

December 26, 2016

Ms. Charlene Sauls; Regional Hydrogeologist
Pennsylvania Department of Environmental Protection
Bureau of Waste Management
909 Elmerton Avenue
Harrisburg, PA 17110-8200

REF: Private Water Supply
4th Quarter 2016 Form 52 Water Quality Analysis
Frey Farm Landfill; BWM Permit #101389

Dear Ms. Sauls:

In accordance with the Municipal Waste Management Regulations, the Lancaster County Solid Waste Management Authority (LCSWMA) continues the above-referenced monitoring program.

Attached are the Forms 52, lab reports, and excel csv file for your Landlinks Access database. MCL and SMCL exceedances are as follows:

1. USEPA MCL's exceedance report; four samples (3044RIVERRD, 3052RIVERRD, 3076RIVERRD and 3088RIVERRD) exceeded the limit for nitrate, samples are consistent with historic data the cause is attributed to agricultural impacts. No other MCL's were exceeded.
2. USEPA SMCL's exceedance report; samples 3052RIVERRD, 3076RIVERRD, & 3106 RIVERRD exceeded the limit for manganese and iron which are consistent with historic data and are attributed to natural soil and geologic conditions. The sample 3088RIVERRD exceeded for TDS which is a result of the home owners water softener.

Ground water monitoring concentrations where consistent with historic data, no significant deviations where observed.

Please do not hesitate in contacting me if you have any questions or concerns at mreider@lcswma.org.

Respectfully submitted,



Mark D Reider
Director of Environmental Compliance

Enclosures

Cc: Bob Zorbaugh, Dan Brown, Bob Eshbach
Ed Rawski, Randy Weiss (PaDEP)



Date Prepared/Revised
12/22/2016

DEP USE ONLY

Date Received

FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

All information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 52, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: SMITH

Address: 3044 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 30.58" Longitude: 76° 26' 11.25"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron): ☒ Yes ☐ No

Sample Date:(mm/dd/yy) 11/30/2016

Sample Collection Time: 10:28 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

12/12/2016

Were any holding times exceeded?: Yes ☒ No ☐ If yes, please explain in comments field.

Comments:

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SMITH

Sample Date

11/30/2016

1. Inorganics (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	27	SM20-2321
CALCIUM, TOTAL	22.2	EPA 200.7
CALCIUM, DISSOLVED	21.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	18.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	13	EPA 200.7
MAGNESIUM, DISSOLVED	12.7	EPA 200.7
MANGANESE, TOTAL (ug/l)	15	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	13	EPA 200.7
NITRATE-NITROGEN	20.2	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

SMITH

Sample Date

11/30/2016

1. Inorganics, continued (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.79	FIELD
pH-LAB (SU)	6.35	SM4500B
POTASSIUM, TOTAL	2.2	EPA 200.7
POTASSIUM, DISSOLVED	2	EPA 200.7
SODIUM, TOTAL	11.3	EPA 200.7
SODIUM, DISSOLVED	10.9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	285	FIELD
SPEC. COND., LAB (umhos/cm)	257	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	27	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	195	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.61	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

SMITH

Sample Date

11/30/2016

2. Organics (Enter all data in ug/l)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	0.5 ND	EPA 524.2
1,2-DIBROMOETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHENE	0.5 ND	EPA 524.2
1,2-DICHLOROETHANE	0.5 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
ETHYLBENZENE	0.5 ND	EPA 524.2
METHYLENE CHLORIDE	0.5 ND	EPA 524.2
TETRACHLOROETHENE	0.5 ND	EPA 524.2
TOLUENE	0.5 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	0.5 ND	EPA 524.2
TRICHLOROETHENE	0.5 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	0.5 ND	EPA 524.2
VINYL CHLORIDE	0.5 ND	EPA 524.2
XYLENES (TOTAL)	0.5 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
12/22/2016

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FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: MILLER

Address: 3052 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 29.85" Longitude: 76° 26' 11.45"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron): ☒ Yes ☐ No

Sample Date:(mm/dd/yy) 11/30/2016

Sample Collection Time: 10:10 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

12/12/2016

Were any holding times exceeded?: Yes ☒ No ☐ If yes, please explain in comments field.

Comments:

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

11/30/2016

1. Inorganics (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	15.5	EPA 200.7
CALCIUM, DISSOLVED	14.7	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	21.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	11.8	EPA 200.7
MAGNESIUM, DISSOLVED	11.5	EPA 200.7
MANGANESE, TOTAL (ug/l)	63	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	58	EPA 200.7
NITRATE-NITROGEN	19.4	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

11/30/2016

1. Inorganics, continued (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	4.95	FIELD
pH-LAB (SU)	5.59	SM4500B
POTASSIUM, TOTAL	2.2	EPA 200.7
POTASSIUM, DISSOLVED	1.9	EPA 200.7
SODIUM, TOTAL	8.1	EPA 200.7
SODIUM, DISSOLVED	8.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	248	FIELD
SPEC. COND., LAB (umhos/cm)	214	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	142	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.6	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.32	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

MILLER

Sample Date

11/30/2016

2. Organics (Enter all data in ug/l)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	0.5 ND	EPA 524.2
1,2-DIBROMOETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHENE	0.5 ND	EPA 524.2
1,2-DICHLOROETHANE	0.5 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
ETHYLBENZENE	0.5 ND	EPA 524.2
METHYLENE CHLORIDE	0.5 ND	EPA 524.2
TETRACHLOROETHENE	0.5 ND	EPA 524.2
TOLUENE	0.5 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	0.5 ND	EPA 524.2
TRICHLOROETHENE	0.5 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	0.5 ND	EPA 524.2
VINYL CHLORIDE	0.5 ND	EPA 524.2
XYLENES (TOTAL)	0.5 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



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FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: SENSENICH

Address: 3076 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 28.2" Longitude: 76° 26' 11.1"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron): ☒ Yes ☐ No

Sample Date:(mm/dd/yy) 11/30/2016

Sample Collection Time: 9:52 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

12/12/2016

Were any holding times exceeded?: Yes ☒ No ☐ If yes, please explain in comments field.

Comments:

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

11/30/2016

1. Inorganics (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	7	SM20-2321
CALCIUM, TOTAL	16.2	EPA 200.7
CALCIUM, DISSOLVED	15.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	45.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	9.8	EPA 200.7
MAGNESIUM, DISSOLVED	9.7	EPA 200.7
MANGANESE, TOTAL (ug/l)	190	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	180	EPA 200.7
NITRATE-NITROGEN	12.7	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

11/30/2016

1. Inorganics, continued (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.7	FIELD
pH-LAB (SU)	5.67	SM4500B
POTASSIUM, TOTAL	3.5	EPA 200.7
POTASSIUM, DISSOLVED	3.2	EPA 200.7
SODIUM, TOTAL	22.8	EPA 200.7
SODIUM, DISSOLVED	22.8	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	253	FIELD
SPEC. COND., LAB (umhos/cm)	271	EPA 120.1
SULFATE	11.7	EPA 300
ALKALINITY	7	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	155	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.83	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

11/30/2016

2. Organics (Enter all data in ug/l)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	0.5 ND	EPA 524.2
1,2-DIBROMOETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHENE	0.5 ND	EPA 524.2
1,2-DICHLOROETHANE	0.5 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
ETHYLBENZENE	0.5 ND	EPA 524.2
METHYLENE CHLORIDE	0.5 ND	EPA 524.2
TETRACHLOROETHENE	0.5 ND	EPA 524.2
TOLUENE	0.5 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	0.5 ND	EPA 524.2
TRICHLOROETHENE	0.5 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	0.5 ND	EPA 524.2
VINYL CHLORIDE	0.5 ND	EPA 524.2
XYLENES (TOTAL)	0.5 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
12/22/2016

DEP USE ONLY

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FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: WEBER

Address: 3088 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 21" Longitude: 76° 26' 7.1"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron): ☒ Yes ☐ No

Sample Date:(mm/dd/yy) 12/01/2016

Sample Collection Time: 3:35 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

12/13/2016

Were any holding times exceeded?: Yes ☒ No ☐ If yes, please explain in comments field.

Comments:

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

12/01/2016

1. Inorganics (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	144	SM20-2321
CALCIUM, TOTAL	0.076	EPA 200.7
CALCIUM, DISSOLVED	0.1 ND	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	187	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	0.05 ND	EPA 200.7
MAGNESIUM, DISSOLVED	0.1 ND	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	12.9	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

12/01/2016

1. Inorganics, continued (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	7.13	FIELD
pH-LAB (SU)	7.07	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	1.3	EPA 200.7
SODIUM, TOTAL	197	EPA 200.7
SODIUM, DISSOLVED	227	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	989	FIELD
SPEC. COND., LAB (umhos/cm)	1000	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	144	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	534	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

12/01/2016

2. Organics (Enter all data in ug/l)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	0.5 ND	EPA 524.2
1,2-DIBROMOETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHENE	0.5 ND	EPA 524.2
1,2-DICHLOROETHANE	0.5 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
ETHYLBENZENE	0.5 ND	EPA 524.2
METHYLENE CHLORIDE	0.5 ND	EPA 524.2
TETRACHLOROETHENE	0.5 ND	EPA 524.2
TOLUENE	0.5 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	0.5 ND	EPA 524.2
TRICHLOROETHENE	0.5 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	0.5 ND	EPA 524.2
VINYL CHLORIDE	0.5 ND	EPA 524.2
XYLENES (TOTAL)	0.5 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



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All information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 52, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: KIRCHNER

Address: 3100 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 17.9" Longitude: 76° 26' 6.28"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron): ☒ Yes ☐ No

Sample Date:(mm/dd/yy) 12/01/2016

Sample Collection Time: 3:20 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

12/13/2016

Were any holding times exceeded?: Yes ☒ No ☐ If yes, please explain in comments field.

Comments:

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

12/01/2016

1. Inorganics (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	27	SM20-2321
CALCIUM, TOTAL	18.1	EPA 200.7
CALCIUM, DISSOLVED	18.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	52.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	8.7	EPA 200.7
MAGNESIUM, DISSOLVED	8.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	7.1	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	7.3	EPA 200.7
NITRATE-NITROGEN	4.4	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

12/01/2016

1. Inorganics, continued (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.29	FIELD
pH-LAB (SU)	6.15	SM4500B
POTASSIUM, TOTAL	1.5	EPA 200.7
POTASSIUM, DISSOLVED	1.5	EPA 200.7
SODIUM, TOTAL	15.9	EPA 200.7
SODIUM, DISSOLVED	16.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	267	FIELD
SPEC. COND., LAB (umhos/cm)	257	EPA 120.1
SULFATE	9.3	EPA 300
ALKALINITY	27	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	170	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

12/01/2016

2. Organics (Enter all data in ug/l)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	0.5 ND	EPA 524.2
1,2-DIBROMOETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHENE	0.5 ND	EPA 524.2
1,2-DICHLOROETHANE	0.5 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
ETHYLBENZENE	0.5 ND	EPA 524.2
METHYLENE CHLORIDE	0.5 ND	EPA 524.2
TETRACHLOROETHENE	0.5 ND	EPA 524.2
TOLUENE	0.5 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	0.5 ND	EPA 524.2
TRICHLOROETHENE	0.5 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	0.5 ND	EPA 524.2
VINYL CHLORIDE	0.5 ND	EPA 524.2
XYLENES (TOTAL)	0.5 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
12/22/2016

DEP USE ONLY

Date Received

FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

All information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 52, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3106 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 17.27" Longitude: 76° 26' 5.6"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron): ☒ Yes ☐ No

Sample Date:(mm/dd/yy) 11/30/2016

Sample Collection Time: 9:30 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

12/12/2016

Were any holding times exceeded?: Yes ☒ No ☐ If yes, please explain in comments field.

Comments:

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/30/2016

1. Inorganics (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	12	SM20-2321
CALCIUM, TOTAL	14.1	EPA 200.7
CALCIUM, DISSOLVED	14	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	49.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1700	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	9.1	EPA 200.7
MAGNESIUM, DISSOLVED	9.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	60	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	46	EPA 200.7
NITRATE-NITROGEN	9.6	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/30/2016

1. Inorganics, continued (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.73	FIELD
pH-LAB (SU)	6.08	SM4500B
POTASSIUM, TOTAL	1.7	EPA 200.7
POTASSIUM, DISSOLVED	1.5	EPA 200.7
SODIUM, TOTAL	28.6	EPA 200.7
SODIUM, DISSOLVED	29.7	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	311	FIELD
SPEC. COND., LAB (umhos/cm)	260	EPA 120.1
SULFATE	3.5	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	173	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.68	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	25.3	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/30/2016

2. Organics (Enter all data in ug/l)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	0.5 ND	EPA 524.2
1,2-DIBROMOETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHENE	0.5 ND	EPA 524.2
1,2-DICHLOROETHANE	0.5 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
ETHYLBENZENE	0.5 ND	EPA 524.2
METHYLENE CHLORIDE	0.5 ND	EPA 524.2
TETRACHLOROETHENE	0.5 ND	EPA 524.2
TOLUENE	0.5 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	0.5 ND	EPA 524.2
TRICHLOROETHENE	0.5 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	0.5 ND	EPA 524.2
VINYL CHLORIDE	0.5 ND	EPA 524.2
XYLENES (TOTAL)	0.5 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/22/2016

DEP USE ONLY

Date Received

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

All information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 52, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: BECK

Address: 3125 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 11.6" Longitude: 76° 26' 5.4"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron): ☒ Yes ☐ No

Sample Date:(mm/dd/yy) 11/30/2016

Sample Collection Time: 10:42 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

12/12/2016

Were any holding times exceeded?: Yes ☒ No ☐ If yes, please explain in comments field.

Comments:

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

11/30/2016

1. Inorganics (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	34	SM20-2321
CALCIUM, TOTAL	2.6	EPA 200.7
CALCIUM, DISSOLVED	0.45	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	138	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	1.5	EPA 200.7
MAGNESIUM, DISSOLVED	0.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	10	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	9.8	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

BECK

Sample Date

11/30/2016

1. Inorganics, continued (Enter all data in mg/l except as noted)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.75	FIELD
pH-LAB (SU)	6.28	SM4500B
POTASSIUM, TOTAL	2	EPA 200.7
POTASSIUM, DISSOLVED	1.4	EPA 200.7
SODIUM, TOTAL	137	EPA 200.7
SODIUM, DISSOLVED	133	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	612	FIELD
SPEC. COND., LAB (umhos/cm)	604	EPA 120.1
SULFATE	6.7	EPA 300
ALKALINITY	34	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	316	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

BECK

Sample Date

11/30/2016

2. Organics (Enter all data in ug/l)

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	0.5 ND	EPA 524.2
1,2-DIBROMOETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHANE	0.5 ND	EPA 524.2
1,1-DICHLOROETHENE	0.5 ND	EPA 524.2
1,2-DICHLOROETHANE	0.5 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	0.5 ND	EPA 524.2
ETHYLBENZENE	0.5 ND	EPA 524.2
METHYLENE CHLORIDE	0.5 ND	EPA 524.2
TETRACHLOROETHENE	0.5 ND	EPA 524.2
TOLUENE	0.5 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	0.5 ND	EPA 524.2
TRICHLOROETHENE	0.5 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	0.5 ND	EPA 524.2
VINYL CHLORIDE	0.5 ND	EPA 524.2
XYLENES (TOTAL)	0.5 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.

December 13, 2016

Mr. Daniel Brown
Lancaster County Solid Waste Authority
1299 Hbg Pike, P.O. Box 4425
Lancaster, PA 17604

Certificate of Analysis

Project Name: **2016-CONTIGUOUS**Workorder: **2192290**

Purchase Order:

Workorder ID: **4TH QTR 2016-3044 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, November 30, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Mark Reider , Landowner , Mr. Jeff Musser

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.



Ms. Susan J Scherer
Project Coordinator

ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

SAMPLE SUMMARY

Workorder: 2192290 4TH QTR 2016-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2192290001	3044 River Road, Conestoga, PA	Water	11/30/2016 10:28	11/30/2016 15:50	Mr. Brian G Shade
2192290002	Field Blank	Water	11/30/2016 10:50	11/30/2016 15:50	Mr. Brian G Shade
2192290003	Trip Blank	Water	11/30/2016 15:50	11/30/2016 15:50	Mr. Brian G Shade

ALS Environmental Laboratory Locations Across North America

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Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

SAMPLE SUMMARY

Workorder: 2192290 4TH QTR 2016-3044 RIVER RD

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

ANALYTICAL RESULTS

Workorder: 2192290 4TH QTR 2016-3044 RIVER RD

Lab ID: **2192290001** Date Collected: 11/30/2016 10:28 Matrix: Water
Sample ID: **3044 River Road, Conestoga, PA** Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/6/16 06:40	CJG	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	76.6		%	70 - 130	EPA 524.2			12/6/16 06:40	CJG	K
4-Bromofluorobenzene (S)	88.8		%	70 - 130	EPA 524.2			12/6/16 06:40	CJG	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	27		mg/L	5	S2320B-97			12/1/16 06:50	MSA	C
Alkalinity, Total	27	1	mg/L	5	S2320B-97			12/1/16 06:50	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			12/7/16 10:52	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			12/2/16 11:34	AK	B
Chloride	18.7		mg/L	2.0	EPA 300.0			12/1/16 14:32	BSL	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/1/16 14:32	BSL	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			12/12/16 12:40	PAG	I
Nitrate-N	20.2		mg/L	0.50	EPA 300.0			12/1/16 14:32	BSL	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/1/16 14:32	BSL	C
pH	6.35	2	pH_Units		S4500HB-00			12/1/16 06:50	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	12/4/16 11:24	JLG	12/6/16 11:16	JLG	H
Specific Conductance	257		umhos/cm	1	S2510B-97			12/1/16 06:50	MSA	C
Sulfate	ND		mg/L	2.0	EPA 300.0			12/1/16 14:32	BSL	C
Total Dissolved Solids	195		mg/L	5	S2540C-11			12/5/16 12:00	ML	C

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ANALYTICAL RESULTS

Workorder: 2192290 4TH QTR 2016-3044 RIVER RD

Lab ID: **2192290001**

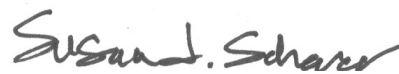
Date Collected: 11/30/2016 10:28

Matrix: Water

Sample ID: **3044 River Road, Conestoga, PA**

Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	0.61		mg/L	0.50	S5310B-00			12/1/16 10:45	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/1/16 00:52	MSA	C
METALS										
Calcium, Total	22.2		mg/L	0.050	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:10	TSS	D1
Calcium, Dissolved	21.2		mg/L	0.10	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:21	TSS	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:10	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:21	TSS	E
Magnesium, Total	13.0		mg/L	0.050	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:10	TSS	D1
Magnesium, Dissolved	12.7		mg/L	0.10	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:21	TSS	E
Manganese, Total	0.015		mg/L	0.0025	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:10	TSS	D1
Manganese, Dissolved	0.013		mg/L	0.0050	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:21	TSS	E
Potassium, Total	2.2		mg/L	0.25	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:10	TSS	D1
Potassium, Dissolved	2.0		mg/L	0.50	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:21	TSS	E
Sodium, Total	11.3		mg/L	0.25	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:10	TSS	D1
Sodium, Dissolved	10.9		mg/L	0.50	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:21	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.790		pH_Units		Field			11/30/16 10:28	BGS	M
Specific Conductance, Field	285		umhos/cm	1	Field			11/30/16 10:28	BGS	M
Temperature	15.30		Deg. C		Field			11/30/16 10:28	BGS	M



Ms. Susan J Scherer

Project Coordinator

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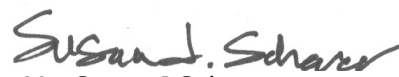
ANALYTICAL RESULTS

Workorder: 2192290 4TH QTR 2016-3044 RIVER RD

Lab ID: **2192290002**
Sample ID: **Field Blank**

Date Collected: 11/30/2016 10:50 Matrix: Water
Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
Toluene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/6/16 01:19	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	73.4		%	70 - 130	EPA 524.2			12/6/16 01:19	CJG	A
4-Bromofluorobenzene (S)	89.4		%	70 - 130	EPA 524.2			12/6/16 01:19	CJG	A


Ms. Susan J Scherer
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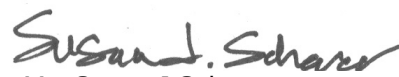
ANALYTICAL RESULTS

Workorder: 2192290 4TH QTR 2016-3044 RIVER RD

Lab ID: **2192290003**
Sample ID: **Trip Blank**

Date Collected: 11/30/2016 15:50 Matrix: Water
Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
Toluene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/6/16 01:43	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	71.7		%	70 - 130	EPA 524.2			12/6/16 01:43	CJG	A
4-Bromofluorobenzene (S)	80.8		%	70 - 130	EPA 524.2			12/6/16 01:43	CJG	A


Ms. Susan J Scherer
Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2192290001	1	3044 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2192290001	2	3044 River Road, Conestoga, PA	S4500HB-00	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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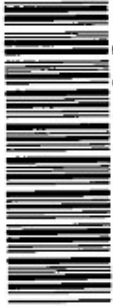
CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Generated by ALS

1 of 1



* 2 1 9 2 2 9 0 *

Client Name: LCSWMA - Nelson L. Smith		Address: 3044 River Road		Contact: Nelson L. Smith		Phone#: (717) 872-2888		Project Name#: LCSWMA - Quarterly		Bill To: Lancaster County Solid Waste MA	
TAT		Date Required:		Email?		Fax?		Sample Date		Sample Time	
[X] Normal-Standard TAT is 10-12 business days.		[] Rush-Subject to ALS approval and surcharges.		[] -Y		[] -Y No:		11-30-16		10:28	
Date Required:		[] -Y		[] -Y No:		11-30-16		10:50		10:50	
Sample Description/Location (as it will appear on the lab report)		Sample Date		Sample Time		Sample Date		Sample Time		Sample Time	
1 3044 RIVER RD		11-30-16		10:28		11-30-16		10:28		10:28	
2 Field Blank		11-30-16		10:50		11-30-16		10:50		10:50	
3 Trip Blank		11-30-16		10:50		11-30-16		10:50		10:50	
4											
5											
6											
7											
8											
9											
10											

Project Comments:	LOGGED BY (signature):	DATE	11-30-16	TIME	10:57
	REVIEWED BY (signature):	DATE	11-30-16	TIME	10:57
Relinquished By / Company Name	Received By / Company Name	Date	11-30-16	Time	10:57
1. [Signature]	2. [Signature]	11-30-16	10:57	10:57	10:57
3					
5					
7					
9					

Container Type	AG	AN	AN	CG	PL	PL	PL
40 ml	40 ml	500 ml	500 ml	500 ml	500 ml	500 ml	500 ml
Preservative	HCl	H2SO4	H2SO4	HCl	HNO3	HNO3	HNO3
Container Size	40 ml	500 ml	500 ml	500 ml	500 ml	500 ml	500 ml
PL	2 L	None	None	None	None	None	None

COOLERS	COOLERS	COOLERS	COOLERS	COOLERS	COOLERS	COOLERS	COOLERS
Therm ID: 318	Therm ID: 318	Therm ID: 318	Therm ID: 318	Therm ID: 318	Therm ID: 318	Therm ID: 318	Therm ID: 318
by Receiving Lab)	by Receiving Lab)	by Receiving Lab)	by Receiving Lab)	by Receiving Lab)	by Receiving Lab)	by Receiving Lab)	by Receiving Lab)

ALS Field Services:	ALS Field Services:	ALS Field Services:	ALS Field Services:	ALS Field Services:	ALS Field Services:	ALS Field Services:	ALS Field Services:
Composite_Sampling	Composite_Sampling	Composite_Sampling	Composite_Sampling	Composite_Sampling	Composite_Sampling	Composite_Sampling	Composite_Sampling
Pickup	Pickup	Pickup	Pickup	Pickup	Pickup	Pickup	Pickup
Rental_Equipment	Rental_Equipment	Rental_Equipment	Rental_Equipment	Rental_Equipment	Rental_Equipment	Rental_Equipment	Rental_Equipment

State Samples Collected In	State Samples Collected In	State Samples Collected In	State Samples Collected In	State Samples Collected In	State Samples Collected In	State Samples Collected In	State Samples Collected In
USACE	USACE	USACE	USACE	USACE	USACE	USACE	USACE
Navy	Navy	Navy	Navy	Navy	Navy	Navy	Navy
NY	NY	NY	NY	NY	NY	NY	NY
NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
PA	PA	PA	PA	PA	PA	PA	PA
NC	NC	NC	NC	NC	NC	NC	NC

Special Processing	Special Processing	Special Processing	Special Processing	Special Processing	Special Processing	Special Processing	Special Processing
USACE	USACE	USACE	USACE	USACE	USACE	USACE	USACE
Navy	Navy	Navy	Navy	Navy	Navy	Navy	Navy
NY	NY	NY	NY	NY	NY	NY	NY
NJ	NJ	NJ	NJ	NJ	NJ	NJ	NJ
PA	PA	PA	PA	PA	PA	PA	PA
NC	NC	NC	NC	NC	NC	NC	NC

Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
CLP-like	CLP-like	CLP-like	CLP-like	CLP-like	CLP-like	CLP-like	CLP-like
USACE	USACE	USACE	USACE	USACE	USACE	USACE	USACE
Reportable to PADEP?	Reportable to PADEP?	Reportable to PADEP?	Reportable to PADEP?	Reportable to PADEP?	Reportable to PADEP?	Reportable to PADEP?	Reportable to PADEP?
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
PWSID #	PWSID #	PWSID #	PWSID #	PWSID #	PWSID #	PWSID #	PWSID #
EDDS: Format Type	EDDS: Format Type	EDDS: Format Type	EDDS: Format Type	EDDS: Format Type	EDDS: Format Type	EDDS: Format Type	EDDS: Format Type

December 13, 2016

Mr. Daniel Brown
Lancaster County Solid Waste Authority
1299 Hbg Pike, P.O. Box 4425
Lancaster, PA 17604

Certificate of Analysis

Project Name: 2016-CONTIGUOUS	Workorder: 2192294
Purchase Order:	Workorder ID: 4TH QTR 2016-3052 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, November 30, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Mark Reider , Landowner , Mr. Jeff Musser

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.


Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2192294 4TH QTR 2016-3052 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2192294001	3052 River Road, Conestoga, PA	Water	11/30/2016 10:10	11/30/2016 15:50	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2192294 4TH QTR 2016-3052 RIVER RD

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2192294 4TH QTR 2016-3052 RIVER RD

Lab ID: **2192294001** Date Collected: 11/30/2016 10:10 Matrix: Water
Sample ID: **3052 River Road, Conestoga, PA** Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 06:18	CJG	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	75.4		%	70 - 130	EPA 524.2			12/7/16 06:18	CJG	K
4-Bromofluorobenzene (S)	90		%	70 - 130	EPA 524.2			12/7/16 06:18	CJG	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND		mg/L	5	S2320B-97			12/1/16 07:24	MSA	C
Alkalinity, Total	ND	1	mg/L	5	S2320B-97			12/1/16 07:24	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			12/7/16 12:14	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			12/5/16 18:06	AK	B
Chloride	21.6		mg/L	2.0	EPA 300.0			12/1/16 15:24	BSL	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/1/16 15:24	BSL	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			12/12/16 11:47	PAG	I
Nitrate-N	19.4		mg/L	0.20	EPA 300.0			12/1/16 15:24	BSL	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/1/16 15:24	BSL	C
pH	5.59	2	pH_Units		S4500HB-00			12/1/16 07:24	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	12/4/16 11:25	JLG	12/6/16 11:16	JLG	H
Specific Conductance	214		umhos/cm	1	S2510B-97			12/1/16 07:24	MSA	C
Sulfate	ND		mg/L	2.0	EPA 300.0			12/1/16 15:24	BSL	C
Total Dissolved Solids	142		mg/L	5	S2540C-11			12/5/16 12:00	ML	C

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ANALYTICAL RESULTS

Workorder: 2192294 4TH QTR 2016-3052 RIVER RD

Lab ID: **2192294001** Date Collected: 11/30/2016 10:10 Matrix: Water
Sample ID: **3052 River Road, Conestoga, PA** Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	0.60		mg/L	0.50	S5310B-00			12/1/16 10:45	PAG	F
Turbidity	0.32		NTU	0.10	S2130B-01			12/1/16 00:52	MSA	C
METALS										
Calcium, Total	15.5		mg/L	0.050	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:41	TSS	D1
Calcium, Dissolved	14.7		mg/L	0.10	EPA 200.7	12/4/16 20:48	TSS	12/6/16 03:37	TSS	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:41	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/4/16 20:48	TSS	12/6/16 03:37	TSS	E
Magnesium, Total	11.8		mg/L	0.050	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:41	TSS	D1
Magnesium, Dissolved	11.5		mg/L	0.10	EPA 200.7	12/4/16 20:48	TSS	12/6/16 03:37	TSS	E
Manganese, Total	0.063		mg/L	0.0025	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:41	TSS	D1
Manganese, Dissolved	0.058		mg/L	0.0050	EPA 200.7	12/4/16 20:48	TSS	12/6/16 03:37	TSS	E
Potassium, Total	2.2		mg/L	0.25	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:41	TSS	D1
Potassium, Dissolved	1.9		mg/L	0.50	EPA 200.7	12/4/16 20:48	TSS	12/6/16 03:37	TSS	E
Sodium, Total	8.1		mg/L	0.25	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:41	TSS	D1
Sodium, Dissolved	8.5		mg/L	0.50	EPA 200.7	12/4/16 20:48	TSS	12/6/16 03:37	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	4.950		pH_Units		Field			11/30/16 10:10	BGS	M
Specific Conductance, Field	248		umhos/cm	1	Field			11/30/16 10:10	BGS	M
Temperature	15.30		Deg. C		Field			11/30/16 10:10	BGS	M



Ms. Susan J Scherer
Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2192294001	1	3052 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2192294001	2	3052 River Road, Conestoga, PA	S4500HB-00	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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December 13, 2016

Mr. Daniel Brown
Lancaster County Solid Waste Authority
1299 Hbg Pike, P.O. Box 4425
Lancaster, PA 17604

Certificate of Analysis

Project Name: 2016-CONTIGUOUS	Workorder: 2192292
Purchase Order:	Workorder ID: 4TH QTR 2016-3076 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, November 30, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

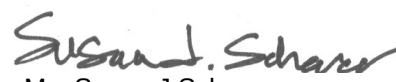
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Mark Reider , Landowner , Mr. Jeff Musser

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.


Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**Workorder: 2192292 4TH QTR 2016-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2192292001	3076 River Road, Conestoga, PA	Water	11/30/2016 09:52	11/30/2016 15:50	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2192292 4TH QTR 2016-3076 RIVER RD

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2192292 4TH QTR 2016-3076 RIVER RD

Lab ID: **2192292001** Date Collected: 11/30/2016 09:52 Matrix: Water
Sample ID: **3076 River Road, Conestoga, PA** Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 05:30	CJG	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	77		%	70 - 130	EPA 524.2			12/7/16 05:30	CJG	K
4-Bromofluorobenzene (S)	90.2		%	70 - 130	EPA 524.2			12/7/16 05:30	CJG	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	7		mg/L	5	S2320B-97			12/1/16 07:07	MSA	C
Alkalinity, Total	7	1	mg/L	5	S2320B-97			12/1/16 07:07	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			12/7/16 11:33	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			12/2/16 11:34	AK	B
Chloride	45.4		mg/L	2.0	EPA 300.0			12/1/16 14:58	BSL	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/1/16 14:58	BSL	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			12/12/16 10:48	PAG	I
Nitrate-N	12.7		mg/L	0.20	EPA 300.0			12/1/16 14:58	BSL	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/1/16 14:58	BSL	C
pH	5.67	2	pH_Units		S4500HB-00			12/1/16 07:07	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	12/4/16 11:25	JLG	12/6/16 11:16	JLG	H
Specific Conductance	271		umhos/cm	1	S2510B-97			12/1/16 07:07	MSA	C
Sulfate	11.7		mg/L	2.0	EPA 300.0			12/1/16 14:58	BSL	C
Total Dissolved Solids	155		mg/L	5	S2540C-11			12/5/16 12:00	ML	C

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ANALYTICAL RESULTS

Workorder: 2192292 4TH QTR 2016-3076 RIVER RD

Lab ID: **2192292001**

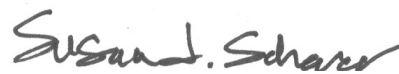
Date Collected: 11/30/2016 09:52

Matrix: Water

Sample ID: **3076 River Road, Conestoga, PA**

Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	0.83		mg/L	0.50	S5310B-00			12/1/16 10:45	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/1/16 00:52	MSA	C
METALS										
Calcium, Total	16.2		mg/L	0.050	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:34	TSS	D1
Calcium, Dissolved	15.8		mg/L	0.10	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:29	TSS	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:34	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:29	TSS	E
Magnesium, Total	9.8		mg/L	0.050	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:34	TSS	D1
Magnesium, Dissolved	9.7		mg/L	0.10	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:29	TSS	E
Manganese, Total	0.19		mg/L	0.0025	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:34	TSS	D1
Manganese, Dissolved	0.18		mg/L	0.0050	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:29	TSS	E
Potassium, Total	3.5		mg/L	0.25	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:34	TSS	D1
Potassium, Dissolved	3.2		mg/L	0.50	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:29	TSS	E
Sodium, Total	22.8		mg/L	0.25	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:34	TSS	D1
Sodium, Dissolved	22.8		mg/L	0.50	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:29	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.700		pH_Units		Field			11/30/16 09:52	BGS	M
Specific Conductance, Field	253		umhos/cm	1	Field			11/30/16 09:52	BGS	M
Temperature	15.40		Deg. C		Field			11/30/16 09:52	BGS	M



Ms. Susan J Scherer

Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2192292001	1	3076 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2192292001	2	3076 River Road, Conestoga, PA	S4500HB-00	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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December 15, 2016

Mr. Daniel Brown
Lancaster County Solid Waste Authority
1299 Hbg Pike, P.O. Box 4425
Lancaster, PA 17604

Certificate of Analysis

Project Name:	2016-CONTIGUOUS	Workorder:	2192676
Purchase Order:		Workorder ID:	4TH QTR 2016-3088 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, December 1, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

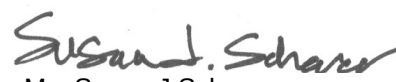
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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CC: Mr. Mark Reider , Landowner , Mr. Jeff Musser

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Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 2192676 4TH QTR 2016-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2192676001	3088 River Road, Conestoga PA	Water	12/1/2016 15:35	12/1/2016 17:00	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2192676 4TH QTR 2016-3088 RIVER RD

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2192676 4TH QTR 2016-3088 RIVER RD

Lab ID: **2192676001** Date Collected: 12/1/2016 15:35 Matrix: Water
Sample ID: **3088 River Road, Conestoga PA** Date Received: 12/1/2016 17:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 13:50	DD	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	75.4		%	70 - 130	EPA 524.2			12/7/16 13:50	DD	K
4-Bromofluorobenzene (S)	92.1		%	70 - 130	EPA 524.2			12/7/16 13:50	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	144		mg/L	5	S2320B-97			12/2/16 08:54	MSA	C
Alkalinity, Total	144	1	mg/L	5	S2320B-97			12/2/16 08:54	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			12/8/16 04:56	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			12/5/16 18:06	AK	B
Chloride	187		mg/L	2.0	EPA 300.0			12/2/16 14:30	BSL	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/2/16 14:30	BSL	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			12/13/16 14:57	PAG	I
Nitrate-N	12.9		mg/L	0.20	EPA 300.0			12/2/16 14:30	BSL	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/2/16 14:30	BSL	C
pH	7.07	2	pH_Units		S4500HB-00			12/2/16 08:54	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	12/4/16 11:28	JLG	12/6/16 11:16	JLG	H
Specific Conductance	1000		umhos/cm	1	S2510B-97			12/2/16 08:54	MSA	C
Sulfate	ND		mg/L	2.0	EPA 300.0			12/2/16 14:30	BSL	C
Total Dissolved Solids	534		mg/L	5	S2540C-11			12/5/16 14:56	ML	C

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ANALYTICAL RESULTS

Workorder: 2192676 4TH QTR 2016-3088 RIVER RD

Lab ID: **2192676001**

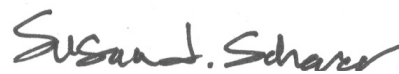
Date Collected: 12/1/2016 15:35

Matrix: Water

Sample ID: **3088 River Road, Conestoga PA**

Date Received: 12/1/2016 17:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/2/16 10:28	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/3/16 02:00	MSA	C
METALS										
Calcium, Total	0.076		mg/L	0.050	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:49	TSS	D1
Calcium, Dissolved	ND		mg/L	0.10	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:46	TSS	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:49	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:46	TSS	E
Magnesium, Total	ND		mg/L	0.050	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:49	TSS	D1
Magnesium, Dissolved	ND		mg/L	0.10	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:46	TSS	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:49	TSS	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:46	TSS	E
Potassium, Total	1.4		mg/L	0.25	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:49	TSS	D1
Potassium, Dissolved	1.3		mg/L	0.50	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:46	TSS	E
Sodium, Total	197		mg/L	0.25	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:49	TSS	D1
Sodium, Dissolved	227		mg/L	0.50	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:46	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.130		pH_Units		Field			12/1/16 15:35	BGS	M
Specific Conductance, Field	989		umhos/cm	1	Field			12/1/16 15:35	BGS	M
Temperature	16.00		Deg. C		Field			12/1/16 15:35	BGS	M



Ms. Susan J Scherer

Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2192676001	1	3088 River Road, Conestoga PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2192676001	2	3088 River Road, Conestoga PA	S4500HB-00	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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December 15, 2016

Mr. Daniel Brown
Lancaster County Solid Waste Authority
1299 Hbg Pike, P.O. Box 4425
Lancaster, PA 17604

Certificate of Analysis

Project Name: 2016-CONTIGUOUS	Workorder: 2192678
Purchase Order:	Workorder ID: 4TH QTR 2016-3100 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, December 1, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

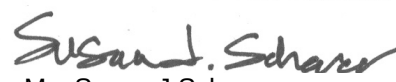
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Mark Reider , Landowner , Mr. Jeff Musser

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.


Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2192678 4TH QTR 2016-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2192678001	3100 River Road, Conestoga, PA	Water	12/1/2016 15:20	12/1/2016 17:00	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2192678 4TH QTR 2016-3100 RIVER RD

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2192678 4TH QTR 2016-3100 RIVER RD

Lab ID: **2192678001** Date Collected: 12/1/2016 15:20 Matrix: Water
Sample ID: **3100 River Road, Conestoga, PA** Date Received: 12/1/2016 17:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 14:14	DD	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	80.5		%	70 - 130	EPA 524.2			12/7/16 14:14	DD	K
4-Bromofluorobenzene (S)	92.3		%	70 - 130	EPA 524.2			12/7/16 14:14	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	27		mg/L	5	S2320B-97			12/2/16 09:03	MSA	C
Alkalinity, Total	27	1	mg/L	5	S2320B-97			12/2/16 09:03	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			12/8/16 07:15	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			12/2/16 11:34	AK	B
Chloride	52.4		mg/L	2.0	EPA 300.0			12/2/16 14:43	BSL	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/2/16 14:43	BSL	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			12/13/16 15:30	PAG	I
Nitrate-N	4.4		mg/L	0.20	EPA 300.0			12/2/16 14:43	BSL	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/2/16 14:43	BSL	C
pH	6.15	2	pH_Units		S4500HB-00			12/2/16 09:03	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	12/4/16 11:25	JLG	12/6/16 11:16	JLG	H
Specific Conductance	257		umhos/cm	1	S2510B-97			12/2/16 09:03	MSA	C
Sulfate	9.3		mg/L	2.0	EPA 300.0			12/2/16 14:43	BSL	C
Total Dissolved Solids	170	3	mg/L	5	S2540C-11			12/5/16 14:56	ML	C

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ANALYTICAL RESULTS

Workorder: 2192678 4TH QTR 2016-3100 RIVER RD

Lab ID: **2192678001**

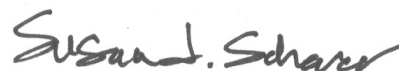
Date Collected: 12/1/2016 15:20

Matrix: Water

Sample ID: **3100 River Road, Conestoga, PA**

Date Received: 12/1/2016 17:00

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/2/16 10:28	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/3/16 02:00	MSA	C
METALS										
Calcium, Total	18.1		mg/L	0.050	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:55	TSS	D1
Calcium, Dissolved	18.5		mg/L	0.10	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:51	TSS	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:55	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:51	TSS	E
Magnesium, Total	8.7		mg/L	0.050	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:55	TSS	D1
Magnesium, Dissolved	8.9		mg/L	0.10	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:51	TSS	E
Manganese, Total	0.0071		mg/L	0.0025	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:55	TSS	D1
Manganese, Dissolved	0.0073		mg/L	0.0050	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:51	TSS	E
Potassium, Total	1.5		mg/L	0.25	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:55	TSS	D1
Potassium, Dissolved	1.5		mg/L	0.50	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:51	TSS	E
Sodium, Total	15.9		mg/L	0.25	EPA 200.7	12/5/16 09:30	TRR	12/6/16 11:55	TSS	D1
Sodium, Dissolved	16.5		mg/L	0.50	EPA 200.7	12/4/16 20:50	TSS	12/6/16 04:51	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.290		pH_Units		Field			12/1/16 15:20	BGS	M
Specific Conductance, Field	267		umhos/cm	1	Field			12/1/16 15:20	BGS	M
Temperature	15.40		Deg. C		Field			12/1/16 15:20	BGS	M



Ms. Susan J Scherer

Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2192678001	1	3100 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2192678001	2	3100 River Road, Conestoga, PA	S4500HB-00	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2192678001	3	3100 River Road, Conestoga, PA	S2540C-11	Total Dissolved Solids
The method blank associated with this analyte had a result of 20 mg/l. Criteria states that the mehod blank should be at a maximum 4 mg/l.				

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 Mexico: Monterrey



CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /

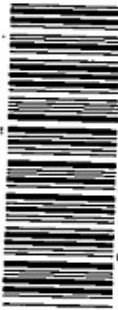
SAMPLER. INSTRUCTIONS ON THE BACK.

Generated by ALS

COC #:

45

ALS Quo



34 Dogwood Lane • Middletown, PA 17057 • Fax: 717.944.5541 • Fax: 717.944.1430

Client Name: LCSWMA - Larry Kirchner

Address: 3100 River Road

Conestoga, PA 17516

Contact: Larry Kirchner

Phone#: (717) 584-0030

Project Name#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

TAT ☒ Normal-Standard TAT is 10-12 business days.

☐ Rush-Subject to ALS approval and surcharges.

Date Required: _____ Approved By: _____

Email? ☐ Y ☐ N

Fax? ☐ Y ☐ N

Sample Description/Location _____

Sample Date _____

Time _____

1 3100 RIVER RD

2 3100 RIVER RD

3

4

5

6

7

8

9

10

Project Comments:

Relinquished By / Company Name _____

Date _____

Time _____

Received By / Company Name _____

Date _____

Time _____

1 3100 RIVER RD

2 3100 RIVER RD

3

4

5

6

7

8

Receipt information (completion by receiving lab)

Cooler Temp: 6 Therm ID: 314

No. of Coolers: _____ Y N Initial

Custody Seals Present? _____

(If present) Seals Intact? _____

Rechecked on Ice? _____

COC Labels Complete/Accurate? _____

Cont. in Good Cond.? _____

Correct Containers? _____

Correct Sample Volumes? _____

Correct Preservation? _____

Headspace/Volatiles? _____

Courier Tracking #: _____

Sample/COC Comments

Enter Number of Containers Per Sample or Field Results Below.

Matrix

G or C

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December 13, 2016

Mr. Daniel Brown
Lancaster County Solid Waste Authority
1299 Hbg Pike, P.O. Box 4425
Lancaster, PA 17604

Certificate of Analysis

Project Name: 2016-CONTIGUOUS	Workorder: 2192291
Purchase Order:	Workorder ID: 4TH QTR 2016-3125 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, November 30, 2016.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Susan J Scherer (Project Coordinator) at (717) 944-5541.

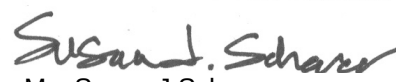
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Mark Reider , Landowner , Mr. Jeff Musser

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.


Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2192291 4TH QTR 2016-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2192291001	3125 River Road, Conestoga, PA	Water	11/30/2016 10:42	11/30/2016 15:50	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2192291 4TH QTR 2016-3125 RIVER RD

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2192291 4TH QTR 2016-3125 RIVER RD

Lab ID: **2192291001** Date Collected: 11/30/2016 10:42 Matrix: Water
Sample ID: **3125 River Road, Conestoga, PA** Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/7/16 05:06	CJG	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	76.1		%	70 - 130	EPA 524.2			12/7/16 05:06	CJG	K
4-Bromofluorobenzene (S)	85.4		%	70 - 130	EPA 524.2			12/7/16 05:06	CJG	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	34		mg/L	5	S2320B-97			12/1/16 06:59	MSA	C
Alkalinity, Total	34	1	mg/L	5	S2320B-97			12/1/16 06:59	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			12/7/16 11:12	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			12/2/16 11:34	AK	B
Chloride	138		mg/L	2.0	EPA 300.0			12/1/16 14:45	BSL	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/1/16 14:45	BSL	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			12/12/16 13:07	PAG	I
Nitrate-N	9.8		mg/L	0.20	EPA 300.0			12/1/16 14:45	BSL	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/1/16 14:45	BSL	C
pH	6.28	2	pH_Units		S4500HB-00			12/1/16 06:59	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	12/4/16 11:24	JLG	12/6/16 11:16	JLG	H
Specific Conductance	604		umhos/cm	1	S2510B-97			12/1/16 06:59	MSA	C
Sulfate	6.7		mg/L	2.0	EPA 300.0			12/1/16 14:45	BSL	C
Total Dissolved Solids	316		mg/L	5	S2540C-11			12/5/16 12:00	ML	C

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ANALYTICAL RESULTS

Workorder: 2192291 4TH QTR 2016-3125 RIVER RD

Lab ID: **2192291001**

Date Collected: 11/30/2016 10:42

Matrix: Water

Sample ID: **3125 River Road, Conestoga, PA**

Date Received: 11/30/2016 15:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	1.1		mg/L	0.50	S5310B-00			12/1/16 10:45	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/1/16 00:52	MSA	C
METALS										
Calcium, Total	2.6		mg/L	0.050	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:29	TSS	D1
Calcium, Dissolved	0.45		mg/L	0.10	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:25	TSS	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:29	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:25	TSS	E
Magnesium, Total	1.5		mg/L	0.050	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:29	TSS	D1
Magnesium, Dissolved	0.20		mg/L	0.10	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:25	TSS	E
Manganese, Total	0.010		mg/L	0.0025	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:29	TSS	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:25	TSS	E
Potassium, Total	2.0		mg/L	0.25	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:29	TSS	D1
Potassium, Dissolved	1.4		mg/L	0.50	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:25	TSS	E
Sodium, Total	137		mg/L	0.25	EPA 200.7	12/1/16 08:30	TRR	12/5/16 13:29	TSS	D1
Sodium, Dissolved	133		mg/L	0.50	EPA 200.7	12/1/16 08:09	SRT	12/6/16 03:25	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.750		pH_Units		Field			11/30/16 10:42	BGS	M
Specific Conductance, Field	612		umhos/cm	1	Field			11/30/16 10:42	BGS	M
Temperature	16.10		Deg. C		Field			11/30/16 10:42	BGS	M



Ms. Susan J Scherer

Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2192291001	1	3125 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2192291001	2	3125 River Road, Conestoga, PA	S4500HB-00	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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34 Dogwood Lane • Middletown, PA 17057 • Fax: 717.944.5541 • Fax: 717.944.1430

Generated by ALS

CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

Client Name: LCSWMA - Christian C. Beck

Address: 3125 River Road

Conesloga, PA 17516

Contact: Christian C. Beck

Phone#: (717) 871-0448

Project Name#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

☒ Normal-Standard TAT is 10-12 business days.

☐ Rush-Subject to ALS approval and surcharges.

Date Required: _____

Email? ☐ Y ☐ N

Fax? ☐ Y ☐ N

Approved By: _____

Sample Description/Location

(as it will appear on the lab report)

*G or C

**Matrix

Enter Number of Containers Per Sample or Field Results Below.

LOGGED BY (signature): _____

REVIEWED BY (signature): _____

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Received By / Company Name

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Lancaster County Solid Waste Management Authority
Frey Farm Landfill

Exceedence Report

<i>Parameter Name</i>	<i>Units</i>	<i>Concentration</i>	<i>Criteria Conc</i>	<i>Qualifiers</i>	<i>Criteria</i>
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3044RIVERR	2192290001	11/30/2016	WATER		
NITRATE-NITROGEN		mg/l	20.20	10.00	EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3052RIVERR	2192294001	11/30/2016	WATER		
NITRATE-NITROGEN		mg/l	19.40	10.00	EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3076RIVERR	2192292001	11/30/2016	WATER		
NITRATE-NITROGEN		mg/l	12.70	10.00	EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3088RIVERR	2192676001	12/01/2016	WATER		
NITRATE-NITROGEN		mg/l	12.90	10.00	EPA-MCL

Lancaster County Solid Waste Management Authority
Frey Farm Landfill

Exceedence Report

<i>Parameter Name</i>	<i>Units</i>	<i>Concentration</i>	<i>Criteria Conc</i>	<i>Qualifiers</i>	<i>Criteria</i>
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3052RIVERR	2192294001	11/30/2016	WATER		
MANGANESE, DISSOLVED		mg/l	0.06	0.05	EPA-SMCL
MANGANESE, TOTAL		mg/l	0.06	0.05	EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3076RIVERR	2192292001	11/30/2016	WATER		
MANGANESE, DISSOLVED		mg/l	0.18	0.05	EPA-SMCL
MANGANESE, TOTAL		mg/l	0.19	0.05	EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3088RIVERR	2192676001	12/01/2016	WATER		
TDS (TOT. DISSOLVED SOLIDS)		mg/l	534.00	500.00	EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3106RIVERR	2192293001	11/30/2016	WATER		
IRON, TOTAL		mg/l	1.70	0.30	EPA-SMCL
MANGANESE, TOTAL		mg/l	0.06	0.05	EPA-SMCL