



DIVISION OF LABORATORY SERVICES

Jackson Regional Laboratory
295 Summar Drive
Jackson, TN 38301
731-426-0686

Knoxville Regional Laboratory
2101 Medical Center Way
Knoxville, TN 37920
865-549-5201

Shelby County Laboratory
814 Jefferson Avenue
Memphis, TN 38105
901-544-7555

Nashville Central Laboratory
630 Hart Lane
Nashville, TN 37243
615-262-6300

Sent To: Patrick Mulligan
TDEC-SWM
CHATTANOOGA FIELD
OFFICE
540 McCALLIE AVE. SUITE
550
CHATTANOOGA, TN 37402

Lab ID: K00008198
Knoxville Regional Laboratory

Sampling Agency: TDEC: Division of Solid Waste Management

J - Estimated value between MDL and MQL
MDL - Method Detection Limit
MQL - Method Quantitation Limit
U - Undetected



TDEC-SWM.K00008198.M

This is to certify that the following results were determined using good laboratory practices and in accordance with federal or state approved methodologies.


Analytical Supervisor

Lab-Sample Number: K00008198002
 Project Name:
 Sample Description: Landfill Sediment Pond

Field Determinations
 pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

Sampler Project Name: Poplar Springs Landfill
 Project Site No.: SNL53-1062
 Station No.: S-2 Pond
 Date/Time Collected: 11/21/2014 10:00
 Sampler's Name: P. Mulligan & T. Hill
 County: LOUDON - 53
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-SWM
 Billing Code: EN00004176
 Send Report To: TDEC-SWM
 Priority Date:
 Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
 Received By: J Liu

TEST: Digestion Metals		METHOD: EPA 200.2				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Digestion Metals	11/26/2014				M Pattanayek	11/26/2014

TEST: ICP		METHOD: EPA 200.7				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Calcium	27	mg/L	0.046	0.1	M Pattanayek	12/1/2014
Iron	230	µg/L	6.0	10	M Pattanayek	12/1/2014
Magnesium	39	mg/L	0.037	0.1	M Pattanayek	12/1/2014
Potassium	900	mg/L	4.200	10.0	M Pattanayek	12/1/2014

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	ML	ANALYZED BY:	DATE
Antimony	U	µg/L	3.70	10	S Spence	12/8/2014
Arsenic	11J	µg/L	6.00	50	S Spence	12/8/2014
Barium	370	µg/L	3.50	50	S Spence	12/8/2014
Beryllium	U	µg/L	3.00	10	S Spence	12/8/2014
Cadmium	U	µg/L	2.30	10	S Spence	12/8/2014
Chromium	U	µg/L	8.00	50	S Spence	12/8/2014
Cobalt	16	µg/L	3.30	10	S Spence	12/8/2014
Copper	70	µg/L	4.00	10	S Spence	12/8/2014
Lead	U	µg/L	6.40	10	S Spence	12/8/2014
Manganese	740	µg/L	2.80	10	S Spence	12/8/2014
Nickel	29	µg/L	2.50	10	S Spence	12/8/2014
Selenium	U	µg/L	8.70	50	S Spence	12/8/2014
Silver	U	µg/L	0.840	2.50	S Spence	12/8/2014
Thallium	U	µg/L	3.10	10	S Spence	12/8/2014
Vanadium	U	µg/L	31.0	50	S Spence	12/8/2014
Zinc	U	µg/L	12.0	50	S Spence	12/8/2014

Lab-Sample Number: K00008198002
Project Name:
Sample Description: Landfill Sediment Pond

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

Sampler Project Name: Poplar Springs Landfill
Project Site No.: SNL53-1062
Station No.: S-2 Pond
Date/Time Collected: 11/21/2014 10:00
Sampler's Name: P. Mulligan & T. Hill
County: LOUDON - 53
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-SWM
Billing Code: EN00004176
Send Report To: TDEC-SWM
Priority Date:
Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM

Received By: J Liu

TEST: Mercury		METHOD: EPA 245.1				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.039	0.2	A Wilson	12/3/2014

TEST: Total Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Hardness By Calculation	230	mg/L	0.27	0.66	M Pattanayek	11/21/2014

Lab-Sample Number: K00008198003
 Project Name:
 Sample Description: Leachate from seeps on landfill

Field Determinations
 pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

Sampler Project Name: Poplar Springs Landfill
 Project Site No.: SNL53-1062
 Station No.: S-1 Leachate
 Date/Time Collected: 11/21/2014 10:26
 Sampler's Name: P. Mulligan & T. Hill
 County: LOUDON - 53
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-SWM
 Billing Code: EN00004176
 Send Report To: TDEC-SWM
 Priority Date:
 Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
 Received By: J Liu

TEST: Digestion Metals		METHOD: EPA 200.2				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/26/2014				M Pattanayek	11/26/2014

TEST: ICP		METHOD: EPA 200.7				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium	45	mg/L	0.046	0.1	M Pattanayek	12/1/2014
Iron	7100	µg/L	6.0	10	M Pattanayek	12/1/2014
Magnesium	72	mg/L	0.037	0.1	M Pattanayek	12/1/2014
Potassium	2000	mg/L	0.042	0.1	M Pattanayek	12/1/2014

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Antimony	U	µg/L	3.70	10	S Spence	12/8/2014
Arsenic	26J	µg/L	6.00	50	S Spence	12/8/2014
Barium	470	µg/L	3.50	50	S Spence	12/8/2014
Beryllium	U	µg/L	3.00	10	S Spence	12/8/2014
Cadmium	U	µg/L	2.30	10	S Spence	12/8/2014
Chromium	10J	µg/L	8.00	50	S Spence	12/8/2014
Cobalt	14	µg/L	3.30	10	S Spence	12/8/2014
Copper	220	µg/L	4.00	10	S Spence	12/8/2014
Lead	U	µg/L	6.40	10	S Spence	12/8/2014
Manganese	700	µg/L	2.80	10	S Spence	12/8/2014
Nickel	39	µg/L	2.50	10	S Spence	12/8/2014
Selenium	U	µg/L	8.70	50	S Spence	12/8/2014
Silver	U	µg/L	0.840	2.50	S Spence	12/8/2014
Thallium	U	µg/L	3.10	10	S Spence	12/8/2014
Vanadium	U	µg/L	31.0	50	S Spence	12/8/2014
Zinc	19J	µg/L	12.0	50	S Spence	12/8/2014

Lab-Sample Number: K00008198003
Project Name:
Sample Description: Leachate from seeps on landfill

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

Sampler Project Name: Poplar Springs Landfill
Project Site No.: SNL53-1062
Station No.: S-1 Leachate
Date/Time Collected: 11/21/2014 10:26
Sampler's Name: P. Mulligan & T. Hill
County: LOUDON - 53
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-SWM
Billing Code: EN00004176
Send Report To: TDEC-SWM
Priority Date:
Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
Received By: J Liu

TEST: Mercury		METHOD: EPA 245.1				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.039	0.2	A Wilson	12/3/2014

TEST: Total Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Hardness By Calculation	410	mg/L	0.27	0.66	M Pattanayek	11/21/2014

Lab-Sample Number: K00008198004
 Project Name:
 Sample Description: Residential Well

Field Determinations
 pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

Sampler Project Name: Poplar Springs Landfill
 Project Site No.: SNL53-1062
 Station No.: R-1 Johnson
 Date/Time Collected: 11/21/2014 11:32
 Sampler's Name: P. Mulligan & T. Hill
 County: LOUDON - 53
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-SWM
 Billing Code: EN00004176
 Send Report To: TDEC-SWM
 Priority Date:
 Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
 Received By: J Liu

TEST: Digestion Metals		METHOD: EPA 200.2				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/26/2014				M Pattanayek	11/26/2014

TEST: ICP		METHOD: EPA 200.7				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium	29	mg/L	0.046	0.1	M Pattanayek	12/1/2014
Iron	97	µg/L	6.0	10	M Pattanayek	12/1/2014
Magnesium	18	mg/L	0.037	0.1	M Pattanayek	12/1/2014
Potassium	1.8	mg/L	0.042	0.1	M Pattanayek	12/1/2014

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Antimony	U	µg/L	0.37	1	S Spence	12/8/2014
Arsenic	U	µg/L	0.60	5	S Spence	12/8/2014
Barium	7.9	µg/L	0.35	5	S Spence	12/8/2014
Beryllium	U	µg/L	0.30	1	S Spence	12/8/2014
Cadmium	U	µg/L	0.23	1	S Spence	12/8/2014
Chromium	U	µg/L	0.80	5	S Spence	12/8/2014
Cobalt	U	µg/L	0.33	1	S Spence	12/8/2014
Copper	6.5	µg/L	0.40	1	S Spence	12/8/2014
Lead	U	µg/L	0.64	1	S Spence	12/8/2014
Manganese	8.1	µg/L	0.28	1	S Spence	12/8/2014
Nickel	1.1	µg/L	0.25	1	S Spence	12/8/2014
Selenium	U	µg/L	0.87	5	S Spence	12/8/2014
Silver	U	µg/L	0.084	0.25	S Spence	12/8/2014
Thallium	U	µg/L	0.31	1	S Spence	12/8/2014
Vanadium	U	µg/L	3.1	5	S Spence	12/8/2014
Zinc	11	µg/L	1.2	5	S Spence	12/8/2014

Lab-Sample Number: K00008198004
 Project Name:
 Sample Description: Residential Well

Field Determinations
 pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

Sampler Project Name: Poplar Springs Landfill
 Project Site No.: SNL53-1062
 Station No.: R-1 Johnson
 Date/Time Collected: 11/21/2014 11:32
 Sampler's Name: P. Mulligan & T. Hill
 County: LOUDON - 53
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-SWM
 Billing Code: EN00004176
 Send Report To: TDEC-SWM
 Priority Date:
 Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
 Received By: J Liu

TEST: Mercury		METHOD: EPA 245.1				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.039	0.2	A Wilson	12/3/2014

TEST: Total Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Hardness By Calculation	140	mg/L	0.27	0.66	M Pattanayek	11/21/2014

Lab-Sample Number: K00008198005
 Project Name:
 Sample Description: Residential well

Field Determinations
 pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

Sampler Project Name: Poplar Springs Landfill
 Project Site No.: SNL53-1062
 Station No.: R-2 Hines
 Date/Time Collected: 11/21/2014 12:06
 Sampler's Name: P. Mulligan & T. Hill
 County: LOUDON - 53
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-SWM
 Billing Code: EN00004176
 Send Report To: TDEC-SWM
 Priority Date:
 Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
 Received By: J Liu

TEST: Digestion Metals		METHOD: EPA 200.2				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/26/2014				M Pattanayek	11/26/2014

TEST: ICP		METHOD: EPA 200.7				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium	28	mg/L	0.046	0.1	M Pattanayek	12/1/2014
Iron	60	µg/L	6.0	10	M Pattanayek	12/1/2014
Magnesium	18	mg/L	0.037	0.1	M Pattanayek	12/1/2014
Potassium	1.0	mg/L	0.042	0.1	M Pattanayek	12/1/2014

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Antimony	U	µg/L	0.37	1	S Spence	12/8/2014
Arsenic	U	µg/L	0.60	5	S Spence	12/8/2014
Barium	6.4	µg/L	0.35	5	S Spence	12/8/2014
Beryllium	U	µg/L	0.30	1	S Spence	12/8/2014
Cadmium	U	µg/L	0.23	1	S Spence	12/8/2014
Chromium	U	µg/L	0.80	5	S Spence	12/8/2014
Cobalt	U	µg/L	0.33	1	S Spence	12/8/2014
Copper	0.68J	µg/L	0.40	1	S Spence	12/8/2014
Lead	U	µg/L	0.64	1	S Spence	12/8/2014
Manganese	4.2	µg/L	0.28	1	S Spence	12/8/2014
Nickel	0.98J	µg/L	0.25	1	S Spence	12/8/2014
Selenium	U	µg/L	0.87	5	S Spence	12/8/2014
Silver	U	µg/L	0.084	0.25	S Spence	12/8/2014
Thallium	U	µg/L	0.31	1	S Spence	12/8/2014
Vanadium	U	µg/L	3.1	5	S Spence	12/8/2014
Zinc	13	µg/L	1.2	5	S Spence	12/8/2014

Lab-Sample Number: K00008198005
Project Name:
Sample Description: Residential well

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

Sampler Project Name: Poplar Springs Landfill
Project Site No.: SNL53-1062
Station No.: R-2 Hines
Date/Time Collected: 11/21/2014 12:06
Sampler's Name: P. Mulligan & T. Hill
County: LOUDON - 53
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-SWM
Billing Code: EN00004176
Send Report To: TDEC-SWM
Priority Date:
Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
Received By: J Liu

TEST: Mercury		METHOD: EPA 245.1				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.039	0.2	A Wilson	12/3/2014

TEST: Total Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Hardness By Calculation	140	mg/L	0.27	0.66	M Pattanayek	11/21/2014

Lab-Sample Number: K00008198006
 Project Name:
 Sample Description: Residential Well

Field Determinations
 pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

Sampler Project Name: Poplar Springs Landfill
 Project Site No.: SNL53-1062
 Station No.: R-3 Hembree
 Date/Time Collected: 11/21/2014 13:03
 Sampler's Name: P. Mulligan & T. Hill
 County: LOUDON - 53
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-SWM
 Billing Code: EN00004176
 Send Report To: TDEC-SWM
 Priority Date:
 Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
 Received By: J Liu

TEST: Digestion Metals		METHOD: EPA 200.2				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/26/2014				M Pattanayek	11/26/2014

TEST: ICP		METHOD: EPA 200.7				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium	18	mg/L	0.046	0.1	M Pattanayek	12/1/2014
Iron	180	µg/L	6.0	10	M Pattanayek	12/1/2014
Magnesium	4.5	mg/L	0.037	0.1	M Pattanayek	12/1/2014
Potassium	3.7	mg/L	0.042	0.1	M Pattanayek	12/1/2014

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Antimony	U	µg/L	0.37	1	S Spence	12/8/2014
Arsenic	U	µg/L	0.60	5	S Spence	12/8/2014
Barium	61	µg/L	0.35	5	S Spence	12/8/2014
Beryllium	U	µg/L	0.30	1	S Spence	12/8/2014
Cadmium	U	µg/L	0.23	1	S Spence	12/8/2014
Chromium	U	µg/L	0.80	5	S Spence	12/8/2014
Cobalt	U	µg/L	0.33	1	S Spence	12/8/2014
Copper	2.4	µg/L	0.40	1	S Spence	12/8/2014
Lead	U	µg/L	0.64	1	S Spence	12/8/2014
Manganese	6.7	µg/L	0.28	1	S Spence	12/8/2014
Nickel	1.0	µg/L	0.25	1	S Spence	12/8/2014
Selenium	U	µg/L	0.87	5	S Spence	12/8/2014
Silver	U	µg/L	0.084	0.25	S Spence	12/8/2014
Thallium	U	µg/L	0.31	1	S Spence	12/8/2014
Vanadium	U	µg/L	3.1	5	S Spence	12/8/2014
Zinc	160	µg/L	1.2	5	S Spence	12/8/2014

Lab-Sample Number: K00008198006
Project Name:
Sample Description: Residential Well

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

Sampler Project Name: Poplar Springs Landfill
Project Site No.: SNL53-1062
Station No.: R-3 Hembree
Date/Time Collected: 11/21/2014 13:03
Sampler's Name: P. Mulligan & T. Hill
County: LOUDON - 53
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-SWM
Billing Code: EN00004176
Send Report To: TDEC-SWM
Priority Date:
Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
Received By: J Liu

TEST: Mercury		METHOD: EPA 245.1				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.039	0.2	A Wilson	12/3/2014

TEST: Total Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Hardness By Calculation	64	mg/L	0.27	0.66	M Pattanayek	11/21/2014

Lab-Sample Number: K00008198007
 Project Name:
 Sample Description: Residential Well

Field Determinations
 pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

Sampler Project Name: Poplar Springs Landfill
 Project Site No.: SNL53-1062
 Station No.: R-4 Humphreys
 Date/Time Collected: 11/21/2014 13:35
 Sampler's Name: P. Mulligan & T. Hill
 County: LOUDON - 53
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-SWM
 Billing Code: EN00004176
 Send Report To: TDEC-SWM
 Priority Date:
 Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
 Received By: J Liu

TEST: Digestion Metals		METHOD: EPA 200.2				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Digestion Metals	11/26/2014				M Pattanayek	11/26/2014

TEST: ICP		METHOD: EPA 200.7				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Calcium	31	mg/L	0.046	0.1	M Pattanayek	12/1/2014
Iron	33	µg/L	6.0	10	M Pattanayek	12/1/2014
Magnesium	19	mg/L	0.037	0.1	M Pattanayek	12/1/2014
Potassium	1.9	mg/L	0.042	0.1	M Pattanayek	12/3/2014

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Antimony	U	µg/L	0.37	1	S Spence	12/8/2014
Arsenic	U	µg/L	0.60	5	S Spence	12/8/2014
Barium	5.1	µg/L	0.35	5	S Spence	12/8/2014
Beryllium	U	µg/L	0.30	1	S Spence	12/8/2014
Cadmium	U	µg/L	0.23	1	S Spence	12/8/2014
Chromium	U	µg/L	0.80	5	S Spence	12/8/2014
Cobalt	U	µg/L	0.33	1	S Spence	12/8/2014
Copper	4.1	µg/L	0.40	1	S Spence	12/8/2014
Lead	U	µg/L	0.64	1	S Spence	12/8/2014
Manganese	U	µg/L	0.28	1	S Spence	12/8/2014
Nickel	0.96J	µg/L	0.25	1	S Spence	12/8/2014
Selenium	U	µg/L	0.87	5	S Spence	12/8/2014
Silver	U	µg/L	0.084	0.25	S Spence	12/8/2014
Thallium	U	µg/L	0.31	1	S Spence	12/8/2014
Vanadium	U	µg/L	3.1	5	S Spence	12/8/2014
Zinc	110	µg/L	1.2	5	S Spence	12/8/2014

Lab-Sample Number: K00008198007
Project Name:
Sample Description: Residential Well

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

Sampler Project Name: Poplar Springs Landfill
Project Site No.: SNL53-1062
Station No.: R-4 Humphreys
Date/Time Collected: 11/21/2014 13:35
Sampler's Name: P. Mulligan & T. Hill
County: LOUDON - 53
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-SWM
Billing Code: EN00004176
Send Report To: TDEC-SWM
Priority Date:
Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
Received By: J Liu

TEST: Mercury		METHOD: EPA 245.1				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Mercury	U	µg/L	0.039	0.2	A Wilson	12/3/2014

TEST: Total Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Total Hardness By Calculation	160	mg/L	0.27	0.66	M Pattanayek	11/21/2014

Lab-Sample Number: K00008198008
 Project Name:
 Sample Description: Residential Well - duplicate sample

Field Determinations
 pH:
 Chlorine, residual:
 Conductivity:
 Temperature:
 Dissolved Oxygen:
 Other:
 Flow: CFS

Sampler Project Name: Poplar Springs Landfill
 Project Site No.: SNL53-1062
 Station No.: R-4 Duplicate Humphreys
 Date/Time Collected: 11/21/2014 13:40
 Sampler's Name: P. Mulligan & T. Hill
 County: LOUDON - 53
 Sample Matrix: Water
 EFO: Knoxville
 Sampling Agency: TDEC-SWM
 Billing Code: EN00004176
 Send Report To: TDEC-SWM
 Priority Date:
 Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
 Received By: J Liu

TEST: Digestion Metals		METHOD: EPA 200.2				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Digestion Metals	11/26/2014				M Pattanayek	11/26/2014

TEST: ICP		METHOD: EPA 200.7				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Calcium	31	mg/L	0.046	0.1	M Pattanayek	12/1/2014
Iron	43	µg/L	6.0	10	M Pattanayek	12/1/2014
Magnesium	19	mg/L	0.037	0.1	M Pattanayek	12/1/2014
Potassium	1.9	mg/L	0.042	0.1	M Pattanayek	12/3/2014

TEST: ICP-MS		METHOD: EPA 200.8				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MQL	ANALYZED BY:	DATE
Antimony	U	µg/L	0.37	1	S Spence	12/8/2014
Arsenic	U	µg/L	0.60	5	S Spence	12/8/2014
Barium	4.6J	µg/L	0.35	5	S Spence	12/8/2014
Beryllium	U	µg/L	0.30	1	S Spence	12/8/2014
Cadmium	U	µg/L	0.23	1	S Spence	12/8/2014
Chromium	U	µg/L	0.80	5	S Spence	12/8/2014
Cobalt	U	µg/L	0.33	1	S Spence	12/8/2014
Copper	4.9	µg/L	0.40	1	S Spence	12/8/2014
Lead	1.8	µg/L	0.64	1	S Spence	12/8/2014
Manganese	0.30J	µg/L	0.28	1	S Spence	12/8/2014
Nickel	0.93J	µg/L	0.25	1	S Spence	12/8/2014
Selenium	U	µg/L	0.87	5	S Spence	12/8/2014
Silver	U	µg/L	0.084	0.25	S Spence	12/8/2014
Thallium	U	µg/L	0.31	1	S Spence	12/8/2014
Vanadium	U	µg/L	3.1	5	S Spence	12/8/2014
Zinc	210	µg/L	1.2	5	S Spence	12/8/2014

Lab-Sample Number: K00008198008
Project Name:
Sample Description: Residential Well - duplicate sample

Field Determinations
pH:
Chlorine, residual:
Conductivity:
Temperature:
Dissolved Oxygen:
Other:
Flow: CFS

Sampler Project Name: Poplar Springs Landfill
Project Site No.: SNL53-1062
Station No.: R-4 Duplicate Humphreys
Date/Time Collected: 11/21/2014 13:40
Sampler's Name: P. Mulligan & T. Hill
County: LOUDON - 53
Sample Matrix: Water
EFO: Knoxville
Sampling Agency: TDEC-SWM
Billing Code: EN00004176
Send Report To: TDEC-SWM
Priority Date:
Date/Time Received: 11/21/2014 15:30

Agency Invoiced: TDEC-SWM
Received By: J Liu

TEST: Mercury		METHOD: EPA 245.1				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Mercury	U	µg/L	0.039	0.2	A Wilson	12/3/2014

TEST: Total Hardness By Calculation		METHOD: SM 2340B				
PERFORMING LAB: Nashville						
ANALYTE	RESULT	UNITS	MDL	MLQ	ANALYZED BY:	DATE
Total Hardness By Calculation	160	mg/L	0.27	0.66	M Pattanayek	11/21/2014



PROJECT NAME: Poplar Springs Landfill SNL 53-1062			Metals			Laboratory Number		
STATION NUMBER: S-2		WATERBODY NAME:				aluminum, Al		
STREAM MILE:		COUNTY: Loudon		* antimony, Sb		K00008198-002		
DESCRIPTION: Landfill Pond			* arsenic, As			Chain of Custody and Supplemental Information		
LATITUDE: 35°43'55.8984" N		LONGITUDE: 84°17'26.6424" W		* barium, Ba		Only one chain of custody form is required per sample or point (if all collected at the same time)		
Matrix: Water		Depth:		* beryllium, Be				
COLLECTED: DATE: 11/21/14		TIME: 10:03		boron, B		1. Collected By: PJM and TNH		
SAMPLER'S FULL NAME (printed) Patrick Mulligan and Timothy Hill			* cadmium, Cd			Date 11/21/14 Time 10:03		
SAMPLING AGENCY: TDEC-DSWM-KEFO			* calcium, Ca			Delivered to Hank Ray Co. B		
IF PRIORITY, DATE NEEDED:		BILLING CODE EN00004176		* chromium, Cr		Date 11-21-14 Time 1530		
SEND REPORT TO: Patrick Mulligan, 3711 Middlebrook Pike, Knoxville, TN 37921			* cobalt, Co			2. Received by [Signature]		
* Env. Microbiology		* Gen. Inorganics (cont.)		* Other General Inorganics		* copper, Cu		
coliform, fecal*		ortho-phosphate				Date 11/21/14 Time 1530		
coliform, total*		silica*				Delivered to PJP EX		
strep, fecal*		* sulfate* Sol				Date 11/21/14 Time 1530		
E. Coli*		turbidity*				3. Received by L. Madan		
Enterococcus*		Preserved, Nutrient				Date 11/25/14 Time 0850		
		COD*				Delivered to		
* General Inorganics		* nitrogen, ammonia				Date Time		
Not Preserved		nitrogen, NO ₃ & NO ₂				4. Received in Lab by		
acidity as CaCO ₃ *		nitrogen, total Kjeldahl				Date Time		
alkalinity as CaCO ₃ *		* nitrogen, total organic				5. Received in Lab by		
BOD, 5-day*		phosphate, total				Date Time		
CBOD, 5-day*						6. Received in Lab by [Signature]		
* chloride* Sol		SPECIAL PRESERVATION				Date 11/21/14 Time 1530		
chromium, hexavalent		cyanide				Logged in by [Signature]		
color		oil and grease				Date 11/21/14 Time 1608		
conductivity*		phenols, total		* Metals Digestion type:		hardness, Ca as CaCO ₃ *		
* fluoride* Sol		sulfide, total*		Normal		hardness, total as CaCO ₃ *		
MBAS*		TOC*		Dissolved		Additional Information		
nitrogen, nitrate*				TCLP				
nitrogen, nitrite*				Other:		* Other Metals:		
pH						1. Others present at collection		
residue, dissolved*		Asbestos				JTC, RAB		
residue, settleable*		bulk asbestos				2. Other samples collected		
residue, suspended*		other microscopic				2		
residue, total*						3. Mode of transportation to lab		
						Car		
						4. Cooler sealed by		
						PJM and TNH		
						5. Date cooler sealed		
						11/21/14		
						6. Remarks		

* denotes analyses performed only on water

FIELD DETERMINATIONS

Conductivity, (u/mhos)	Chlorine, residual	Other Field Parameters:
Dissolved Oxygen, (mg/L)	Turbidity, (NTU)	
Temperature, (°C)	ORP, (mv)	
pH	Flow Rate	



PROJECT NAME: Poplar Springs Landfill SNL 53-1062				Metals:		Laboratory Number	
STATION NUMBER: S-1		WATERBODY NAME:				K0000 8198-003	
STREAM MILE:		COUNTY: Loudon		* aluminum, Al		Chain of Custody and Supplemental Information Only one chain of custody form is required per sample or point (if all collected at the same time)	
DESCRIPTION: Leachate from seeps on landfill				* antimony, Sb			
LATITUDE: 35°43'55.8984" N		LONGITUDE: 84°17'26.6424" W		* arsenic, As		1. Collected By: PJM and TNH Date 11/21/14 Time 10:26 Delivered to <i>Knox Co Lab</i> Date 11-21-14 Time 1530	
Matrix: Water		Depth:		* barium, Ba			
COLLECTED: DATE: 11/21/14		TIME: 10:26		* beryllium, Be		2. Received by <i>J. J. J.</i> Date 11/21/14 Time 1530 Delivered to <i>EPD</i> Date 11/24/14 Time 1530	
SAMPLER'S FULL NAME (printed): Patrick Mulligan and Timothy Hill				* boron, B			
SAMPLING AGENCY: TDEC-DSWM-KEFO				* cadmium, Cd		3. Received by <i>J. Madaral</i> Date 11/25/14 Time 0850 Delivered to Date Time	
IF PRIORITY, DATE NEEDED:		BILLING CODE: EN00004176		* calcium, Ca			
SEND REPORT TO: Patrick Mulligan, 3711 Middlebrook Pike, Knoxville, TN 37921				* chromium, Cr		4. Received in Lab by Date Time	
Env. Microbiology:		Gen. Inorganics (cont):		* cobalt, Co			
coliform, fecal*		ortho-phosphate		* copper, Cu		5. Received in Lab by Date Time	
coliform, total*		silica*		* iron, Fe			
strep, fecal*		* sulfite* <i>5.2</i>		* lithium, Li		6. Received in Lab by <i>J. J. J.</i> Date 11/24/14 Time 1530 Logged in by <i>J. J. J.</i> Date 11/21/14 Time 1608	
E. Coli*		turbidity*		* lead, Pb			
Enterococcus*		Preserved, Nutrient		* magnesium, Mg		Additional Information	
		COD*		* manganese, Mn			
General Inorganics:		* nitrogen, ammonia		* mercury, Hg		7. Others present at collection JTC, RAB, RAB	
Not Preserved		nitrogen, NO ₃ & NO ₂		* nickel, Ni			
acidity as CaCO ₃ *		nitrogen, total Kjeldahl		* potassium, K		8. Mode of transportation to lab Car	
alkalinity as CaCO ₃ *		* nitrogen, total organic		* selenium, Se			
BOD, 5-day*		phosphate, total		* silver, Ag		9. Date cooler sealed PJM and TNH	
CBOD, 5-day*		SPECIAL PRESERVATION		* sodium, Na			
* fluoride* <i>5.2</i>		cyanide		* strontium, Sr		10. Date cooler sealed 11/21/14	
chromium, hexavalent		oil and grease		* thallium, Tl			
color		phenols, total		* vanadium, V		11. Remarks	
conductivity*		phenols, total		* zinc, Zn			
* fluoride* <i>5.2</i>		sulfide, total*		Metals Digestion type:		1. Others present at collection JTC, RAB, RAB	
MBAS*		TOC*		Normal			
nitrogen, nitrate*				Dissolved		2. Other samples collected 2	
nitrogen, nitrite*				TCLP			
pH				Other:		3. Mode of transportation to lab Car	
residue, dissolved*		Asbestos:					
residue, settleable*		bulk asbestos				4. Cooler sealed by PJM and TNH	
residue, suspended*		other microscopic					
residue, total*						5. Date cooler sealed 11/21/14	

* denotes analyses performed only on water

FIELD DETERMINATIONS

Conductivity, (u/mhos)	Chlorine, residual	Other Field Parameters:
Dissolved Oxygen, (mg/L)	Turbidity, (NTU)	
Temperature, (°C)	ORP, (mv)	
pH	Flow Rate	



PROJECT NAME: Poplar Springs Landfill SNL 53-1062				Metals:		Laboratory Number	
STATION NUMBER: R-1 1042500		WATERBODY NAME:		aluminum, Al		K00008198-004	
STREAM MILE:		COUNTY: Loudon		* antimony, Sb			
DESCRIPTION: Residential Well				* arsenic, As		Chain of Custody and Supplemental Information	
LATITUDE:		LONGITUDE:		* barium, Ba		Only one chain of custody form is required per sample or point (if all collected at the same time)	
Matrix: Water		Depth:		* beryllium, Be			
COLLECTED: DATE: 11/21/14		TIME: 11:32		boron, B		1. Collected By: PJM and TNH	
SAMPLER'S FULL NAME (printed) Patrick Mulligan and Timothy Hill				* cadmium, Cd		Date 11/21/14 Time 11:32	
SAMPLING AGENCY: TDEC-DSWM-KEFO				* calcium, Ca		Delivered to [Signature]	
IF PRIORITY, DATE NEEDED:		BILLING CODE: EN00004176		* chromium, Cr		Date 11-21-14 Time 1530	
SEND REPORT TO: Patrick Mulligan, 3711 Middlebrook Pike, Knoxville, TN 37921				* cobalt, Co		2. Received by [Signature]	
* Env. Microbiology		* Gen. Inorganics (cont.)		* copper, Cu		Date 11/21/14 Time 1530	
coliform, fecal*		ortho-phosphate		* iron, Fe		Delivered to [Signature]	
coliform, total*		silica*		lithium, Li		Date 11/24/14 Time 1530	
strep, fecal*		* sulfate* 5.2		* lead, Pb		3. Received by [Signature]	
E. Coli*		turbidity*		* magnesium, Mg		Date 11/25/14 Time 0850	
Enterococcus*		Preserved, Nutrient		* manganese, Mn		Delivered to [Signature]	
		COD*		* mercury, Hg		Date Time	
* General Inorganics		* nitrogen, ammonia		* nickel, Ni		4. Received in Lab by	
Not Preserved		nitrogen, NO ₃ & NO ₂		* potassium, K		Date Time	
acidity as CaCO ₃ *		nitrogen, total Kjeldahl		* selenium, Se		5. Received in Lab by	
alkalinity as CaCO ₃ *		* nitrogen, total organic		* silver, Ag		Date Time	
BOD, 5-day*		phosphate, total		sodium, Na		6. Received in Lab by [Signature]	
CBOD, 5-day*				strontium, Sr		Date 11/21/14 Time 1530	
* chloride* 5.2		SPECIAL PRESERVATION		* thallium, Tl		Logged in by [Signature]	
chromium, hexavalent		cyanide		* vanadium, V		Date 11/21/14 Time 1608	
color		oil and grease		* zinc, Zn			
conductivity*		phenols, total		hardness, Ca as CaCO ₃ *			
* fluoride* 6.2		sulfide, total*		* hardness, total as CaCO ₃ *			
MBAS*		TOC*		Metals Digestion type:		Additional Information	
nitrogen, nitrate*				Normal			
nitrogen, nitrite*				Dissolved			
pH				TCLP			
residue, dissolved*		Asbestos:		Other:		1. Others present at collection	
residue, settleable*		bulk asbestos				JTC, RA, RAB	
residue, suspended*		other microscopic				2. Other samples collected	
residue, total*						2	

* denotes analyses performed only on water

FIELD DETERMINATIONS

Conductivity, (uhmos)	Chlorine, residual	Other Field Parameters:
Dissolved Oxygen, (mg/L)	Turbidity, (NTU)	
Temperature, (°C)	ORP, (mv)	
pH	Flow Rate	

Additional Information	
1. Others present at collection	
JTC, RA, RAB	
2. Other samples collected	
2	
3. Mode of transportation to lab	
Car	
4. Cooler sealed by	
PJM and TNH	
5. Date cooler sealed	
11/21/14	
6. Remarks	



PROJECT NAME: Poplar Springs Landfill SNL 53-1062				Metals:		Laboratory Number	
STATION NUMBER: R-2		WATERBODY NAME:				aluminum, Al	
STREAM MILE:		COUNTY: Loudon		* antimony, Sb		K00008198-005	
DESCRIPTION: Residential Well				* arsenic, As		Chain of Custody and Supplemental Information	
LATITUDE:		LONGITUDE:		* barium, Ba		Only one chain of custody form is required per sample or point (if all collected at the same time)	
Matrix: Water		Depth:		* beryllium, Be			
COLLECTED: DATE: 11/21/14		TIME 1206		* boron, B		1. Collected By: PJM and TNH	
SAMPLER'S FULL NAME (printed): Patrick Mulligan and Timothy Hill				* cadmium, Cd		Date 11/21/14 Time 1206	
SAMPLING AGENCY: TDEC-DSWM-KEFO				* calcium, Ca		Delivered to [Signature]	
IF PRIORITY, DATE NEEDED:		BILLING CODE: EN00004176		* chromium, Cr		Date 11-21-14 Time 1530	
SEND REPORT TO: Patrick Mulligan, 3711 Middlebrook Pike, Knoxville, TN 37921				* cobalt, Co		2. Received by [Signature]	
Env. Microbiology:		Gen. Inorganics (cont):		* copper, Cu		Date 11/21/14 Time 1530	
coliform, fecal*		ortho-phosphate		* iron, Fe		Delivered to [Signature]	
coliform, total*		silica*		* lithium, Li		Date 11/24/14 Time 1530	
strep, fecal*		* sulfate* [Signature]		* lead, Pb		3. Received by [Signature]	
E. Coli*		turbidity*		* magnesium, Mg		Date 11/25/14 Time 0850	
Enterococcus*		Preserved, Nutrient		* manganese, Mn		Delivered to [Signature]	
		COD*		* mercury, Hg		Date [] Time []	
General Inorganics:		* nitrogen, ammonia		* nickel, Ni		4. Received in Lab by [Signature]	
Not Preserved		nitrogen, NO ₃ & NO ₂		* potassium, K		Date [] Time []	
acidity as CaCO ₃ *		nitrogen, total Kjeldahl		* selenium, Se		5. Received in Lab by [Signature]	
alkalinity as CaCO ₃ *		* nitrogen, total organic		* silver, Ag		Date [] Time []	
BOD, 5-day*		phosphate, total		sodium, Na		6. Received in Lab by [Signature]	
CBOD, 5-day*				strontium, Sr		Date 11/21/14 Time 1530	
* chloride* [Signature]		SPECIAL PRESERVATION		* thallium, Tl		Logged in by [Signature]	
chromium, hexavalent		cyanide		* vanadium, V		Date 11/21/14 Time 1608	
color		oil and grease		* zinc, Zn			
conductivity*		phenols, total		Metals Digestion type:			
* fluoride* [Signature]		sulfide, total*		Normal		hardness, Ca as CaCO ₃ *	
MBAS*		TOC*		Dissolved		hardness, total as CaCO ₃ *	
nitrogen, nitrate*				TCLP		Additional Information	
nitrogen, nitrite*				Other:		1. Others present at collection	
pH		Asbestos:				JTC, RA, RAB	
residue, dissolved*		bulk asbestos				2. Other samples collected	
residue, settleable*		other microscopic				2	
residue, suspended*						3. Mode of transportation to lab	
residue, total*						Car	

* denotes analyses performed only on water

FIELD DETERMINATIONS

Conductivity, (uhmos)	Chlorine, residual	Other Field Parameters:
Dissolved Oxygen, (mg/L)	Turbidity, (NTU)	
Temperature, (°C)	ORP, (mv)	
pH	Flow Rate	

Additional Information	
1. Others present at collection	
JTC, RA, RAB	
2. Other samples collected	
2	
3. Mode of transportation to lab	
Car	
4. Cooler sealed by	
PJM and TNH	
5. Date cooler sealed	
11/21/14	
6. Remarks	



PROJECT NAME: Poplar Springs Landfill SNL 53-1062				Metals		Laboratory Number	
STATION NUMBER: R-3 <i>HEMBREE</i>		WATERBODY NAME:		aluminum, Al		<i>K00008198-006</i>	
STREAM MILE:		COUNTY: Loudon		* antimony, Sb			
DESCRIPTION: Residential Well				* arsenic, As		Chain of Custody and Supplemental Information	
LATITUDE:		LONGITUDE:		* barium, Ba		Only <u>one</u> chain of custody form is required per sample or point (if all collected at the same time)	
Matrix: Water		Depth:		* beryllium, Be			
COLLECTED: DATE: 11/21/14		TIME: 13:03		boron, B		1. Collected By: PJM and TNH	
SAMPLER'S FULL NAME (printed) Patrick Mulligan and Timothy Hill				* cadmium, Cd		Date 11/21/14 Time 13:03	
SAMPLING AGENCY: TDEC-DSWM-KEFO				* calcium, Ca		Delivered to <i>Knox Co Lab PJM</i>	
IF PRIORITY, DATE NEEDED:		BILLING CODE EN00004176		* chromium, Cr		Date 11-21-14 Time 1530	
SEND REPORT TO: Patrick Mulligan, 3711 Middlebrook Pike, Knoxville, TN 37921				* cobalt, Co		2. Received by <i>J. J. Hill</i>	
* Env. Microbiology		* Gen. Inorganics (cont.)		* Other General Inorganics		* copper, Cu	
coliform, fecal*		ortho-phosphate				Date 11/21/14 Time 1530	
coliform, total*		silica*				Delivered to <i>EPD Box</i>	
strep, fecal*		* sulfate* <i>See</i>				Date 11/24/14 Time 1530	
E. Coli*		turbidity*				3. Received by <i>L. Mendez</i>	
Enterococcus*		Preserved, Nutrient				Date 11/25/14 Time 0850	
		COD*				Delivered to	
* General Inorganics		* nitrogen, ammonia				Date Time	
Not Preserved		nitrogen, NO ₃ & NO ₂				4. Received in Lab by	
acidity as CaCO ₃ *		nitrogen, total Kjeldahl				Date Time	
alkalinity as CaCO ₃ *		* nitrogen, total organic				5. Received in Lab by	
BOD, 5-day*		phosphate, total				Date Time	
CBOD, 5-day*						6. Received in Lab by <i>J. J. Hill</i>	
* chloride* <i>See</i>		SPECIAL PRESERVATION				Date 11/21/14 Time 1530	
chromium, hexavalent		cyanide				Logged in by <i>J. J. Hill</i>	
color		oil and grease				Date 11/21/14 Time 1608	
conductivity*		phenols, total		Metals Digestion type:			
* fluoride* <i>See</i>		sulfide, total*		Normal		hardness, Ca as CaCO ₃ *	
MBAS*		TOC*		Dissolved		* hardness, total as CaCO ₃ *	
nitrogen, nitrate*				TCLP			
nitrogen, nitrite*				Other:		Additional Information	
pH						1. Others present at collection	
residue, dissolved*		Asbestos				JTC, RA, RAB	
residue, settleable*		bulk asbestos				2. Other samples collected	
residue, suspended*		other microscopic				2	
residue, total*						3. Mode of transportation to lab	
						Car	

* denotes analyses performed only on water

FIELD DETERMINATIONS

Conductivity, (u/mhos)	Chlorine, residual	Other Field Parameters:
Dissolved Oxygen, (mg/L)	Turbidity, (NTU)	
Temperature, (°C)	ORP, (mv)	
pH	Flow Rate	

Additional Information	
1. Others present at collection	
JTC, RA, RAB	
2. Other samples collected	
2	
3. Mode of transportation to lab	
Car	
4. Cooler sealed by	
PJM and TNH	
5. Date cooler sealed	
11/21/14	
6. Remarks	



PROJECT NAME: Poplar Springs Landfill SNL 53-1062			Metals:		Laboratory Number
STATION NUMBER: R-4 Humphreys		WATERBODY NAME:		aluminum, Al	K00008198-007
STREAM MILE:		COUNTY: Loudon		antimony, Sb	
DESCRIPTION: Residential Well				arsenic, As	Chain of Custody and Supplemental Information Only one chain of custody form is required per sample or point (if all collected at the same time)
LATITUDE:		LONGITUDE:		barium, Ba	
Matrix: Water		Depth:		beryllium, Be	
COLLECTED: DATE: 11/21/14		TIME: 13:35		boron, B	1. Collected By: PJM and TNH
SAMPLER'S FULL NAME (printed): Patrick Mulligan and Timothy Hill				cadmium, Cd	Date 11/21/14 Time 13:35
SAMPLING AGENCY: TDEC-DSWM-KEFO				calcium, Ca	Delivered to <i>Area Lab PJM</i>
IF PRIORITY, DATE NEEDED:		BILLING CODE: EN00004176		chromium, Cr	Date 11-21-14 Time 15:30
SEND REPORT TO: Patrick Mulligan, 3711 Middlebrook Pike, Knoxville, TN 37921				cobalt, Co	2. Received by <i>J. J. J.</i>
Env. Microbiology:		General Inorganics (cont):		copper, Cu	Date 11/21/14 Time 15:30
coliform, fecal*		ortho-phosphate		iron, Fe	Delivered to <i>FEED EX</i>
coliform, total*		silica*		lithium, Li	Date 11/21/14 Time 15:30
strep, fecal*		sulfate* <i>SO4</i>		lead, Pb	3. Received by <i>J. J. J.</i>
E. Coli*		turbidity*		magnesium, Mg	Date 11/25/14 Time 08:50
Enterococcus*		Preserved, Nutrient		manganese, Mn	Delivered to <i>J. J. J.</i>
		COD*		mercury, Hg	Date
		nitrogen, ammonia		nickel, Ni	4. Received in Lab by
		nitrogen, NO ₃ & NO ₂		potassium, K	Date
		nitrogen, total Kjeldahl		selenium, Se	5. Received in Lab by
		nitrogen, total organic		silver, Ag	Date
		phosphate, total		sodium, Na	6. Received in Lab by <i>J. J. J.</i>
				strontium, Sr	Date 11/21/14 Time 15:30
				thallium, Tl	Logged in by <i>J. J. J.</i>
				vanadium, V	Date 11/21/14 Time 16:08
				zinc, Zn	
				hardness, Ca as CaCO ₃ *	
				hardness, total as CaCO ₃ *	
					Additional Information
					1. Others present at collection
					JTC, RA, RAB
					2. Other samples collected
					2
					3. Mode of transportation to lab
					Car
					4. Cooler sealed by
					PJM and TNH
					5. Date cooler sealed
					11/21/14
					6. Remarks

* denotes analyses performed only on water

FIELD DETERMINATIONS

Conductivity, (uhmos)	Chlorine, residual	Other Field Parameters:
Dissolved Oxygen, (mg/L)	Turbidity, (NTU)	
Temperature, (°C)	ORP, (mv)	
pH	Flow Rate	

1. Others present at collection
JTC, RA, RAB
2. Other samples collected
2
3. Mode of transportation to lab
Car
4. Cooler sealed by
PJM and TNH
5. Date cooler sealed
11/21/14
6. Remarks



PROJECT NAME: Poplar Springs Landfill SNL 53-1062				Metals:		Laboratory Number	
STATION NUMBER: R-5 Duplicate ⁴ <i>HUMPHREY</i>		WATERBODY NAME:		aluminum, Al		<i>K00008198-008</i>	
STREAM MILE:		COUNTY: Loudon		* antimony, Sb			
DESCRIPTION: Residential Well-duplicate sample				* arsenic, As			
LATITUDE:		LONGITUDE:		* barium, Ba		Chain of Custody and Supplemental Information	
Matrix: Water		Depth:		* beryllium, Be		<i>Only one chain of custody form is required per sample or point (if all collected at the same time)</i>	
COLLECTED: DATE: 11/21/14		TIME: 13:40		boron, B		1. Collected By: PJM and TNH	
SAMPLER'S FULL NAME (printed): Patrick Mulligan and Timothy Hill				* cadmium, Cd		Date 11/21/14 Time	
SAMPLING AGENCY: TDEC-DSWM-KEFO				* calcium, Ca		Delivered to <i>Book Room / Lab</i>	
IF PRIORITY, DATE NEEDED:		BILLING CODE: EN00004176		* chromium, Cr		Date <i>11/21/14</i> Time <i>5:30</i>	
SEND REPORT TO: Patrick Mulligan, 3711 Middlebrook Pike, Knoxville, TN 37921				* cobalt, Co		2. Received by <i>[Signature]</i>	
Env. Microbiology		Gen. Inorganics (cont)		* copper, Cu		Date 11/21/14 Time <i>1530</i>	
coliform, fecal*		ortho-phosphate		* iron, Fe		Delivered to <i>[Signature]</i>	
coliform, total*		silica*		lithium, Li		Date <i>11/21/14</i> Time <i>1530</i>	
strep, fecal*		* sulfate* <i>see</i>		* lead, Pb		3. Received by <i>L. Madaral</i>	
E. Coli*		turbidity*		* magnesium, Mg		Date <i>11/25/14</i> Time <i>0850</i>	
Enterococcus*		Preserved, Nutrient		* manganese, Mn		Delivered to	
		COD*		* mercury, Hg		Date Time	
General Inorganics		* nitrogen, ammonia		* nickel, Ni		4. Received in Lab by	
Not Preserved		nitrogen, NO ₃ & NO ₂		* potassium, K		Date Time	
acidity as CaCO ₃ *		nitrogen, total Kjeldahl		* selenium, Se		5. Received in Lab by	
alkalinity as CaCO ₃ *		* nitrogen, total organic		* silver, Ag		Date Time	
BOD, 5-day*		phosphate, total		sodium, Na		6. Received in Lab by <i>[Signature]</i>	
CBOD, 5-day*				strontium, Sr		Date <i>11/21/14</i> Time <i>9:30</i>	
* chloride* <i>see</i>		SPECIAL PRESERVATION		* thallium, Tl		Logged in by <i>[Signature]</i>	
chromium, hexavalent		cyanide		* vanadium, V		Date <i>11/21/14</i> Time <i>1608</i>	
color		oil and grease		* zinc, Zn			
conductivity*		phenols, total		Metals Digestion type:			
* fluoride* <i>see</i>		sulfide, total*		Normal		hardness, Ca as CaCO ₃ *	
MBAS*		TOC*		Dissolved		hardness, total as CaCO ₃ *	
nitrogen, nitrate*				TCLP		Additional Information	
nitrogen, nitrite*				Other:		1. Others present at collection	
pH						JTC, RA, RAB	
residue, dissolved*		Asbestos				2. Other samples collected	
residue, settleable*		bulk asbestos				2	
residue, suspended*		other microscopic				3. Mode of transportation to lab	
residue, total*						Car	

* denotes analyses performed only on water

FIELD DETERMINATIONS

Conductivity, (u/mhos)	Chlorine, residual	Other Field Parameters:
Dissolved Oxygen, (mg/L)	Turbidity, (NTU)	
Temperature, (°C)	ORP, (mv)	
pH	Flow Rate	

Additional Information	
1. Others present at collection	
JTC, RA, RAB	
2. Other samples collected	
2	
3. Mode of transportation to lab	
Car	
4. Cooler sealed by	
PJM and TNH	
5. Date cooler sealed	
11/21/14	
6. Remarks	

Laboratory Sample Control Log and Manifest

Sample ID Number	Person Delivering Sample to Lab	Agency Submitting Sample	Date Sample Collected	Person Receiving Sample In Lab	Date Sample Received in Lab	Time Sample Received in Lab	How Sample Transported to Lab	Condition of Sample/Cooler (Sealed, Unsealed, Broken, etc.)
k00008198-001-008	Patrick Mulligan	TDEC-SWM	11/21/2014	Jin Liu	11/21/2014	1530	State Vehicle	Unsealed/Unsealed

Inter Laboratory Chain of Custody

Sample Description and Quantity	Name of Lab Personnel Transferring Sample	Name of Lab Sample Transferred To	Name of Courier Transferring Sample	Date/Time Samples Relinquished to Courier	Name of Person Receiving Sample in Lab	Date/Time Samples Received in Lab	Condition of Sample (Sealed, Unsealed, Broken, etc.)	Condition of Cooler (Sealed, Unsealed, Broken, etc.)
500 mL Nutrient x7	J.Liu	Nashville Central Lab	FED EX	11/24/14, 1530				
Metals x7	J.Liu							
VOA x8	J.Liu							

Within Laboratory Sample Manifest

Name of Person Requesting Sample for Analysis	Date/Time Sample Relinquished for Analysis	Comments	Name of Person Returning Sample from Analysis	Date/Time Sample Returned from Analysis	How Sample Destroyed	Date/Time Sample Destroyed	Who Destroyed Sample
<i>g. quiniquis</i>	<i>11/25/14</i>	<i>VOA organics</i>					
<i>L. Salazar</i>	<i>11/23/14 @ MCV</i>	<i>Met</i>	<i>L. Salazar</i>	<i>12/4/14 @ 1400</i>			
<i>MP</i>	<i>11/26/14 @ 7:30</i>	<i>Met cleq</i>	<i>MP</i>	<i>11/25/14 @ 11:00</i>			