03	9/24/2014 11:00:00AM	Groundwater	MICRO-EXTRACTABLE VOCs		09/29/2014	09/30/2014
1409M69-001C	MW-03	9/24/2014 11:00:00AM	Groundwater	Inorganic Anions by IC			09/25/2014
1409M69-001C	MW-03	9/24/2014 11:00:00AM	Groundwater	Residue, Dissolved (TDS) by SM2540C		09/29/2014	09/29/2014
1409M69-001D	MW-03	9/24/2014 11:00:00AM	Groundwater	Dissolved Metals by ICP/MS		10/01/2014	10/01/2014
1409M69-001E	MW-03	9/24/2014 11:00:00AM	Groundwater	Nitrogen, Ammonia (as N)			10/01/2014
1409M69-001E	MW-03	9/24/2014 11:00:00AM	Groundwater	Chemical Oxygen Demand (COD)			09/30/2014
1409M69-001E	MW-03	9/24/2014 11:00:00AM	Groundwater	Total Organic Carbon by SM5310B			09/30/2014
1409M69-001F	MW-03	9/24/2014 11:00:00AM	Groundwater	Cyanide		09/26/2014	09/26/2014
1409M69-002A	MW-03	9/24/2014 12:40:00PM	Groundwater	APPENDIX I METALS		09/29/2014	10/01/2014
1409M69-002A	MW-03	9/24/2014 12:40:00PM	Groundwater	Total Metals by ICP/MS		09/29/2014	10/01/2014
1409M69-002A	MW-03	9/24/2014 12:40:00PM	Groundwater	TOTAL MERCURY		09/29/2014	09/29/2014
1409M69-003A	MW-1A	9/23/2014 2:50:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		09/30/2014	09/30/2014
1409M69-003B	MW-1A	9/23/2014 2:50:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		09/29/2014	09/30/2014
1409M69-003C	MW-1A	9/23/2014 2:50:00PM	Groundwater	Inorganic Anions by IC			09/25/2014
1409M69-003C	MW-1A	9/23/2014 2:50:00PM	Groundwater	Residue, Dissolved (TDS) by SM2540C		09/29/2014	09/29/2014
1409M69-003D	MW-1A	9/23/2014 2:50:00PM	Groundwater	Dissolved Metals by ICP/MS		10/01/2014	10/01/2014
1409M69-003E	MW-1A	9/23/2014 2:50:00PM	Groundwater	Nitrogen, Ammonia (as N)			10/01/2014
1409M69-003E	MW-1A	9/23/2014 2:50:00PM	Groundwater	Chemical Oxygen Demand (COD)			09/30/2014
1409M69-003E	MW-1A	9/23/2014 2:50:00PM	Groundwater	Total Organic Carbon by SM5310B			09/30/2014
1409M69-003F	MW-1A	9/23/2014 2:50:00PM	Groundwater	Cyanide		09/26/2014	09/26/2014
1409M69-004A	MW-1A	9/24/2014 11:59:00AM	Groundwater	APPENDIX I METALS		09/29/2014	10/01/2014
1409M69-004A	MW-1A	9/24/2014 11:59:00AM	Groundwater	Total Metals by ICP/MS		09/29/2014	10/01/2014
1409M69-004A	MW-1A	9/24/2014 11:59:00AM	Groundwater	TOTAL MERCURY		09/29/2014	09/29/2014
1409M69-005A	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	APPENDIX I VOLATILE ORGANICS		09/30/2014	09/30/2014
1409M69-005B	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	MICRO-EXTRACTABLE VOCs		09/29/2014	09/30/2014
1409M69-005C	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Inorganic Anions by IC			09/25/2014
1409M69-005C	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Residue, Dissolved (TDS) by SM2540C		09/29/2014	09/29/2014
1409M69-005D	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Dissolved Metals by ICP/MS		10/01/2014	10/01/2014

Client: Santek Environmental Inc.
Project: Loudon Co. (Matlock Bend) LF 2nd Semi-Annual
Lab Order: 1409M69

Dates Report

Lab Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	TCLP Date	Prep Date	Analysis Date
1409M69-005E	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Nitrogen, Ammonia (as N)			10/01/2014
1409M69-005E	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Chemical Oxygen Demand (COD)			09/30/2014
1409M69-005E	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Total Organic Carbon by SM5310B			09/30/2014
1409M69-005F	DUPLICATE	9/23/2014 2:50:00PM	Groundwater	Cyanide		09/26/2014	09/26/2014
1409M69-006A	DUPLICATE	9/24/2014 11:59:00AM	Groundwater	APPENDIX I METALS		09/29/2014	10/01/2014
1409M69-006A	DUPLICATE	9/24/2014 11:59:00AM	Groundwater	Total Metals by ICP/MS		09/29/2014	10/01/2014
1409M69-006A	DUPLICATE	9/24/2014 11:59:00AM	Groundwater	TOTAL MERCURY		09/29/2014	09/29/2014

AES

ANALYTICAL ENVIRONMENTAL SERVICES, INC.

October 10, 2014

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

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

RE: Loudon Co. (Matlock Bend) LF 2nd Semi-Annual

Dear Will Martin: Order No: 1409N05

Analytical Environmental Services, Inc. received 6 samples on 9/25/2014 10:15:00 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 07/01/14-06/30/15.
-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 09/01/15.

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

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

CKanhai

Chantelle Kanhai
Project Manager

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: 1409N05

Date: 9/24/14 Page 1 of 1

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

#	SAMPLE ID	SAMPLED DATE	SAMPLED TIME	Grab	Composite	Matrix (See codes)	Inorganic Anions by IC	TDS	Total Metals by ICP/MS	Total Mercury	App. III Metals	Dissolved Metals by ICP/MS	App. IV VOC's	Micro-Ext. VOA's	Nitrogen, Ammonia	TOC	COD	Cyanide	REMARKS	No # of Containers
							PRESERVATION (See codes)													
1	Trip Blank	9/24/14	2:45	X		W	X	X	X	X	X	X	X	X	X	X	X	X		9
2	~~Equip. Blank~~ Equip. Blank	9/24/14	3:00	X		W	X	X	X	X	X	X	X	X	X	X	X	X		9
3	MW-01	9/23/14	3:50	X		GW	X	X				X	X	X	X	X	X	X		8
4	↳	9/24/14	12:10	X		GW			X	X	X									1
5	MW-02	9/24/14	10:12	X		GW	X	X				X	X	X	X	X	X	X		8
6	↳	9/24/14	12:20	X		GW			X	X	X									1
7																				
8																				
9																				
10																				
11																				
12																				
13																				
14																				

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

RELINQUISHED BY	DATE/TIME	RECEIVED BY	DATE/TIME
1: Robert Hudson	9/24/14 5pm	1: [signature] MET	9/25/14 1015
2:		2:	
3:		3:	

PROJECT INFORMATION

PROJECT NAME: Loudon Co. (Matlock Bend) LF 2nd Semi-
PROJECT #: Annual GW Event 2014
SITE ADDRESS:
SEND REPORT TO: Will Martin
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.

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.

Sample/Cooler Receipt Checklist

Client Santek Work Order Number 1409N05

Checklist completed by MRC 9/25/14
Signature Date

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

Shipping container/cooler in good condition?	Yes ✓	No __	Not Present __
Custody seals intact on shipping container/cooler?	Yes ✓	No __	Not Present __
Custody seals intact on sample bottles?	Yes __	No __	Not Present ✓
Container/Temp Blank temperature in compliance? (0°≤6°C)*	Yes ✓	No __	

Cooler #1 2.4 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 MRC

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 11:00:00 AM
Lab ID:	1409M69-001	**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	R276883	1	09/30/2014 19:26	JM
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	71	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1				**(E350.1)**				
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:15	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011				**(SW8011)**				
1,2-Dibromo-3-chloropropane	BRL	0.203		ug/L	196924	1	09/30/2014 02:31	SH
1,2-Dibromoethane	BRL	0.051		ug/L	196924	1	09/30/2014 02:31	SH
Surr: 4-Bromofluorobenzene	118	60-120		%REC	196924	1	09/30/2014 02:31	SH
Inorganic Anions by IC E300.0								
Chloride	13.8	1.00		mg/L	R276589	1	09/25/2014 11:22	YS
Fluoride	BRL	4.00		mg/L	R276589	1	09/25/2014 11:22	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276589	1	09/25/2014 11:22	YS
Sulfate	1.40	1.00		mg/L	R276589	1	09/25/2014 11:22	YS
Dissolved Metals by ICP/MS SW6020A				**(SW3005A)**				
Manganese	150	10.0		ug/L	197033	1	10/01/2014 19:42	MR
Cyanide SW9014				**(SW9010C)**				
Cyanide, Total	BRL	0.200		mg/L	196886	1	09/26/2014 14:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	BRL	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
1,1,1-Trichloroethane	BRL	200		ug/L	196989	1	09/30/2014 04:46	NH
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
1,1-Dichloroethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
1,1-Dichloroethene	BRL	7.0		ug/L	196989	1	09/30/2014 04:46	NH
1,2,3-Trichloropropane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
1,2-Dichlorobenzene	BRL	600		ug/L	196989	1	09/30/2014 04:46	NH
1,2-Dichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
1,2-Dichloropropane	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
1,4-Dichlorobenzene	BRL	75		ug/L	196989	1	09/30/2014 04:46	NH
2-Butanone	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 11:00:00 AM
Lab ID:	1409M69-001	**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	196989	1	09/30/2014 04:46	NH
4-Methyl-2-pentanone	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Acetone	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Acrylonitrile	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Benzene	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Bromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Bromodichloromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Bromoform	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Bromomethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Carbon disulfide	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Carbon tetrachloride	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Chlorobenzene	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Chloroethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Chloroform	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Chloromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
cis-1,2-Dichloroethene	BRL	70		ug/L	196989	1	09/30/2014 04:46	NH
cis-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Dibromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Dibromomethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Ethylbenzene	BRL	700		ug/L	196989	1	09/30/2014 04:46	NH
Iodomethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Methylene chloride	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Styrene	BRL	100		ug/L	196989	1	09/30/2014 04:46	NH
Tetrachloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Toluene	BRL	1000		ug/L	196989	1	09/30/2014 04:46	NH
trans-1,2-Dichloroethene	BRL	100		ug/L	196989	1	09/30/2014 04:46	NH
trans-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Trichloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 04:46	NH
Trichlorofluoromethane	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Vinyl acetate	BRL	10		ug/L	196989	1	09/30/2014 04:46	NH
Vinyl chloride	BRL	2.0		ug/L	196989	1	09/30/2014 04:46	NH
Xylenes, Total	BRL	10000		ug/L	196989	1	09/30/2014 04:46	NH
Surr: 4-Bromofluorobenzene	86.2	66.2-120		%REC	196989	1	09/30/2014 04:46	NH
Surr: Dibromofluoromethane	104	79.5-121		%REC	196989	1	09/30/2014 04:46	NH
Surr: Toluene-d8	98.6	77-117		%REC	196989	1	09/30/2014 04:46	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-03
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 12:40:00 PM
Lab ID:	1409M69-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Metals by ICP/MS SW6020A				(SW3005A)				
Calcium	1270	100		ug/L	196901	1	10/01/2014 13:17	MR
Iron	BRL	100		ug/L	196901	1	10/01/2014 13:17	MR
Magnesium	620	100		ug/L	196901	1	10/01/2014 19:15	MR
Potassium	651	500		ug/L	196901	1	10/01/2014 19:15	MR
Sodium	10100	500		ug/L	196901	1	10/01/2014 13:17	MR
Mercury, Total SW7470A				(SW7470A)				
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:39	CG
APPENDIX I METALS SW6020A				(SW3005A)				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 13:17	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 13:17	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 13:17	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 13:17	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 13:17	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 13:17	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/01/2014 19:15	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 13:17	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 13:17	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 13:17	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 13:17	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 13:17	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 13:17	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 13:17	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 13:17	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-4R
Project Name:	Loudon Co. LF (Matlock Bend) 2nd Semi-Annual GW Ev	**Collection Date:**	9/23/2014 12:24:00 PM
Lab ID:	1409N07-001	**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	0.203		ug/L	196924	1	09/30/2014 06:17	SH
1,2-Dibromoethane	BRL	0.051		ug/L	196924	1	09/30/2014 06:17	SH
Surr: 4-Bromofluorobenzene	113	60-120		%REC	196924	1	09/30/2014 06:17	SH
Inorganic Anions by IC E300.0								
Fluoride	BRL	4.00		mg/L	R276708	1	09/26/2014 17:33	YS
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
1,1,1-Trichloroethane	BRL	200		ug/L	196989	1	09/30/2014 18:26	NH
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 18:26	NH
1,1-Dichloroethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
1,1-Dichloroethene	BRL	7.0		ug/L	196989	1	09/30/2014 18:26	NH
1,2,3-Trichloropropane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
1,2-Dichlorobenzene	BRL	600		ug/L	196989	1	09/30/2014 18:26	NH
1,2-Dichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 18:26	NH
1,2-Dichloropropane	BRL	5.0		ug/L	196989	1	09/30/2014 18:26	NH
1,4-Dichlorobenzene	BRL	75		ug/L	196989	1	09/30/2014 18:26	NH
2-Butanone	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
2-Hexanone	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
4-Methyl-2-pentanone	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Acetone	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Acrylonitrile	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Benzene	BRL	5.0		ug/L	196989	1	09/30/2014 18:26	NH
Bromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Bromodichloromethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Bromoform	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Bromomethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Carbon disulfide	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Carbon tetrachloride	BRL	5.0		ug/L	196989	1	09/30/2014 18:26	NH
Chlorobenzene	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Chloroethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Chloroform	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Chloromethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
cis-1,2-Dichloroethene	BRL	70		ug/L	196989	1	09/30/2014 18:26	NH
cis-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Dibromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Dibromomethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Ethylbenzene	BRL	700		ug/L	196989	1	09/30/2014 18:26	NH
Iodomethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-4R
Project Name:	Loudon Co. LF (Matlock Bend) 2nd Semi-Annual GW Ev	**Collection Date:**	9/23/2014 12:24:00 PM
Lab ID:	1409N07-001	**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	196989	1	09/30/2014 18:26	NH
Styrene	BRL	100		ug/L	196989	1	09/30/2014 18:26	NH
Tetrachloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 18:26	NH
Toluene	BRL	1000		ug/L	196989	1	09/30/2014 18:26	NH
trans-1,2-Dichloroethene	BRL	100		ug/L	196989	1	09/30/2014 18:26	NH
trans-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Trichloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 18:26	NH
Trichlorofluoromethane	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Vinyl acetate	BRL	10		ug/L	196989	1	09/30/2014 18:26	NH
Vinyl chloride	BRL	2.0		ug/L	196989	1	09/30/2014 18:26	NH
Xylenes, Total	BRL	10000		ug/L	196989	1	09/30/2014 18:26	NH
Surr: 4-Bromofluorobenzene	83.3	66.2-120		%REC	196989	1	09/30/2014 18:26	NH
Surr: Dibromofluoromethane	110	79.5-121		%REC	196989	1	09/30/2014 18:26	NH
Surr: Toluene-d8	98.2	77-117		%REC	196989	1	09/30/2014 18:26	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-4R
Project Name:	Loudon Co. LF (Matlock Bend) 2nd Semi-Annual GW Ev	**Collection Date:**	9/24/2014 11:40:00 AM
Lab ID:	1409N07-002	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Mercury, Total SW7470A				**(SW7470A)**				
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:54	CG
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:44	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:44	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:44	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:44	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:44	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:44	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/02/2014 17:56	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:44	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:44	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:44	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:44	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:44	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:44	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:44	MR
Zinc	0.0264	0.0200		mg/L	196901	1	10/01/2014 14:44	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-05
Project Name:	Loudon Co. LF (Matlock Bend) 2nd Semi-Annual GW Ev	**Collection Date:**	9/23/2014 11:35:00 AM
Lab ID:	1409N07-003	**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	0.203		ug/L	196924	1	09/30/2014 06:44	SH
1,2-Dibromoethane	BRL	0.051		ug/L	196924	1	09/30/2014 06:44	SH
Surr: 4-Bromofluorobenzene	117	60-120		%REC	196924	1	09/30/2014 06:44	SH
Inorganic Anions by IC E300.0								
Fluoride	BRL	4.00		mg/L	R276708	1	09/26/2014 17:48	YS
APPENDIX I VOLATILE ORGANICS SW8260B				**(SW5030B)**				
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
1,1,1-Trichloroethane	BRL	200		ug/L	196989	1	09/30/2014 18:53	NH
1,1,2,2-Tetrachloroethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
1,1,2-Trichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 18:53	NH
1,1-Dichloroethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
1,1-Dichloroethene	BRL	7.0		ug/L	196989	1	09/30/2014 18:53	NH
1,2,3-Trichloropropane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
1,2-Dichlorobenzene	BRL	600		ug/L	196989	1	09/30/2014 18:53	NH
1,2-Dichloroethane	BRL	5.0		ug/L	196989	1	09/30/2014 18:53	NH
1,2-Dichloropropane	BRL	5.0		ug/L	196989	1	09/30/2014 18:53	NH
1,4-Dichlorobenzene	BRL	75		ug/L	196989	1	09/30/2014 18:53	NH
2-Butanone	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
2-Hexanone	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
4-Methyl-2-pentanone	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Acetone	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Acrylonitrile	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Benzene	BRL	5.0		ug/L	196989	1	09/30/2014 18:53	NH
Bromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Bromodichloromethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Bromoform	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Bromomethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Carbon disulfide	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Carbon tetrachloride	BRL	5.0		ug/L	196989	1	09/30/2014 18:53	NH
Chlorobenzene	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Chloroethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Chloroform	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Chloromethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
cis-1,2-Dichloroethene	BRL	70		ug/L	196989	1	09/30/2014 18:53	NH
cis-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Dibromochloromethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Dibromomethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Ethylbenzene	BRL	700		ug/L	196989	1	09/30/2014 18:53	NH
Iodomethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-05
Project Name:	Loudon Co. LF (Matlock Bend) 2nd Semi-Annual GW Ev	**Collection Date:**	9/23/2014 11:35:00 AM
Lab ID:	1409N07-003	**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	196989	1	09/30/2014 18:53	NH
Styrene	BRL	100		ug/L	196989	1	09/30/2014 18:53	NH
Tetrachloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 18:53	NH
Toluene	BRL	1000		ug/L	196989	1	09/30/2014 18:53	NH
trans-1,2-Dichloroethene	BRL	100		ug/L	196989	1	09/30/2014 18:53	NH
trans-1,3-Dichloropropene	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Trichloroethene	BRL	5.0		ug/L	196989	1	09/30/2014 18:53	NH
Trichlorofluoromethane	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Vinyl acetate	BRL	10		ug/L	196989	1	09/30/2014 18:53	NH
Vinyl chloride	BRL	2.0		ug/L	196989	1	09/30/2014 18:53	NH
Xylenes, Total	BRL	10000		ug/L	196989	1	09/30/2014 18:53	NH
Surr: 4-Bromofluorobenzene	83.8	66.2-120		%REC	196989	1	09/30/2014 18:53	NH
Surr: Dibromofluoromethane	110	79.5-121		%REC	196989	1	09/30/2014 18:53	NH
Surr: Toluene-d8	100	77-117		%REC	196989	1	09/30/2014 18:53	NH

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	MW-05
Project Name:	Loudon Co. LF (Matlock Bend) 2nd Semi-Annual GW Ev	**Collection Date:**	9/24/2014 11:27:00 AM
Lab ID:	1409N07-004	**Matrix:**	Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Mercury, Total SW7470A					**(SW7470A)**			
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:56	CG
APPENDIX I METALS SW6020A					**(SW3005A)**			
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:50	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:50	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:50	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:50	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:50	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:50	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/02/2014 18:01	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:50	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:50	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:50	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:50	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:50	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:50	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:50	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 14:50	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 2:45:00 PM
Lab ID:	1409N05-001	**Matrix:**	Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Total Organic Carbon (TOC) by SM5310B								
Organic Carbon, Total	1.98	1.00		mg/L	R276883	1	09/30/2014 20:19	JM
Total Metals by ICP/MS SW6020A					(SW3005A)			
Calcium	BRL	100		ug/L	196901	1	10/01/2014 19:52	MR
Iron	BRL	100		ug/L	196901	1	10/01/2014 14:14	MR
Magnesium	BRL	100		ug/L	196901	1	10/01/2014 14:14	MR
Potassium	BRL	500		ug/L	196901	1	10/01/2014 14:14	MR
Sodium	BRL	500		ug/L	196901	1	10/01/2014 14:14	MR
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	28	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1					(E350.1)			
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:18	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011					(SW8011)			
1,2-Dibromo-3-chloropropane	BRL	0.207		ug/L	196924	1	09/30/2014 03:55	SH
1,2-Dibromoethane	BRL	0.052		ug/L	196924	1	09/30/2014 03:55	SH
Surr: 4-Bromofluorobenzene	111	60-120		%REC	196924	1	09/30/2014 03:55	SH
Mercury, Total SW7470A					(SW7470A)			
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:44	CG
Inorganic Anions by IC E300.0								
Chloride	BRL	1.00		mg/L	R276614	1	09/25/2014 13:28	YS
Fluoride	BRL	4.00		mg/L	R276614	1	09/25/2014 13:28	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276614	1	09/25/2014 13:28	YS
Sulfate	BRL	1.00		mg/L	R276614	1	09/25/2014 13:28	YS
Dissolved Metals by ICP/MS SW6020A					(SW3005A)			
Manganese	BRL	10.0		ug/L	197033	1	10/01/2014 20:57	MR
Cyanide SW9014					(SW9010C)			
Cyanide, Total	BRL	0.200		mg/L	196886	1	09/26/2014 14:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	BRL	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B					(SW5030B)			
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
1,1,1-Trichloroethane	BRL	200		ug/L	197080	1	10/01/2014 19:42	GK

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 2:45:00 PM
Lab ID:	1409N05-001	**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	197080	1	10/01/2014 19:42	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
1,1-Dichloroethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
1,1-Dichloroethene	BRL	7.0		ug/L	197080	1	10/01/2014 19:42	GK
1,2,3-Trichloropropane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
1,2-Dichlorobenzene	BRL	600		ug/L	197080	1	10/01/2014 19:42	GK
1,2-Dichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
1,2-Dichloropropane	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
1,4-Dichlorobenzene	BRL	75		ug/L	197080	1	10/01/2014 19:42	GK
2-Butanone	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
2-Hexanone	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
4-Methyl-2-pentanone	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Acetone	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Acrylonitrile	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Benzene	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Bromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Bromodichloromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Bromoform	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Bromomethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Carbon disulfide	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Carbon tetrachloride	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Chlorobenzene	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Chloroethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Chloroform	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Chloromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
cis-1,2-Dichloroethene	BRL	70		ug/L	197080	1	10/01/2014 19:42	GK
cis-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Dibromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Dibromomethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Ethylbenzene	BRL	700		ug/L	197080	1	10/01/2014 19:42	GK
Iodomethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Methylene chloride	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Styrene	BRL	100		ug/L	197080	1	10/01/2014 19:42	GK
Tetrachloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Toluene	BRL	1000		ug/L	197080	1	10/01/2014 19:42	GK
trans-1,2-Dichloroethene	BRL	100		ug/L	197080	1	10/01/2014 19:42	GK
trans-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Trichloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 19:42	GK
Trichlorofluoromethane	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK
Vinyl acetate	BRL	10		ug/L	197080	1	10/01/2014 19:42	GK

Qualifiers:

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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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	TRIP BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 2:45:00 PM
Lab ID:	1409N05-001	**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	197080	1	10/01/2014 19:42	GK
Xylenes, Total	BRL	10000		ug/L	197080	1	10/01/2014 19:42	GK
Surr: 4-Bromofluorobenzene	93.8	66.2-120		%REC	197080	1	10/01/2014 19:42	GK
Surr: Dibromofluoromethane	98.3	79.5-121		%REC	197080	1	10/01/2014 19:42	GK
Surr: Toluene-d8	94.8	77-117		%REC	197080	1	10/01/2014 19:42	GK
APPENDIX I METALS SW6020A				**(SW3005A)**				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:14	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:14	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:14	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:14	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:14	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:14	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/01/2014 19:52	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:14	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:14	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:14	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:14	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:14	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:14	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:14	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 14:14	MR

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:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP. BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 3:00:00 PM
Lab ID:	1409N05-002	**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	R276883	1	09/30/2014 20:32	JM
Total Metals by ICP/MS SW6020A					(SW3005A)			
Calcium	BRL	100		ug/L	196901	1	10/01/2014 14:26	MR
Iron	BRL	100		ug/L	196901	1	10/01/2014 14:26	MR
Magnesium	BRL	100		ug/L	196901	1	10/01/2014 14:26	MR
Potassium	BRL	500		ug/L	196901	1	10/01/2014 14:26	MR
Sodium	BRL	500		ug/L	196901	1	10/01/2014 14:26	MR
Residue, Dissolved (TDS) by SM2540C								
Residue, Dissolved (TDS)	19	1		mg/L	196932	1	09/29/2014 11:50	OM
Nitrogen, Ammonia (as N) E350.1					(E350.1)			
Nitrogen, Ammonia (As N)	BRL	0.200		mg/L	R276943	1	10/01/2014 17:19	LV
MICRO-EXTRACTABLE VOLATILE ORGANICS SW8011					(SW8011)			
1,2-Dibromo-3-chloropropane	BRL	0.199		ug/L	196924	1	09/30/2014 04:24	SH
1,2-Dibromoethane	BRL	0.050		ug/L	196924	1	09/30/2014 04:24	SH
Surr: 4-Bromofluorobenzene	111	60-120		%REC	196924	1	09/30/2014 04:24	SH
Mercury, Total SW7470A					(SW7470A)			
Mercury	BRL	0.00200		mg/L	196855	1	09/29/2014 12:11	CG
Inorganic Anions by IC E300.0								
Chloride	BRL	1.00		mg/L	R276614	1	09/25/2014 12:43	YS
Fluoride	BRL	4.00		mg/L	R276614	1	09/25/2014 12:43	YS
Nitrogen, Nitrate (As N)	BRL	10.0		mg/L	R276614	1	09/25/2014 12:43	YS
Sulfate	BRL	1.00		mg/L	R276614	1	09/25/2014 12:43	YS
Dissolved Metals by ICP/MS SW6020A					(SW3005A)			
Manganese	BRL	10.0		ug/L	197033	1	10/01/2014 21:03	MR
Cyanide SW9014					(SW9010C)			
Cyanide, Total	BRL	0.200		mg/L	196886	1	09/26/2014 14:30	PF
Chemical Oxygen Demand (COD) E410.4								
Chemical Oxygen Demand	11.1	10.0		mg/L	R276802	1	09/30/2014 11:00	MG
APPENDIX I VOLATILE ORGANICS SW8260B					(SW5030B)			
1,1,1,2-Tetrachloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
1,1,1-Trichloroethane	BRL	200		ug/L	197080	1	10/01/2014 20:07	GK

Qualifiers:

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Analytical Environmental Services, Inc **Date:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP. BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 3:00:00 PM
Lab ID:	1409N05-002	**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	197080	1	10/01/2014 20:07	GK
1,1,2-Trichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
1,1-Dichloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
1,1-Dichloroethene	BRL	7.0		ug/L	197080	1	10/01/2014 20:07	GK
1,2,3-Trichloropropane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
1,2-Dichlorobenzene	BRL	600		ug/L	197080	1	10/01/2014 20:07	GK
1,2-Dichloroethane	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
1,2-Dichloropropane	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
1,4-Dichlorobenzene	BRL	75		ug/L	197080	1	10/01/2014 20:07	GK
2-Butanone	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
2-Hexanone	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
4-Methyl-2-pentanone	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Acetone	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Acrylonitrile	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Benzene	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Bromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Bromodichloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Bromoform	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Bromomethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Carbon disulfide	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Carbon tetrachloride	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Chlorobenzene	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Chloroethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Chloroform	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Chloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
cis-1,2-Dichloroethene	BRL	70		ug/L	197080	1	10/01/2014 20:07	GK
cis-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Dibromochloromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Dibromomethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Ethylbenzene	BRL	700		ug/L	197080	1	10/01/2014 20:07	GK
Iodomethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Methylene chloride	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Styrene	BRL	100		ug/L	197080	1	10/01/2014 20:07	GK
Tetrachloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Toluene	BRL	1000		ug/L	197080	1	10/01/2014 20:07	GK
trans-1,2-Dichloroethene	BRL	100		ug/L	197080	1	10/01/2014 20:07	GK
trans-1,3-Dichloropropene	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
trans-1,4-Dichloro-2-butene	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Trichloroethene	BRL	5.0		ug/L	197080	1	10/01/2014 20:07	GK
Trichlorofluoromethane	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK
Vinyl acetate	BRL	10		ug/L	197080	1	10/01/2014 20:07	GK

Qualifiers:

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Analytical Environmental Services, Inc **Date:** 10-Oct-14

Client:	Santek Environmental Inc.	**Client Sample ID:**	EQUIP. BLANK
Project Name:	Loudon Co. (Matlock Bend) LF 2nd Semi-Annual	**Collection Date:**	9/24/2014 3:00:00 PM
Lab ID:	1409N05-002	**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	197080	1	10/01/2014 20:07	GK
Xylenes, Total	BRL	10000		ug/L	197080	1	10/01/2014 20:07	GK
Surr: 4-Bromofluorobenzene	83.9	66.2-120		%REC	197080	1	10/01/2014 20:07	GK
Surr: Dibromofluoromethane	92.2	79.5-121		%REC	197080	1	10/01/2014 20:07	GK
Surr: Toluene-d8	99.4	77-117		%REC	197080	1	10/01/2014 20:07	GK
APPENDIX I METALS SW6020A				(SW3005A)				
Antimony	BRL	0.00600		mg/L	196901	1	10/01/2014 14:26	MR
Arsenic	BRL	0.0500		mg/L	196901	1	10/01/2014 14:26	MR
Barium	BRL	2.00		mg/L	196901	1	10/01/2014 14:26	MR
Beryllium	BRL	0.00400		mg/L	196901	1	10/01/2014 14:26	MR
Cadmium	BRL	0.00500		mg/L	196901	1	10/01/2014 14:26	MR
Chromium	BRL	0.100		mg/L	196901	1	10/01/2014 14:26	MR
Cobalt	BRL	0.0100		mg/L	196901	1	10/02/2014 17:30	MR
Copper	BRL	0.0100		mg/L	196901	1	10/01/2014 14:26	MR
Lead	BRL	0.0150		mg/L	196901	1	10/01/2014 14:26	MR
Nickel	BRL	0.100		mg/L	196901	1	10/01/2014 14:26	MR
Selenium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:26	MR
Silver	BRL	0.0500		mg/L	196901	1	10/01/2014 14:26	MR
Thallium	BRL	0.00200		mg/L	196901	1	10/01/2014 14:26	MR
Vanadium	BRL	0.0100		mg/L	196901	1	10/01/2014 14:26	MR
Zinc	BRL	0.0200		mg/L	196901	1	10/01/2014 14:26	MR

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 #03

INORGANIC	APPENDIX I LIMITS	3-23-84	8-2-84	**7-13-84	10-18-84	12-1-84	3-2-85	10-30-86	4-12-96	11-2-96	3-21-97	9-29-97	05-19-98	10-29-98	3-15-99	9-14-99	03-23-00	9-6-00	2-16-01	8-29-01	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	4-6-11	10-5-11	3-15-12	10-3-12	3-29-13	9-26-13	3-25-14	9-24-14	MW-03 AVG	MW-4R AVG
Antimony	6	1	1	1	1	1	1	1	4	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	5.04	5.95
Arsenic	50	3.2	2	8.8	7.8	3.2	10	2	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	37.56	47.66
Barium	2000	180	10	300	100	50	40	57	53	40	50	30	60	50	39.1	39	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	1571.66	1535.49
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	3.63	7.24
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	5.02	5.07
Chromium	100	27	10	42	32	10	10	10	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	72.20	80.71
Cobalt	NA	24	10	68	39	10	10	13	13	10	10	10	10	10	10	10	10	12	10	10	10	12	10	10	50.5	10.0	26.0	10.0	48.4	10.0	10.0	10.0	10.0	10.0	10.0	10	10	10	10	10	10	10	10	10	10	14.35	15.61
Copper	NA	43	10	150	160	28	10	10	25	10	10	10	10	20	10	10	10	20.4	10	10	10	13.5	18.0	12.9	26.4	10.0	23.6	10.0	43.8	50.0	50.0	10.0	10.0	10.0	10	10	10	10	10	10	10	10	10	10	10	21.65	18.43
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	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	2.66	2.58
Lead	115	45	8.7	350	97	32	25	17	34	20	10	10	10	40	10	10	50	50	50	50	50	50	50	50	135	50	50	99.4	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	42.07	40.53
Mercury	2	0.2	*	0.68	0.2	0.2	0.4	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	1.57	1.75
Nickel	100	33	10	100	57	23	20	12	20	10	10	10	20	50	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	78.87	100.27
Selenium	10	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	10.52	12.35
Silver	50	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	53	50	50	50	50	50	53	50	35.78	39.31
Thallium	2	1	1	2.4	1	1	1	3	2	2	2	2	2	2	10	2	2	2	2	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2.10	3.17
Vanadium	NA	25	10	78	40	15	10	10	16	10	10	10	20	20	12	10	10	13.3	10	10	10	14.0	13.0	13.6	10.0	16.3	10.0	24.1	10.0	10.0	10.0	10.0	10.0	10	10	13	10	10	12	10	10	10	10	10	10	13.69	22.82
Zinc	15000	110	33	420	240	95	50	164	114	70	50	50	190	150	24.4	54	30	89.1	20	27.1	47.6	56.6	131	46	58.0	26.6	71.3	33.6	155.0	23.6	25.9	47.0	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	59.47	211.45

† = 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	3-23-84	8-02-84	**7-13-84	10-18-84	12-1-84	3-02-85	10-30-86	4-12-96	11-2-96	3-21-97	9-29-97	05-19-98	10-29-98	3-15-99	9-14-99	03-23-00	9-6-00	2-16-01	8-29-01	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	4-4-10	10-5-10	4-6-11	10-4-11	3-14-12	10-3-12	3-29-13	9-25-13	3-25-14	9-24-14
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-Dichloroethene; 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
BACKGROUND WELL
MONITORING WELL #4R

INORGANIC	APPENDIX I LIMITS	11-2-96	12-13-96	12-19-96	12-30-96	3-21-97	10-10-97	05-19-98	11-6-98	3-16-99	9-16-99	03-23-00	2-19-01	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	10-04-06	1-3-07	3-22-07	11-1-07	3-27-08	6-25-08	8-29-08	10-2-08	10-13-08	4-2-09	10-2-09	4-7-10	10-6-10	10-5-10	1-4-11	10-4-11	3-15-12	10-3-12	3-21-13	9-25-13	3-25-14	9-24-14	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	DRY	6	6	DRY	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	5.95
Arsenic	50	130	40	60	50	20	20	20	30	20	20	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	50	47.88
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	DRY	2000	2000	DRY	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	1535.43
Beryllium	4	54	16	40	29	14	4	4	11	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	4	7.24
Cadmium	5	6	5	5	7	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	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	DRY	100	100	DRY	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	85.73
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 6	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	15 61
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	18 43
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	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	4 0	2 58
Lead	115	200	70	140	80	60	20	10	60	17 9	10	50	68 8	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	42 53
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	DRY	2	2	DRY	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	1 75
Nickel	100	310	110	210	120	90	30	20	80	21 3	10	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	100 27
Selenium	10	20	20	20	20	20	20	20	20	20	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	10	12 38
Silver	50	5	6	5	5	5	5	5	5	5	5	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	50	39 31
Thallium	2	18	9	17	9	6	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	2	3 17
Vanadium	NA	200	70	130	80	50	10	10	60	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 62
Zinc	15000	1950	700	1370	740	490	330	240	520	58	69	129	126	79 4	230 0	143 0	305 0	57 4	91 0	37 3	20 0	56 7	144 0	78 2	DRY	68 7	81 1	DRY	43 9	32 1	54 3	20 0	66 0	83 9	100 0	26 4	20 0	74 8	41 3	20 0	32 0	82 4	20 0	24 1	26 4	211 45

*ALL DATA IN UG/L EXCEPT FLUORIDE (MG/L)
† = TREATMENT TECHNIQUE ACTION LEVEL
‡ = NATIONAL SECONDARY DRINKING WATER STANDARD
Note: Results from 11-2-96 to 3-27-08 were taken from MW-04. MW-04 was replaced by MW-4R

ORGANIC	11-2-96	12-13-96	12-19-96	12-30-96	3-21-97	10-10-97	05-19-98	11-6-98	3-16-99	9-16-99	03-23-00	2-19-01	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	10-04-06	1-3-07	3-22-07	11-1-07	3-27-08	6-25-08	8-29-08	10-2-08	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
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	26	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
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
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
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
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
Carbon disulfide	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	DRY	ND	ND	DRY	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
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
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	DRY	ND	ND	DRY	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	DRY	ND	ND	DRY	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
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
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
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
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
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
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
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
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
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
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

LOUDON COUNTY
COMPLIANCE WELL
MONITORING WELL #05

INORGANIC	APPENDIX I 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	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	6.00	5.95
Arsenic	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	47.86
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	2000.00	1535.49
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	4.15	7.24
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	5.01	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	100.00	85.71
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	10.49	15.61
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	10.43	18.43
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	3.88	2.98
Lead	115	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	32.82	40.53
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	2.00	1.75
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	100.00	100.27
Selenium	10	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	15.16	12.38
Silver	50	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	44.84	39.31
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	2.05	3.17
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	10.86	22.62
Zinc	‡5000	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	120.17	211.45

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

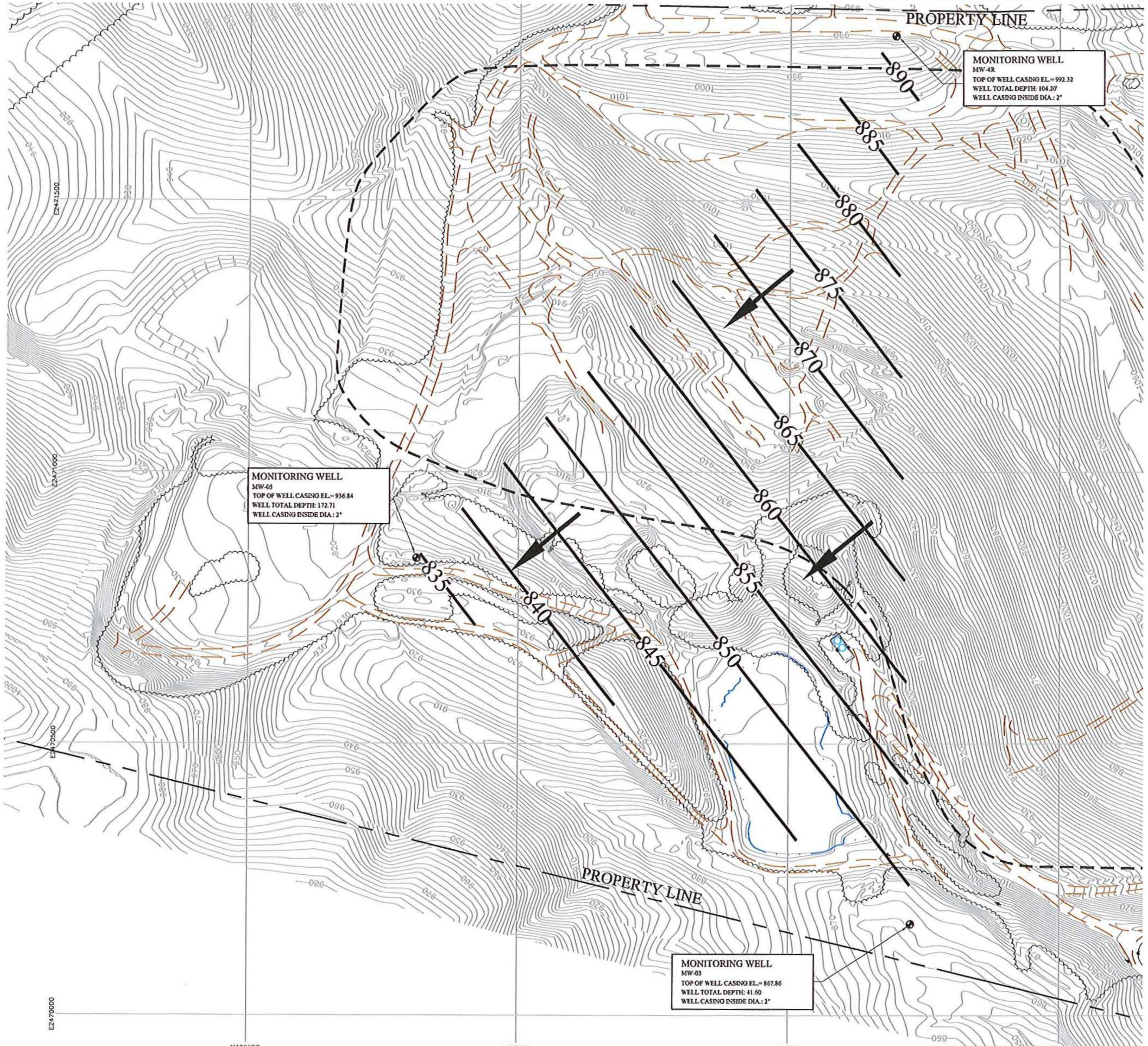
ORGANIC	2-10-01	4-25-01	6-13-01	9-18-01	4-17-02	9-30-02	4-21-03	9-30-03	4-28-04	9-22-04	4-11-05	9-29-05	3-27-06	10-04-06	3-22-07	11-1-07	3-27-08	10-13-08	4-1-09	10-1-09	4-6-10	10-5-10	10-5-10	1-4-11	10-4-11	3-14-12	10-2-12	3-27-13	9-24-13	3-24-14	9-23-14
Acetone	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
Xylenes	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 II/IV)
September 23, 2014

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	19.76	848.10	850	45	1.20E-05	0.18	4.22E-02	2.81E-06	4.05E-03	NW
MW-4R*	992.32	100.50	891.82	890	40	1.90E-05	0.18	4.55E-02	4.80E-06	6.92E-03	NW
MW-05	936.84	102.29	834.55	835	10	2.20E-05	0.18	4.50E-02	5.50E-06	7.92E-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 SEPTEMBER 23, 2014.
2. TOPOGRAPHIC CONTOURS SHOWN WERE PROVIDED BY CONTINENTAL AERIAL SURVEYS, ALCOA, TENNESSEE DATED SEPTEMBER 18, 2014.

G.W. WELL NO.	WATER ELEV.
MW-03	848.10
MW-4R	891.82
MW-05	834.55

RON VAIL
REGISTERED ENGINEER
AGRICULTURE
COMMERCE
No. 00109716
STATE OF TENNESSEE
11/19/14

0' 100' 200' 300'

DATE	DRWN	CHKD	REVISION

2014 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: 11/3/14
DRAWN BY: RH
CHECKED BY: WM
APPROVED BY: RV
FILE: 1410-F2
JOB NO: 200-1410

F-2
sheet number