

September 27, 2018

1299 HARRISBURG PIKE | PO BOX 4425 | LANCASTER, PA 17604
PHONE: 717-397-9968 | FAX: 717-397-9973

www.lcswma.org

Charlene Sauls PG; Licensed Professional Geologist
Pennsylvania Department of Environmental Protection
Bureau of Waste Management
909 Elmerton Avenue
Harrisburg, PA 17110-8200

REF: Private Water Supply
3rd Quarter 2018 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; samples (3044RIVERRD, 3052RIVERRD, 3056 RIVERRD, 3060RIVERRD, 3076RIVERRD, 3088RIVERRD and 3100RIVERRD) 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; sample 3088RIVERRD exceeded the limit for total dissolved solids and chloride; samples 3056RIVERRD, 3060RIVERRD, 3076RIVERRD, and 3079RIVERRD exceeded the limit for manganese which is consistent with historic data and are attributed to natural soil and geologic conditions.

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
Deputy Chief of Operations & Environmental Compliance

Enclosures

Cc: Bob Zorbaugh, Dan Brown, Jeff Musser, Jordan Gallagher Bob Eshbach
Ed Rawski, Randy Weiss (PADEP)



Date Prepared/Revised 09/17/2018
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:	3044 RIVER ROAD
Phone No.:	
Sampling Point:	Latitude: 39 ^o 57' 30.58" Longitude: 76 ^o 26' 11.25"
Depth to Water Level:	ft. Measured from: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	ft.
Sampling Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Well Volumes Purged:
Sample Field Filtered (must be 0.45 micron):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/22/2018 Sample Collection Time: 12:14 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	09/05/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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

08/22/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	18	SM20-2321
CALCIUM, TOTAL	17.5	EPA 200.7
CALCIUM, DISSOLVED	18.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	22.6	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	10.5	EPA 200.7
MAGNESIUM, DISSOLVED	10.6	EPA 200.7
MANGANESE, TOTAL (ug/l)	19	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	19	EPA 200.7
NITRATE-NITROGEN	19.6	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/22/2018

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)	5.38	FIELD
pH-LAB (SU)	6.21	SM4500B
POTASSIUM, TOTAL	2.2	EPA 200.7
POTASSIUM, DISSOLVED	2.2	EPA 200.7
SODIUM, TOTAL	8.5	EPA 200.7
SODIUM, DISSOLVED	8.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	202	FIELD
SPEC. COND., LAB (umhos/cm)	251	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	18	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	168	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.68	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.85	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

08/22/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised 09/17/2018
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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 ^o 57' 29.85" Longitude: 76 ^o 26' 11.45"
Depth to Water Level:	ft. Measured from: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	ft.
Sampling Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Well Volumes Purged:
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/23/2018 Sample Collection Time: 1:15 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	09/07/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.144	SM4500D
BICARBONATE ALKALINITY	8	SM20-2321
CALCIUM, TOTAL	16	EPA 200.7
CALCIUM, DISSOLVED	16.9	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	22	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	8.2	EPA 200.7
MAGNESIUM, DISSOLVED	8.4	EPA 200.7
MANGANESE, TOTAL (ug/l)	31	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	33	EPA 200.7
NITRATE-NITROGEN	18.3	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

08/23/2018

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	FIELD
pH-LAB (SU)	5.8	SM4500B
POTASSIUM, TOTAL	1.7	EPA 200.7
POTASSIUM, DISSOLVED	1.8	EPA 200.7
SODIUM, TOTAL	7.2	EPA 200.7
SODIUM, DISSOLVED	7.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	283	FIELD
SPEC. COND., LAB (umhos/cm)	216	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	8	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	130	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.76	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.12	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



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PRIVATE WATER SUPPLY
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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:	LCSWMA
Address:	3056 RIVER ROAD
Phone No.:	
Sampling Point:	Latitude: 39 ^o 57' 28.44" Longitude: 76 ^o 26' 10.43"
Depth to Water Level:	ft. Measured from: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	ft.
Sampling Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Well Volumes Purged:
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/22/2018 Sample Collection Time: 11:00 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	09/05/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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

08/22/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	10	SM20-2321
CALCIUM, TOTAL	13	EPA 200.7
CALCIUM, DISSOLVED	12.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	26.3	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	13.2	EPA 200.7
MAGNESIUM, DISSOLVED	13	EPA 200.7
MANGANESE, TOTAL (ug/l)	91	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	90	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 LCSWMA

Sample Date

08/22/2018

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)	6.11	FIELD
pH-LAB (SU)	6.09	SM4500B
POTASSIUM, TOTAL	2.4	EPA 200.7
POTASSIUM, DISSOLVED	2.3	EPA 200.7
SODIUM, TOTAL	8.3	EPA 200.7
SODIUM, DISSOLVED	7.8	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	249	FIELD
SPEC. COND., LAB (umhos/cm)	240	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	10	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	167	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 LCSWMA

Sample Date

08/22/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



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**FORM 52
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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:	LCSWMA
Address:	3060 RIVER ROAD
Phone No.:	
Sampling Point:	Latitude: 39° 57' 27.63" Longitude: 76° 26' 10.01"
Depth to Water Level:	ft. Measured from: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: _____ ft./MSL
Total Well Depth:	ft.
Sampling Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Well Volumes Purged: _____
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/22/2018 Sample Collection Time: 10:41 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	09/05/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, please explain in comments field.
Comments:	

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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

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Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/22/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.298	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	17.7	EPA 200.7
CALCIUM, DISSOLVED	17.9	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	20.6	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	11.3	EPA 200.7
MAGNESIUM, DISSOLVED	11.1	EPA 200.7
MANGANESE, TOTAL (ug/l)	150	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	150	EPA 200.7
NITRATE-NITROGEN	20	EPA 300

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101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/22/2018

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)	5.42	FIELD
pH-LAB (SU)	5.35	SM4500B
POTASSIUM, TOTAL	2.4	EPA 200.7
POTASSIUM, DISSOLVED	2.2	EPA 200.7
SODIUM, TOTAL	6.7	EPA 200.7
SODIUM, DISSOLVED	6.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	259	FIELD
SPEC. COND., LAB (umhos/cm)	255	EPA 120.1
SULFATE	20.7	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	221	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.

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Sample Date

08/22/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised 09/17/2018
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:	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: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Sampling Depth:	ft. Well Volumes Purged:
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/23/2018 Sample Collection Time: 1:00 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	09/07/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.114	SM4500D
BICARBONATE ALKALINITY	13	SM20-2321
CALCIUM, TOTAL	15	EPA 200.7
CALCIUM, DISSOLVED	15.6	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	51.6	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	9.1	EPA 200.7
MAGNESIUM, DISSOLVED	9.3	EPA 200.7
MANGANESE, TOTAL (ug/l)	200	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	200	EPA 200.7
NITRATE-NITROGEN	10.4	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 SENSENICH

Sample Date

08/23/2018

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)	5.35	FIELD
pH-LAB (SU)	6.19	SM4500B
POTASSIUM, TOTAL	3.1	EPA 200.7
POTASSIUM, DISSOLVED	3.2	EPA 200.7
SODIUM, TOTAL	21.9	EPA 200.7
SODIUM, DISSOLVED	21.3	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	260	FIELD
SPEC. COND., LAB (umhos/cm)	296	EPA 120.1
SULFATE	14	EPA 300
ALKALINITY	13	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	211	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.66	SM20-5310B
TOTAL PHENOLICS (ug/l)	9	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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised 09/17/2018
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:	3079 RIVER ROAD
Phone No.:	
Sampling Point:	Latitude: 39 ^o 57' 21.99" Longitude: 76 ^o 26' 10.58"
Depth to Water Level:	ft. Measured from: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	ft.
Sampling Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Well Volumes Purged:
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/23/2018 Sample Collection Time: 2:51 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	09/07/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.156	SM4500D
BICARBONATE ALKALINITY	26	SM20-2321
CALCIUM, TOTAL	9.9	EPA 200.7
CALCIUM, DISSOLVED	10.9	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	32.8	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	4.7	EPA 200.7
MAGNESIUM, DISSOLVED	5	EPA 200.7
MANGANESE, TOTAL (ug/l)	65	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	74	EPA 200.7
NITRATE-NITROGEN	0.2 ND	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

08/23/2018

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)	6.07	FIELD
pH-LAB (SU)	6.13	SM4500B
POTASSIUM, TOTAL	2	EPA 200.7
POTASSIUM, DISSOLVED	2.1	EPA 200.7
SODIUM, TOTAL	10	EPA 200.7
SODIUM, DISSOLVED	10.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	184	FIELD
SPEC. COND., LAB (umhos/cm)	174	EPA 120.1
SULFATE	21.3	EPA 300
ALKALINITY	26	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	60	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 LCSWMA

Sample Date

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised 09/17/2018
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:	WEBER
Address:	3088 RIVER ROAD
Phone No.:	
Sampling Point:	Latitude: 39 ^o 57' 21" Longitude: 76 ^o 26' 7.1"
Depth to Water Level:	ft. Measured from: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: _____ ft./MSL
Total Well Depth:	ft.
Sampling Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Well Volumes Purged: _____
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/23/2018 Sample Collection Time: 2:28 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	09/07/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.128	SM4500D
BICARBONATE ALKALINITY	119	SM20-2321
CALCIUM, TOTAL	0.21	EPA 200.7
CALCIUM, DISSOLVED	0.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	257	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	0.086	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	10.4	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 WEBER

Sample Date

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.46	EPA 300
pH-FIELD (SU)	5.63	FIELD
pH-LAB (SU)	7.17	SM4500B
POTASSIUM, TOTAL	2.6	EPA 200.7
POTASSIUM, DISSOLVED	2.5	EPA 200.7
SODIUM, TOTAL	231	EPA 200.7
SODIUM, DISSOLVED	249	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	386	FIELD
SPEC. COND., LAB (umhos/cm)	1230	EPA 120.1
SULFATE	7.2	EPA 300
ALKALINITY	119	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	576	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.77	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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised 09/17/2018
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:	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: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Sampling Depth:	ft. Well Volumes Purged:
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/23/2018 Sample Collection Time: 2:38 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	09/07/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.129	SM4500D
BICARBONATE ALKALINITY	15	SM20-2321
CALCIUM, TOTAL	17.9	EPA 200.7
CALCIUM, DISSOLVED	18	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	50.8	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	8.6	EPA 200.7
MAGNESIUM, DISSOLVED	8.8	EPA 200.7
MANGANESE, TOTAL (ug/l)	9.3	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	9.4	EPA 200.7
NITRATE-NITROGEN	6.9	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 KIRCHNER

Sample Date

08/23/2018

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)	5.6	FIELD
pH-LAB (SU)	6.05	SM4500B
POTASSIUM, TOTAL	1.6	EPA 200.7
POTASSIUM, DISSOLVED	1.6	EPA 200.7
SODIUM, TOTAL	15.6	EPA 200.7
SODIUM, DISSOLVED	15.9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	302	FIELD
SPEC. COND., LAB (umhos/cm)	261	EPA 120.1
SULFATE	9.9	EPA 300
ALKALINITY	15	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	132	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5	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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised 09/17/2018
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:	FRY
Address:	3106 RIVER ROAD
Phone No.:	
Sampling Point:	Latitude: 39 ^o 57' 17.27" Longitude: 76 ^o 26' 5.6"
Depth to Water Level:	ft. Measured from: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	ft.
Sampling Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Well Volumes Purged:
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/23/2018 Sample Collection Time: 12:44 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	09/06/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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 FRY

Sample Date

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.392	SM4500D
BICARBONATE ALKALINITY	16	SM20-2321
CALCIUM, TOTAL	12.5	EPA 200.7
CALCIUM, DISSOLVED	13.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	54	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	7.7	EPA 200.7
MAGNESIUM, DISSOLVED	7.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	23	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	22	EPA 200.7
NITRATE-NITROGEN	10.1	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 FRY

Sample Date

08/23/2018

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)	5.71	FIELD
pH-LAB (SU)	6.16	SM4500B
POTASSIUM, TOTAL	1.5	EPA 200.7
POTASSIUM, DISSOLVED	1.5	EPA 200.7
SODIUM, TOTAL	26.2	EPA 200.7
SODIUM, DISSOLVED	26.3	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	319	FIELD
SPEC. COND., LAB (umhos/cm)	283	EPA 120.1
SULFATE	6.2	EPA 300
ALKALINITY	16	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	153	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.64	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 FRY

Sample Date

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised 09/17/2018
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:	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: <input checked="" type="checkbox"/> Land Surface <input type="checkbox"/> TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	ft.
Sampling Depth:	ft. Sampling Method: <input type="checkbox"/> Pumped <input type="checkbox"/> Bailed
Well Purged:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Well Volumes Purged:
Sample Field Filtered (must be 0.45 micron)?:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Sample Date:(mm/dd/yy)	08/23/2018 Sample Collection Time: 12:34 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	09/06/2018
Were any holding times exceeded?:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	198	SM20-2321
CALCIUM, TOTAL	0.97	EPA 200.7
CALCIUM, DISSOLVED	1.1	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	154	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	0.12	EPA 200.7
MAGNESIUM, DISSOLVED	0.13	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	7.5	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

08/23/2018

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)	6.25	FIELD
pH-LAB (SU)	7.45	SM4500B
POTASSIUM, TOTAL	0.56	EPA 200.7
POTASSIUM, DISSOLVED	0.65	EPA 200.7
SODIUM, TOTAL	167	EPA 200.7
SODIUM, DISSOLVED	184	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	425	FIELD
SPEC. COND., LAB (umhos/cm)	969	EPA 120.1
SULFATE	27.2	EPA 300
ALKALINITY	198	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	472	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.97	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

08/23/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHANE	1 ND	EPA 524.2
1,1-DICHLOROETHENE	1 ND	EPA 524.2
1,2-DICHLOROETHANE	1 ND	EPA 524.2
CIS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
TRANS 1,2-DICHLOROETHENE	1 ND	EPA 524.2
ETHYLBENZENE	1 ND	EPA 524.2
METHYLENE CHLORIDE	1 ND	EPA 524.2
TETRACHLOROETHENE	1 ND	EPA 524.2
TOLUENE	1 ND	EPA 524.2
1,1,1-TRICHLOROETHANE	1 ND	EPA 524.2
TRICHLOROETHENE	1 ND	EPA 524.2
TRICHLOROFLUOROMETHANE	1 ND	EPA 524.2
VINYL CHLORIDE	1 ND	EPA 524.2
XYLENES (TOTAL)	3 ND	EPA 524.2

T Please indicate detection limit if analyte is not detected.

September 6, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3044 RIVER RD	Workorder:	2334257
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018-3044 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, August 22, 2018.

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.

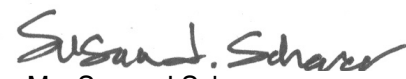
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2334257 3RD QTR 2018-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334257001	3044 River Road, Conestoga, PA	Water	8/22/2018 12:14	8/22/2018 17:32	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334257 3RD QTR 2018-3044 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

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ANALYTICAL RESULTS

Workorder: 2334257 3RD QTR 2018-3044 RIVER RD

Lab ID: **2334257001** Date Collected: 8/22/2018 12:14 Matrix: Water
Sample ID: **3044 River Road, Conestoga, PA** Date Received: 8/22/2018 17:32

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/28/18 19:04	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/28/18 19:04	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-Dichloroethane-d4 (S)	106		%	62 - 133	SW846 8260B			8/28/18 19:04	DD	K
4-Bromofluorobenzene (S)	99		%	79 - 114	SW846 8260B			8/28/18 19:04	DD	K
Dibromofluoromethane (S)	99.1		%	78 - 116	SW846 8260B			8/28/18 19:04	DD	K
Toluene-d8 (S)	100		%	76 - 127	SW846 8260B			8/28/18 19:04	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	18		mg/L	5	SM2320B-2011			8/25/18 22:11	MSA	C
Alkalinity, Total	18	1	mg/L	5	SM2320B-2011			8/25/18 22:11	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			9/5/18 22:59	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/29/18 17:58	AK	B
Chloride	22.6		mg/L	2.0	EPA 300.0			8/23/18 14:56	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/23/18 14:56	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			8/29/18 14:47	PAG	I
Nitrate-N	19.6	3	mg/L	0.50	EPA 300.0			8/25/18 07:10	MBW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/23/18 14:56	CHW	C
pH	6.21	4	pH_Units		S4500HB-11			8/27/18 12:27	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 13:40	RXB	8/30/18 08:24	C_D	H
Specific Conductance	251		umhos/cm	1	SM2510B-2011			8/25/18 22:11	MSA	C

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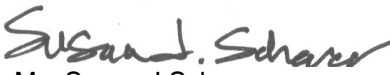
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ANALYTICAL RESULTS

Workorder: 2334257 3RD QTR 2018-3044 RIVER RD

Lab ID: **2334257001** Date Collected: 8/22/2018 12:14 Matrix: Water
Sample ID: **3044 River Road, Conestoga, PA** Date Received: 8/22/2018 17:32

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	ND		mg/L	2.0	EPA 300.0			8/23/18 14:56	CHW	C
Total Dissolved Solids	168	2	mg/L	5	S2540C-11			8/25/18 11:45	BMK	C
Total Organic Carbon (TOC)	0.68		mg/L	0.50	SM5310B-2011			8/28/18 15:53	PAG	F
Turbidity	0.85		NTU	0.10	SM2130B-2011			8/24/18 04:50	MSA	C
METALS										
Calcium, Total	17.5		mg/L	0.050	EPA 200.7	8/24/18 12:20	AHI	8/28/18 00:28	SRT	D1
Calcium, Dissolved	18.2		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:24	SRT	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/24/18 12:20	AHI	8/28/18 00:28	SRT	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:24	SRT	E
Magnesium, Total	10.5		mg/L	0.050	EPA 200.7	8/24/18 12:20	AHI	8/28/18 00:28	SRT	D1
Magnesium, Dissolved	10.6		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:24	SRT	E
Manganese, Total	0.019		mg/L	0.0025	EPA 200.7	8/24/18 12:20	AHI	8/28/18 00:28	SRT	D1
Manganese, Dissolved	0.019		mg/L	0.0050	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:24	SRT	E
Potassium, Total	2.2		mg/L	0.25	EPA 200.7	8/24/18 12:20	AHI	8/28/18 00:28	SRT	D1
Potassium, Dissolved	2.2		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:24	SRT	E
Sodium, Total	8.5		mg/L	0.25	EPA 200.7	8/24/18 12:20	AHI	8/28/18 00:28	SRT	D1
Sodium, Dissolved	8.5		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:24	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.380		pH_Units		Field			8/22/18 12:14	BGS	M
Specific Conductance, Field	202		umhos/cm	1	Field			8/22/18 12:14	BGS	M
Temperature	14.20		Deg. C		Field			8/22/18 12:14	BGS	M


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334257 3RD QTR 2018-3044 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334257001	1	3044 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2334257001	2	3044 River Road, Conestoga, PA	S2540C-11	Total Dissolved Solids
The evaporating dish for this sample was heated in a 180 degree C oven for 13 hours instead of the method required 16 hours due to an analyst error. The laboratory control sample, the method blank, and the temperature blank were all within control limits.				
2334257001	3	3044 River Road, Conestoga, PA	EPA 300.0	Nitrate-N
The sample was originally run within hold time, but required further analysis that exceeded hold time.				
2334257001	4	3044 River Road, Conestoga, PA	S4500HB-11	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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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334257 3RD QTR 2018-3044 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334257001	3044 River Road, Conestoga, PA	D6919-09	
2334257001	3044 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2334257001	3044 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2334257001	3044 River Road, Conestoga, PA	EPA 300.0	
2334257001	3044 River Road, Conestoga, PA	EPA 410.4	
2334257001	3044 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2334257001	3044 River Road, Conestoga, PA	Field	
2334257001	3044 River Road, Conestoga, PA	S2540C-11	
2334257001	3044 River Road, Conestoga, PA	S4500HB-11	
2334257001	3044 River Road, Conestoga, PA	SM2130B-2011	
2334257001	3044 River Road, Conestoga, PA	SM2320B-2011	
2334257001	3044 River Road, Conestoga, PA	SM2510B-2011	
2334257001	3044 River Road, Conestoga, PA	SM5310B-2011	
2334257001	3044 River Road, Conestoga, PA	SW846 8260B	
2334257001	3044 River Road, Conestoga, PA	SW846 9020B	

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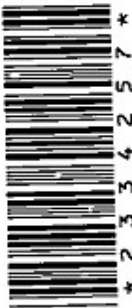


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ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /
SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: C
ALS Quote



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

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike, P.O. Box 4424
Lancaster, PA 17604

Contact: Mark Reider

Phone#: (717) 735-0193

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

Fax? -Y No: _____

Sample Description/Location

(as it will appear on the lab report)

Sample Date

Time

1 3044RIVERRD

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Project Comments:

Relinquished By / Company Name

1 *Mark Reider* ALS

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Receipt Information (completed by Receiving Lab)

Cooler Temp: 3.0 Therm ID: 359

No. of Coolers: _____ Y N Initial

Custody Seals Present?

(if present) Seals Intact?

Received on Ice?

COC/Labels Complete/Accurate?

Cont. in Good Cond.?

Correct Containers?

Correct Sample Volumes?

Correct Preservation?

HeadSpace/Volatilities?

Courier/Tracking #: _____

Sample/COC Comments

Alkalinity, HCO3

pH, TDS, NO2, NO3, Cl, SO4, F,

Tb, SPC

Metals: Ca, Fe, Mg, Mn, K, Na

Dissolved Metals: Ca, Fe, Mg, Mn,

K, Na

NH3-N, COD

FM

SW846-8260 VOCs

TOX

O-OH

TOC

Container Type

AG 40 ml

AN 125 ml

AN 250 ml

AN 250 ml

PL 500 ml

PL 250 ml

PL 250 ml

PL 500 ml

CG 40 ml

CG 40 ml

CG 40 ml

CG 40 ml

CG 40 ml

CG 40 ml

CG 40 ml

CG 40 ml

Container Size

Container Preservative

AG 40 ml HCl

AN 125 ml H2SO4

AN 250 ml H2SO4

AN 250 ml HNO3

PL 500 ml HNO3

PL 250 ml None

PL 250 ml None

PL 500 ml None

CG 40 ml None

CG 40 ml None

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Container Type

AG 40 ml HCl

AN 125 ml H2SO4

AN 250 ml H2SO4

AN 250 ml HNO3

PL 500 ml HNO3

PL 250 ml None

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Container Type

AG 40 ml HCl

AN 125 ml H2SO4

AN 250 ml H2SO4

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Container Type

AG 40 ml HCl

AN 125 ml H2SO4

AN 250 ml H2SO4

AN 250 ml HNO3

PL 500 ml HNO3

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Container Type

AG 40 ml HCl

AN 125 ml H2SO4

AN 250 ml H2SO4

AN 250 ml HNO3

PL 500 ml HNO3

PL 250 ml None

PL 250 ml None

PL 500 ml None

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CG 40 ml None

CG 40 ml None

CG 40 ml None

CG 40 ml None

Container Type

AG 40 ml HCl

AN 125 ml H2SO4

AN 250 ml H2SO4

AN 250 ml HNO3

PL 500 ml HNO3

PL 250 ml None

PL 250 ml None

PL 5

September 9, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3052 RIVER RD	Workorder:	2334476
Purchase Order:	PO1000126	Workorder ID:	3052 RIVER ROAD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 23, 2018.

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.

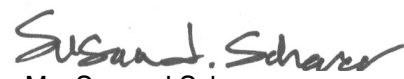
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: Ms. Jordan Gallagher , 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: 2334476 3052 RIVER ROAD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334476001	3052 River Road, Conestoga, PA	Water	8/23/2018 13:15	8/23/2018 16:54	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334476 3052 RIVER ROAD

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: 2334476 3052 RIVER ROAD

Lab ID: **2334476001** Date Collected: 8/23/2018 13:15 Matrix: Water
Sample ID: **3052 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
1,1-Dichloroethene	ND	3	ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
trans-1,2-Dichloroethene	ND	5	ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
Methylene Chloride	ND	4	ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/29/18 21:05	TMP	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/29/18 21:05	TMP	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-Dichloroethane-d4 (S)	84.2		%	62 - 133	SW846 8260B			8/29/18 21:05	TMP	K
4-Bromofluorobenzene (S)	93.9		%	79 - 114	SW846 8260B			8/29/18 21:05	TMP	K
Dibromofluoromethane (S)	91.2		%	78 - 116	SW846 8260B			8/29/18 21:05	TMP	K
Toluene-d8 (S)	89.8		%	76 - 127	SW846 8260B			8/29/18 21:05	TMP	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	8		mg/L	5	SM2320B-2011			8/27/18 19:19	MSA	C
Alkalinity, Total	8	1	mg/L	5	SM2320B-2011			8/27/18 19:19	MSA	C
Ammonia-N	0.144		mg/L	0.100	D6919-09			9/6/18 16:46	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/31/18 18:34	AK	B
Chloride	22.0		mg/L	2.0	EPA 300.0			8/24/18 09:02	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/24/18 09:02	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			9/5/18 10:44	PAG	I
Nitrate-N	18.3		mg/L	0.20	EPA 300.0			8/24/18 09:02	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/24/18 09:02	CHW	C
pH	5.80	2	pH_Units		S4500HB-11			8/27/18 19:19	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 15:58	C_D	9/7/18 14:02	RXB	H
Specific Conductance	216		umhos/cm	1	SM2510B-2011			8/27/18 19:19	MSA	C

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ANALYTICAL RESULTS

Workorder: 2334476 3052 RIVER ROAD

Lab ID: **2334476001** Date Collected: 8/23/2018 13:15 Matrix: Water
Sample ID: **3052 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	ND		mg/L	2.0	EPA 300.0			8/24/18 09:02	CHW	C
Total Dissolved Solids	130		mg/L	5	S2540C-11			8/27/18 15:00	BMK	C
Total Organic Carbon (TOC)	0.76		mg/L	0.50	SM5310B-2011			8/30/18 19:38	PAG	F
Turbidity	0.12		NTU	0.10	SM2130B-2011			8/24/18 22:05	MSA	C
METALS										
Calcium, Total	16.0		mg/L	0.050	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:04	SRT	D1
Calcium, Dissolved	16.9		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:08	SRT	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:04	SRT	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:08	SRT	E
Magnesium, Total	8.2		mg/L	0.050	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:04	SRT	D1
Magnesium, Dissolved	8.4		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:08	SRT	E
Manganese, Total	0.031		mg/L	0.0025	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:04	SRT	D1
Manganese, Dissolved	0.033		mg/L	0.0050	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:08	SRT	E
Potassium, Total	1.7		mg/L	0.25	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:04	SRT	D1
Potassium, Dissolved	1.8		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:08	SRT	E
Sodium, Total	7.2		mg/L	0.25	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:04	SRT	D1
Sodium, Dissolved	7.2		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:08	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.000		pH_Units		Field			8/23/18 13:15	BGS	N
Specific Conductance, Field	283		umhos/cm	1	Field			8/23/18 13:15	BGS	N
Temperature	16.10		Deg. C		Field			8/23/18 13:15	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334476 3052 RIVER ROAD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334476001	1	3052 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2334476001	2	3052 River Road, Conestoga, PA	S4500HB-11	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.				
2334476001	3	3052 River Road, Conestoga, PA	SW846 8260B	1,1-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 132 and the control limits were 63 to 128.				
2334476001	4	3052 River Road, Conestoga, PA	SW846 8260B	Methylene Chloride
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Methylene Chloride. The RPD was reported as 18.4 and the upper control limit is 17.				
2334476001	5	3052 River Road, Conestoga, PA	SW846 8260B	trans-1,2-Dichloroethene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 127 and the control limits were 71 to 122.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334476 3052 RIVER ROAD

Lab ID	Sample ID	Analysis Method	Prep Method
2334476001	3052 River Road, Conestoga, PA	D6919-09	
2334476001	3052 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2334476001	3052 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2334476001	3052 River Road, Conestoga, PA	EPA 300.0	
2334476001	3052 River Road, Conestoga, PA	EPA 410.4	
2334476001	3052 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2334476001	3052 River Road, Conestoga, PA	Field	
2334476001	3052 River Road, Conestoga, PA	S2540C-11	
2334476001	3052 River Road, Conestoga, PA	S4500HB-11	
2334476001	3052 River Road, Conestoga, PA	SM2130B-2011	
2334476001	3052 River Road, Conestoga, PA	SM2320B-2011	
2334476001	3052 River Road, Conestoga, PA	SM2510B-2011	
2334476001	3052 River Road, Conestoga, PA	SM5310B-2011	
2334476001	3052 River Road, Conestoga, PA	SW846 8260B	
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* 2 3 3 4 4 7 6 *

1 of 1

Client Name: LCSWMA - Gerald E. Miller, Sr.
 Address: 3052 River Road
 Conestoga, PA 17516
 Contact: Gerald E. Miller, Sr.
 Phone#: (717) 872-5117
 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
 Fax? -Y No: _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	G or C	Matrix	TOC	OH	TOX	SM846-8260 VOCs	NH3-N, COD	TM	Disolved Metals: Ca, Fe, Mg, Mn, K, Na	K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	pH, TDS, NO2, NO3, Cl, SO4, F,	Tb, Spc	Alkalinity, HCO3	PL	PL	PL	PL	PL	PL	PL	PL	Receipt Information (completed by Receiving Lab)
1 3052RIVERRD	8-23-18	1315	G	DW	2	1	2	3A	1	X	1	1	1	1	1	1	500 ml	2 L	250 ml	250 ml	250 ml	500 ml	500 ml	500 ml	500 ml
2								SW																	
3																									
4																									
5																									
6																									
7																									
8																									
9																									
10																									

Enter Number of Containers Per Sample or Field Results Below.

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:

Special Processing: USACE Navy
 State Samples Collected In: NY NJ PA NC

Reportable to PADEP? Yes No
 Sample Disposal: Lab Special
 PWSID # _____ EDDS: Format Type: _____

Project Comments: _____
 LOGGED BY (signature): _____
 REVIEWED BY (signature): _____
 Relinquished By / Company Name: ALS
 Date: 8-23-18
 Time: 1654

* G=Grab; C=Composite **Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
 ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057
 Rev 8/04



September 6, 2018

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

Certificate of Analysis

Project Name:	FREY FARM	Workorder:	2334256
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018 3056 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, August 22, 2018.

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.

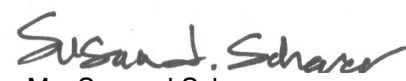
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2334256 3RD QTR 2018 3056 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334256001	3056RIVERRD	Water	8/22/2018 11:00	8/22/2018 17:32	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334256 3RD QTR 2018 3056 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.
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- 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: 2334256 3RD QTR 2018 3056 RIVER RD

Lab ID: **2334256001** Date Collected: 8/22/2018 11:00 Matrix: Water
Sample ID: **3056RIVERRD** Date Received: 8/22/2018 17:32

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	10		mg/L	5	SM2320B-2011			8/27/18 12:19	MSA	C
Alkalinity, Total	10	3	mg/L	5	SM2320B-2011			8/27/18 12:19	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			9/5/18 22:44	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/29/18 17:58	AK	B
Chloride	26.3		mg/L	2.0	EPA 300.0			8/23/18 13:39	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/23/18 13:39	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			8/28/18 14:51	PAG	I
Nitrate-N	19.4		mg/L	0.20	EPA 300.0			8/23/18 13:39	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/23/18 13:39	CHW	C
pH	6.09	1	pH_Units		S4500HB-11			8/25/18 21:25	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 13:40	RXB	8/30/18 08:24	C_D	H
Specific Conductance	240		umhos/cm	1	SM2510B-2011			8/25/18 21:25	MSA	C
Sulfate	ND		mg/L	2.0	EPA 300.0			8/23/18 13:39	CHW	C
Total Dissolved Solids	167	2	mg/L	5	S2540C-11			8/25/18 11:45	BMK	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			8/28/18 15:53	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			8/24/18 04:50	MSA	C
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/28/18 18:43	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/28/18 18:43	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>

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ANALYTICAL RESULTS

Workorder: 2334256 3RD QTR 2018 3056 RIVER RD

Lab ID: **2334256001** Date Collected: 8/22/2018 11:00 Matrix: Water
Sample ID: **3056RIVERRD** Date Received: 8/22/2018 17:32

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	107		%	62 - 133	SW846 8260B			8/28/18 18:43	DD	K
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B			8/28/18 18:43	DD	K
Dibromofluoromethane (S)	99.5		%	78 - 116	SW846 8260B			8/28/18 18:43	DD	K
Toluene-d8 (S)	99.2		%	76 - 127	SW846 8260B			8/28/18 18:43	DD	K
METALS										
Calcium, Total	13.0		mg/L	0.050	EPA 200.7	8/24/18 12:20	AHI	8/27/18 08:23	DAG	D1
Calcium, Dissolved	12.8		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:20	SRT	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/24/18 12:20	AHI	8/27/18 08:23	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:20	SRT	E
Magnesium, Total	13.2		mg/L	0.050	EPA 200.7	8/24/18 12:20	AHI	8/27/18 08:23	DAG	D1
Magnesium, Dissolved	13.0		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:20	SRT	E
Manganese, Total	0.091		mg/L	0.0025	EPA 200.7	8/24/18 12:20	AHI	8/27/18 08:23	DAG	D1
Manganese, Dissolved	0.090		mg/L	0.0050	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:20	SRT	E
Potassium, Total	2.4		mg/L	0.25	EPA 200.7	8/24/18 12:20	AHI	8/27/18 08:23	DAG	D1
Potassium, Dissolved	2.3		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:20	SRT	E
Sodium, Total	8.3		mg/L	0.25	EPA 200.7	8/24/18 12:20	AHI	8/27/18 08:23	DAG	D1
Sodium, Dissolved	7.8		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:20	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.110		pH_Units		Field			8/22/18 11:00	BGS	N
Specific Conductance, Field	249		umhos/cm	1	Field			8/22/18 11:00	BGS	N
Temperature	15.60		Deg. C		Field			8/22/18 11:00	BGS	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334256 3RD QTR 2018 3056 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334256001	1	3056RIVERRD	S4500HB-11	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.				
2334256001	2	3056RIVERRD	S2540C-11	Total Dissolved Solids
The evaporating dish for this sample was heated in a 180 degree C oven for 13 hours instead of the method required 16 hours due to an analyst error. The laboratory control sample, the method blank, and the temperature blank were all within control limits.				
2334256001	3	3056RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				

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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

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334256 3RD QTR 2018 3056 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334256001	3056RIVERRD	D6919-09	
2334256001	3056RIVERRD	EPA 200.7	EPA ACID
2334256001	3056RIVERRD	EPA 200.7	EPA TRMD
2334256001	3056RIVERRD	EPA 300.0	
2334256001	3056RIVERRD	EPA 410.4	
2334256001	3056RIVERRD	EPA 420.4	420.4/9066
2334256001	3056RIVERRD	Field	
2334256001	3056RIVERRD	S2540C-11	
2334256001	3056RIVERRD	S4500HB-11	
2334256001	3056RIVERRD	SM2130B-2011	
2334256001	3056RIVERRD	SM2320B-2011	
2334256001	3056RIVERRD	SM2510B-2011	
2334256001	3056RIVERRD	SM5310B-2011	
2334256001	3056RIVERRD	SW846 8260B	
2334256001	3056RIVERRD	SW846 9020B	

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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

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike, P.O. Box 4424
 Lancaster, PA 17604

Contact: Mark Reider

Phone#: (717) 735-0193

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
 (as it will appear on the lab report)

Sample Date Time

1 3056RIVERRD 8-22-18 1100

2

3

4

5

6

7

8

9

10

Project Comments:

Relinquished By / Company Name
 [Signature] ALS

Date Time Received By / Company Name

8-22-18 17:32 [Signature] ALS

LOGGED BY (signature):

REVIEWED BY (signature):

COC # 1 of 1
 ALS Q
 * 2 3 3 4 2 5 6 *

Receipt Information (completed by Receiving Lab)
 Cooler Temp: 2 C Therm ID: 359
 No. of Coolers: Y N Initial

Custody Seals Present?
 Received on Ice?
 COC Labels Complete/Accurate?
 Cont. in Good Cond.?
 Correct Containers?
 Correct Sample Volumes?
 Correct Preservation?
 Headspace/Volatiles-2

Courier/Tracking #: _____

Sample/COC Comments

Enter Number of Containers Per Sample or Field Results Below.		Metals: Ca, Fe, Mg, Mn, K, Na		Dissolved Metals: Ca, Fe, Mg, Mn,		K Na		pH, TDS, NO2, NO3, Cl, SO4, F,		Alkalinity, HCO3	
Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix	Matrix
TOC	HCl	H2SO4	HCl	FM	NH3-N, COD	SW846-8260 VOCs	TOX	H2SO4	HCl	HNO3	HNO3
2	1	2	2	2	1	2	2	2	1	1	1
G	DW	G	DW	G	DW	G	DW	G	DW	G	DW
1100											

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:

Special Processing
 USACE
 Navy
 Sample Disposal
 Lab
 Special

State Samples Collected In
 NY
 NJ
 PA
 NC

Reportable to PADEP? Yes
 PWSID # _____
 EDDS: Format Type _____

Matrix - ALS=Air, DW=Drinking Water, GW=Groundwater, OL=Oil, OI=Other Liquid, SL=Sludge, SO=Soil, WP=Wipe, WW=Wastewater
 ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

September 6, 2018

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

Certificate of Analysis

Project Name:	FREY FARM	Workorder:	2334255
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018 3060 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, August 22, 2018.

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

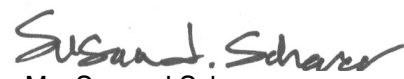
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , Mr. Jeff Musser

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Project Coordinator

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SAMPLE SUMMARY

Workorder: 2334255 3RD QTR 2018 3060 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334255001	3060RIVERRD	Water	8/22/2018 10:41	8/22/2018 17:32	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334255 3RD QTR 2018 3060 RIVER RD

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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
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(S)	Surrogate Compound
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*	Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 2334255 3RD QTR 2018 3060 RIVER RD

Lab ID: **2334255001** Date Collected: 8/22/2018 10:41 Matrix: Water
Sample ID: **3060RIVERRD** Date Received: 8/22/2018 17:32

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND		mg/L	5	SM2320B-2011			8/27/18 12:10	MSA	C
Alkalinity, Total	ND	4	mg/L	5	SM2320B-2011			8/27/18 12:10	MSA	C
Ammonia-N	0.298		mg/L	0.100	D6919-09			9/5/18 22:30	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/29/18 17:58	AK	B
Chloride	20.6		mg/L	2.0	EPA 300.0			8/23/18 13:26	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/23/18 13:26	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			8/28/18 13:57	PAG	I
Nitrate-N	20.0	3	mg/L	0.50	EPA 300.0			8/25/18 06:57	MBW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/23/18 13:26	CHW	C
pH	5.35	1	pH_Units		S4500HB-11			8/25/18 21:16	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 13:40	RXB	8/30/18 08:24	C_D	H
Specific Conductance	255		umhos/cm	1	SM2510B-2011			8/25/18 21:16	MSA	C
Sulfate	20.7		mg/L	2.0	EPA 300.0			8/23/18 13:26	CHW	C
Total Dissolved Solids	221	2	mg/L	5	S2540C-11			8/25/18 11:45	BMK	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			8/28/18 15:53	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			8/24/18 04:50	MSA	C
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/28/18 18:21	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/28/18 18:21	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>

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ANALYTICAL RESULTS

Workorder: 2334255 3RD QTR 2018 3060 RIVER RD

Lab ID: **2334255001** Date Collected: 8/22/2018 10:41 Matrix: Water
Sample ID: **3060RIVERRD** Date Received: 8/22/2018 17:32

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	104		%	62 - 133	SW846 8260B			8/28/18 18:21	DD	K
4-Bromofluorobenzene (S)	99.7		%	79 - 114	SW846 8260B			8/28/18 18:21	DD	K
Dibromofluoromethane (S)	99.9		%	78 - 116	SW846 8260B			8/28/18 18:21	DD	K
Toluene-d8 (S)	97.9		%	76 - 127	SW846 8260B			8/28/18 18:21	DD	K
METALS										
Calcium, Total	17.7		mg/L	0.050	EPA 200.7	8/24/18 12:20	AHI	8/27/18 05:05	DAG	D1
Calcium, Dissolved	17.9		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:17	SRT	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/24/18 12:20	AHI	8/27/18 05:05	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:17	SRT	E
Magnesium, Total	11.3		mg/L	0.050	EPA 200.7	8/24/18 12:20	AHI	8/27/18 05:05	DAG	D1
Magnesium, Dissolved	11.1		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:17	SRT	E
Manganese, Total	0.15		mg/L	0.0025	EPA 200.7	8/24/18 12:20	AHI	8/27/18 05:05	DAG	D1
Manganese, Dissolved	0.15		mg/L	0.0050	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:17	SRT	E
Potassium, Total	2.4		mg/L	0.25	EPA 200.7	8/24/18 12:20	AHI	8/27/18 05:05	DAG	D1
Potassium, Dissolved	2.2		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:17	SRT	E
Sodium, Total	6.7		mg/L	0.25	EPA 200.7	8/24/18 12:20	AHI	8/28/18 03:10	SRT	D1
Sodium, Dissolved	6.6		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 04:17	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.420		pH_Units		Field			8/22/18 10:41	BGS	N
Specific Conductance, Field	259		umhos/cm	1	Field			8/22/18 10:41	BGS	N
Temperature	15.20		Deg. C		Field			8/22/18 10:41	BGS	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334255 3RD QTR 2018 3060 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334255001	1	3060RIVERRD	S4500HB-11	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.				
2334255001	2	3060RIVERRD	S2540C-11	Total Dissolved Solids
The evaporating dish for this sample was heated in a 180 degree C oven for 13 hours instead of the method required 16 hours due to an analyst error. The laboratory control sample, the method blank, and the temperature blank were all within control limits.				
2334255001	3	3060RIVERRD	EPA 300.0	Nitrate-N
The sample was originally run within hold time, but required further analysis that exceeded hold time.				
2334255001	4	3060RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334255 3RD QTR 2018 3060 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334255001	3060RIVERRD	D6919-09	
2334255001	3060RIVERRD	EPA 200.7	EPA ACID
2334255001	3060RIVERRD	EPA 200.7	EPA TRMD
2334255001	3060RIVERRD	EPA 300.0	
2334255001	3060RIVERRD	EPA 410.4	
2334255001	3060RIVERRD	EPA 420.4	420.4/9066
2334255001	3060RIVERRD	Field	
2334255001	3060RIVERRD	S2540C-11	
2334255001	3060RIVERRD	S4500HB-11	
2334255001	3060RIVERRD	SM2130B-2011	
2334255001	3060RIVERRD	SM2320B-2011	
2334255001	3060RIVERRD	SM2510B-2011	
2334255001	3060RIVERRD	SM5310B-2011	
2334255001	3060RIVERRD	SW846 8260B	
2334255001	3060RIVERRD	SW846 9020B	

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Mexico: Monterrey



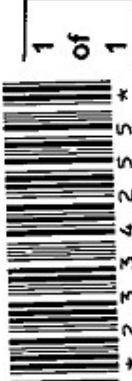
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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

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

COC #: **ALS Q1**



* 2 3 3 4 2 5 5 *

Client Name: Lancaster County Solid Waste MA
 Address: 1299 Harrisburg Pike, P.O. Box 4424
 Lancaster, PA 17604
 Contact: Mark Reider
 Phone#: (717) 735-0193
 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 (as it will appear on the lab report)	Sample Date	Time
1 3060RIVERRD	8-22-18	1041
2		
3		
4		
5		
6		
7		
8		
9		
10		

Container Type	AG	AN	AN	CG	PL	PL	PL	PL	PL	PL	PL
Container Size	40 ml	125 ml	250 ml	40 ml	500 ml	250 ml	250 ml	250 ml	2 L	500 ml	500 ml
Preservative	HCl	H2SO4	H2SO4	HCl	H2SO4	HNO3	HNO3	HNO3	None	None	None

Enter Number of Containers Per Sample or Field Results Below.	TOC	O-OH	TOX	NH3-N, COD	Dissolved Metals: Ca, Fe, Mg, Mn, K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	pH, TDS, NO2, NO3, Cl, SO4, F, Pb, Spc	Alkalinity, HCO3
2		1	2	1	1	1	1	1
2								
2								
2								
2								
2								
2								
2								
2								
2								

Receipt Information (completed by Receiving Lab)
 Cooler Temp: 2 °C Therm ID: 359
 No. of Coolers: Y N Initial
 Custody Seals Present? (if present) Status intact?
 Received on Ice?
 COC Labels Complete/Accurate?
 Cont. in Good Cond.?
 Correct Containers?
 Correct Sample Volumes?
 Correct Preservation?
 Headspace/Volatiles?

Special Processing: USACE Navy State Samples Collected In: NY NJ PA NC
 ALS Field Services: Pickup Labor Rental_Equipment
 Composite_Sampling Other:

Standard	Deliverables	Reportable to PADEP?	Sample Disposal	Special Processing	State Samples Collected In
<input type="checkbox"/> Standard	<input type="checkbox"/> CLP-like	Yes <input type="checkbox"/>	Lab <input checked="" type="checkbox"/>	USACE	<input type="checkbox"/> NY
<input type="checkbox"/> USACE	<input type="checkbox"/> USACE		Special <input type="checkbox"/>	Navy	<input type="checkbox"/> NJ
					<input checked="" type="checkbox"/> PA
					<input type="checkbox"/> NC

LOGGED BY (signature): _____
 REVIEWED BY (signature): _____
 Date: 8-22-18 17:32
 Received By / Company Name: gnr ALS
 PWSID #: _____
 EDDS: Format Type: _____



September 9, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3076 RIVER RD	Workorder:	2334730
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018-3076 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 23, 2018.

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.

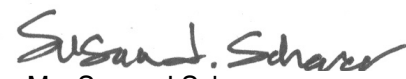
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Jordan Gallagher , 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: 2334730 3RD QTR 2018-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334730001	3076 River Road, Conestoga, PA	Water	8/23/2018 13:00	8/23/2018 16:54	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334730 3RD QTR 2018-3076 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: 2334730 3RD QTR 2018-3076 RIVER RD

Lab ID: **2334730001** Date Collected: 8/23/2018 13:00 Matrix: Water
Sample ID: **3076 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/30/18 01:20	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 01:20	PDK	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-Dichloroethane-d4 (S)	106		%	62 - 133	SW846 8260B			8/30/18 01:20	PDK	K
4-Bromofluorobenzene (S)	98.9		%	79 - 114	SW846 8260B			8/30/18 01:20	PDK	K
Dibromofluoromethane (S)	104		%	78 - 116	SW846 8260B			8/30/18 01:20	PDK	K
Toluene-d8 (S)	99		%	76 - 127	SW846 8260B			8/30/18 01:20	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	13		mg/L	5	SM2320B-2011			8/28/18 03:43	MSA	C
Alkalinity, Total	13	1	mg/L	5	SM2320B-2011			8/28/18 03:43	MSA	C
Ammonia-N	0.114		mg/L	0.100	D6919-09			9/7/18 01:12	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/31/18 18:34	AK	B
Chloride	51.6		mg/L	2.0	EPA 300.0			8/24/18 12:39	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/24/18 12:39	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			9/5/18 12:31	PAG	I
Nitrate-N	10.4		mg/L	0.20	EPA 300.0			8/24/18 12:39	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/24/18 12:39	CHW	C
pH	6.19	2	pH_Units		S4500HB-11			8/28/18 03:43	MSA	C
Phenolics	0.009		mg/L	0.005	EPA 420.4	8/29/18 15:58	C_D	9/6/18 17:39	RXB	H
Specific Conductance	296		umhos/cm	1	SM2510B-2011			8/28/18 03:43	MSA	C

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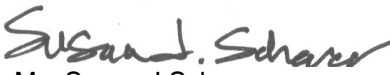
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ANALYTICAL RESULTS

Workorder: 2334730 3RD QTR 2018-3076 RIVER RD

Lab ID: **2334730001** Date Collected: 8/23/2018 13:00 Matrix: Water
Sample ID: **3076 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	14.0		mg/L	2.0	EPA 300.0			8/24/18 12:39	CHW	C
Total Dissolved Solids	211		mg/L	5	S2540C-11			8/28/18 14:30	BMK	C
Total Organic Carbon (TOC)	0.66		mg/L	0.50	SM5310B-2011			8/30/18 19:38	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			8/25/18 01:59	MSA	C
METALS										
Calcium, Total	15.0		mg/L	0.050	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:45	DAG	D2
Calcium, Dissolved	15.6		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:19	SRT	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:45	DAG	D2
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:19	SRT	E
Magnesium, Total	9.1		mg/L	0.050	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:45	DAG	D2
Magnesium, Dissolved	9.3		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:19	SRT	E
Manganese, Total	0.20		mg/L	0.0025	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:45	DAG	D2
Manganese, Dissolved	0.20		mg/L	0.0050	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:19	SRT	E
Potassium, Total	3.1		mg/L	0.25	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:45	DAG	D2
Potassium, Dissolved	3.2		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:19	SRT	E
Sodium, Total	21.9		mg/L	0.25	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:45	DAG	D2
Sodium, Dissolved	21.3		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:19	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.350		pH_Units		Field			8/23/18 13:00	BGS	N
Specific Conductance, Field	260		umhos/cm	1	Field			8/23/18 13:00	BGS	N
Temperature	16.10		Deg. C		Field			8/23/18 13:00	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334730 3RD QTR 2018-3076 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334730001	1	3076 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2334730001	2	3076 River Road, Conestoga, PA	S4500HB-11	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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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334730 3RD QTR 2018-3076 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334730001	3076 River Road, Conestoga, PA	D6919-09	
2334730001	3076 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2334730001	3076 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2334730001	3076 River Road, Conestoga, PA	EPA 300.0	
2334730001	3076 River Road, Conestoga, PA	EPA 410.4	
2334730001	3076 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2334730001	3076 River Road, Conestoga, PA	Field	
2334730001	3076 River Road, Conestoga, PA	S2540C-11	
2334730001	3076 River Road, Conestoga, PA	S4500HB-11	
2334730001	3076 River Road, Conestoga, PA	SM2130B-2011	
2334730001	3076 River Road, Conestoga, PA	SM2320B-2011	
2334730001	3076 River Road, Conestoga, PA	SM2510B-2011	
2334730001	3076 River Road, Conestoga, PA	SM5310B-2011	
2334730001	3076 River Road, Conestoga, PA	SW846 8260B	
2334730001	3076 River Road, Conestoga, PA	SW846 9020B	

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34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

Environmental

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

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

Page 1 of 1
Counter: _____
Tracking #: _____

Co. Name: LCSWMA - Brian Sengerich
Contact (Report to): Brian Sengerich
Address: 3076 River Rd
Conestoga, PA

Phone: _____

Bill to (if different than Report to):
LCSWMA

PO#: _____

Project Name/ID: Annual Sampling ALS Quote #: _____

TAT: Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.

Email? Y N
Fax? Y N

Sample Description/Location <small>(as it will appear on the lab report)</small>	COC Comments	Sample Date	Sample Time	Military
1 3076 RIVER RD		8-23-18	1300	G
2				
3				
4				
5				
6				
7				
8				

SAMPLED BY (Please Print): REG SHADE ALS

Relinquished By / Company Name: ALS

Date	Time	Received By / Company Name	Date	Time
8-23-18	1654	gn	8/23/18	1654

Project Comments:

Container Type	AV	PW	AN	CG	PL	PL	PL
Container Size	40	25	250	40	250	250	500
Preservative	HCL	HNO3	H2SO4	HCL	HNO3	HNO3	HNO3

ANALYSIS METHOD REQUESTED

Matrix	TOC	COF	TOX	SWH6-8200 VOC	FM	NH3/N-COD	CAFC-MY-MN-K-AK	CAFC-MY-MN-K-NA	PT-TMS-MY-NOR-CI-SO4	FT-TH-SPC	AIK-HCO3
G	Z	1	2	3	X	L	L	L	L	L	L

Enter Number of Containers Per Analysis

Notes:
No. of Coolers: _____
Therm. ID: 359
Cooler Temp: S/L

Correct containers?	Y	N
(if present) Seals Intact?	Y	N
Received on Ice?	Y	N
COCl labels complete/accurate?	Y	N
Container in good condition?	Y	N

ALS FIELD SERVICES	Pickup	_____
	Labor	_____
	Composite Sampling	_____
	Rental Equipment	_____
	Other:	_____

Barcode: * 2 3 3 4 7 3 0 *

Copies: WHITE - ORIGINAL CANARY - CUSTOMER COPY
* G=Grab; C=Composite
**Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
***Container Type: AG=Amber Glass; CG=Clear Glass; PL=Plastic. Container Size: 200ml, 500ml, 1L, 8oz, etc. Preservative: HCl, HNO3, NaOH, etc.



September 9, 2018

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

Certificate of Analysis

Project Name:	FREY FARM	Workorder:	2334475
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018 3079 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 23, 2018.

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.

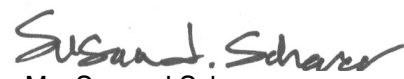
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2334475 3RD QTR 2018 3079 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334475001	3079RIVERRD	Water	8/23/2018 14:51	8/23/2018 16:54	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334475 3RD QTR 2018 3079 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: 2334475 3RD QTR 2018 3079 RIVER RD

Lab ID: **2334475001** Date Collected: 8/23/2018 14:51 Matrix: Water
Sample ID: **3079RIVERRD** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/30/18 03:31	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 03:31	PDK	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-Dichloroethane-d4 (S)	102		%	62 - 133	SW846 8260B			8/30/18 03:31	PDK	K
4-Bromofluorobenzene (S)	99.3		%	79 - 114	SW846 8260B			8/30/18 03:31	PDK	K
Dibromofluoromethane (S)	99.4		%	78 - 116	SW846 8260B			8/30/18 03:31	PDK	K
Toluene-d8 (S)	95.5		%	76 - 127	SW846 8260B			8/30/18 03:31	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	26		mg/L	5	SM2320B-2011			8/27/18 19:10	MSA	C
Alkalinity, Total	26	1	mg/L	5	SM2320B-2011			8/27/18 19:10	MSA	C
Ammonia-N	0.156		mg/L	0.100	D6919-09			9/6/18 16:32	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/31/18 18:34	AK	B
Chloride	32.8		mg/L	2.0	EPA 300.0			8/24/18 09:27	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/24/18 09:27	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			9/4/18 14:56	PAG	I
Nitrate-N	ND		mg/L	0.20	EPA 300.0			8/24/18 09:27	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/24/18 09:27	CHW	C
pH	6.13	2	pH_Units		S4500HB-11			8/27/18 19:10	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 15:58	C_D	9/7/18 14:02	RXB	H
Specific Conductance	174		umhos/cm	1	SM2510B-2011			8/27/18 19:10	MSA	C

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ANALYTICAL RESULTS

Workorder: 2334475 3RD QTR 2018 3079 RIVER RD

Lab ID: **2334475001**
Sample ID: **3079RIVERRD**

Date Collected: 8/23/2018 14:51 Matrix: Water
Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	21.3		mg/L	2.0	EPA 300.0			8/24/18 09:27	CHW	C
Total Dissolved Solids	60		mg/L	5	S2540C-11			8/27/18 15:00	BMK	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			8/30/18 19:38	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			8/24/18 22:05	MSA	C
METALS										
Calcium, Total	9.9		mg/L	0.050	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:00	SRT	D1
Calcium, Dissolved	10.9		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:04	SRT	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:00	SRT	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:04	SRT	E
Magnesium, Total	4.7		mg/L	0.050	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:00	SRT	D1
Magnesium, Dissolved	5.0		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:04	SRT	E
Manganese, Total	0.065		mg/L	0.0025	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:00	SRT	D1
Manganese, Dissolved	0.074		mg/L	0.0050	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:04	SRT	E
Potassium, Total	2.0		mg/L	0.25	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:00	SRT	D1
Potassium, Dissolved	2.1		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:04	SRT	E
Sodium, Total	10		mg/L	0.25	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:00	SRT	D1
Sodium, Dissolved	10.6		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:04	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.070		pH_Units		Field			8/22/18 14:51	BGS	N
Specific Conductance, Field	184		umhos/cm	1	Field			8/22/18 14:51	BGS	N
Temperature	16.10		Deg. C		Field			8/22/18 14:51	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334475 3RD QTR 2018 3079 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334475001	1	3079RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2334475001	2	3079RIVERRD	S4500HB-11	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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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334475 3RD QTR 2018 3079 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334475001	3079RIVERRD	D6919-09	
2334475001	3079RIVERRD	EPA 200.7	EPA ACID
2334475001	3079RIVERRD	EPA 200.7	EPA TRMD
2334475001	3079RIVERRD	EPA 300.0	
2334475001	3079RIVERRD	EPA 410.4	
2334475001	3079RIVERRD	EPA 420.4	420.4/9066
2334475001	3079RIVERRD	Field	
2334475001	3079RIVERRD	S2540C-11	
2334475001	3079RIVERRD	S4500HB-11	
2334475001	3079RIVERRD	SM2130B-2011	
2334475001	3079RIVERRD	SM2320B-2011	
2334475001	3079RIVERRD	SM2510B-2011	
2334475001	3079RIVERRD	SM5310B-2011	
2334475001	3079RIVERRD	SW846 8260B	
2334475001	3079RIVERRD	SW846 9020B	

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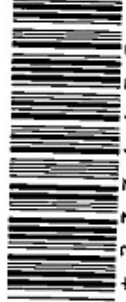


CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

Generated

4475
1 of 1



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www.alsenv.com

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harnsburg Pike, P.O. Box 4424

Lancaster, PA 17604

Contact: Mark Reider

Phone#: (717) 735-0193

Project Name#: LCSWMA - Quarterly Fire Co.

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 (as it will appear on the lab report)

Sample Date Time

1 3079RIVERRD 8-23-10 1451

2

3

4

5

6

7

8

9

10

Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):

Relinquished By/Company Name Date Time

1 *[Signature]* 1418 8-23-10 1654 2

3

4

6

8

10

Cooler Temp: 52 Therm ID: TH-359

No. of Coolers: Y N Initial

Custody Seals Present? (If present) Seals Intact?

Received on Ice?

COC/Labels Complete/Accurate?

Cont. in Good Cond.?

Correct Containers?

Correct Sample Volumes?

Correct Preservation?

Headspace/Volatiles?

Courier/Tracking #:

Sample/COC Comments

Alkalinity, HCO3

pH, TDS, NO2, NO3, Cl, SO4, F,

Metals: Ca, Fe, Mg, Mn, K, Na

Dissolved Metals: Ca, Fe, Mg, Mn,

NH3-N, COD

FM

SW846-8260 VOCs

TOX

O-OH

TOC

Matrix

Enter Number of Containers Per Sample or Field Results Below.

2 1 2 1 1 1 1 1

G DW 2 1 2 1 1 1 1

ALS Field Services: Pickup Labor

Composite_Sampling Rental_Equipment

Other:

Standard

Deliverables

Special Processing

State Samples Collected In

USACE Navy NY

Sample Disposal Lab X NC

Reportable to PADEP? Yes

PWSID.#

EDDS: Format Type

Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

Rev 8/04

September 9, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3088 RIVER RD	Workorder:	2334731
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018-3088 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 23, 2018.

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.

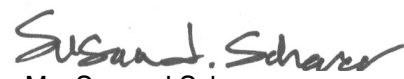
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: Ms. Jordan Gallagher , 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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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

SAMPLE SUMMARY

Workorder: 2334731 3RD QTR 2018-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334731001	3088 River Road, Conestoga PA	Water	8/23/2018 14:28	8/23/2018 16:54	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334731 3RD QTR 2018-3088 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: 2334731 3RD QTR 2018-3088 RIVER RD

Lab ID: **2334731001** Date Collected: 8/23/2018 14:28 Matrix: Water
Sample ID: **3088 River Road, Conestoga PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/30/18 01:42	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 01:42	PDK	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-Dichloroethane-d4 (S)	105		%	62 - 133	SW846 8260B			8/30/18 01:42	PDK	K
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			8/30/18 01:42	PDK	K
Dibromofluoromethane (S)	103		%	78 - 116	SW846 8260B			8/30/18 01:42	PDK	K
Toluene-d8 (S)	98.8		%	76 - 127	SW846 8260B			8/30/18 01:42	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	119		mg/L	5	SM2320B-2011			8/28/18 04:31	MSA	C
Alkalinity, Total	119	1	mg/L	5	SM2320B-2011			8/28/18 04:31	MSA	C
Ammonia-N	0.128		mg/L	0.100	D6919-09			9/7/18 01:26	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/30/18 17:53	AK	B
Chloride	257		mg/L	5.0	EPA 300.0			8/28/18 15:33	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/24/18 13:18	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			9/5/18 14:03	PAG	I
Nitrate-N	10.4		mg/L	0.20	EPA 300.0			8/24/18 13:18	CHW	C
Nitrite-N	0.46		mg/L	0.20	EPA 300.0			8/24/18 13:18	CHW	C
pH	7.17	2	pH_Units		S4500HB-11			8/28/18 04:31	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 15:58	C_D	9/6/18 17:39	RXB	H
Specific Conductance	1230		umhos/cm	1	SM2510B-2011			8/28/18 04:31	MSA	C

ALS Environmental Laboratory Locations Across North America

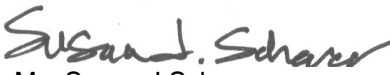
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ANALYTICAL RESULTS

Workorder: 2334731 3RD QTR 2018-3088 RIVER RD

Lab ID: **2334731001** Date Collected: 8/23/2018 14:28 Matrix: Water
Sample ID: **3088 River Road, Conestoga PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	7.2		mg/L	2.0	EPA 300.0			8/24/18 13:18	CHW	C
Total Dissolved Solids	576		mg/L	5	S2540C-11			8/28/18 14:30	BMK	C
Total Organic Carbon (TOC)	0.77		mg/L	0.50	SM5310B-2011			8/30/18 19:38	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			8/25/18 01:59	MSA	C
METALS										
Calcium, Total	0.21		mg/L	0.050	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:48	DAG	D2
Calcium, Dissolved	0.20		mg/L	0.10	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:23	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:48	DAG	D2
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:23	DAG	E
Magnesium, Total	0.086		mg/L	0.050	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:48	DAG	D2
Magnesium, Dissolved	ND		mg/L	0.10	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:23	DAG	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:48	DAG	D2
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:23	DAG	E
Potassium, Total	2.6		mg/L	0.25	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:48	DAG	D2
Potassium, Dissolved	2.5		mg/L	0.50	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:23	DAG	E
Sodium, Total	231		mg/L	0.25	EPA 200.7	8/29/18 08:25	DXC	8/30/18 03:48	DAG	D2
Sodium, Dissolved	249		mg/L	0.50	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:23	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.630		pH_Units		Field			8/23/18 14:28	BGS	N
Specific Conductance, Field	386		umhos/cm	1	Field			8/23/18 14:28	BGS	N
Temperature	17.00		Deg. C		Field			8/23/18 14:28	BGS	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334731 3RD QTR 2018-3088 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334731001	1	3088 River Road, Conestoga PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2334731001	2	3088 River Road, Conestoga PA	S4500HB-11	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.				

ALS Environmental Laboratory Locations Across North America

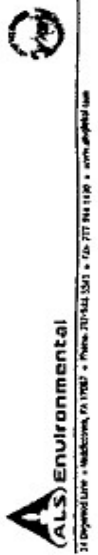
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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334731 3RD QTR 2018-3088 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334731001	3088 River Road, Conestoga PA	D6919-09	
2334731001	3088 River Road, Conestoga PA	EPA 200.7	EPA ACID
2334731001	3088 River Road, Conestoga PA	EPA 200.7	EPA TRMD
2334731001	3088 River Road, Conestoga PA	EPA 300.0	
2334731001	3088 River Road, Conestoga PA	EPA 410.4	
2334731001	3088 River Road, Conestoga PA	EPA 420.4	420.4/9066
2334731001	3088 River Road, Conestoga PA	Field	
2334731001	3088 River Road, Conestoga PA	S2540C-11	
2334731001	3088 River Road, Conestoga PA	S4500HB-11	
2334731001	3088 River Road, Conestoga PA	SM2130B-2011	
2334731001	3088 River Road, Conestoga PA	SM2320B-2011	
2334731001	3088 River Road, Conestoga PA	SM2510B-2011	
2334731001	3088 River Road, Conestoga PA	SM5310B-2011	
2334731001	3088 River Road, Conestoga PA	SW846 8260B	
2334731001	3088 River Road, Conestoga PA	SW846 9020B	

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Generated by ALS

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

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

34 Dogwood Lane • Middletown, PA 17057 • Phone: 717.944.5511 • Fax: 717.944.1430

Client Name: LCSWMA - Hans Weber and Deb Kalbach

Address: 3088 River Road

Conestoga, PA 17516

Contact: Hans Weber and Deb Kalbach

Phone#: (717) 419-7982

Project Name#: LCSWMA - Quarterly

Bill To: LCSWMA - Hans Weber and Deb Kalbach

TAT Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.

Date Required: _____ Approved By: _____

Email? -Y

Fax? -Y No: _____

Sample Description/Location
(as it will appear on the lab report)

1 3088 RIVER RD

2 _____

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10 _____

Project Comments:

LOGGED BY (signature): _____

REVIEWED BY (signature): _____

Date Time Received By / Company Name

1 8/23/17 16:54 2 8/23/17 16:54

3 _____

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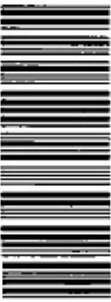
10 _____

Reportable to PADEP? Yes No

PWSID # _____

EDDS: Format Type _____

COC #: _____
ALS Quo: _____



* 2 3 3 4 7 3 1 *

Receipt Information (completed by Receiving Lab)

Cooler Temp: 62 Therm ID: TH-359

No. of Coolers: _____ Y N Initial

Custody Seals Present? _____

(if present) Seals Intact? _____

Received on Ice? _____

COC Labels Complete/Accurate? _____

Cont. in Good Cond.? _____

Correct Containers? _____

Correct Sample Volumes? _____

Correct Preservation? _____

Headspace/Volatiles? _____

Courier/Tracking #: _____

Sample/COC Comments

Alkalinity, HCO3

pH, TDS, NO2, NO3, Cl, SO4, F,

Metals: Ca, Fe, Mg, Mn, K, Na

Dissolved Metals: Ca, Fe, Mg, Mn,

NH3-N, COD

FM

SW846-8260 VOCs

TOX

OH

TOC

Matrix

G or C

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September 9, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3100 RIVER RD	Workorder:	2334733
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018-3100 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 23, 2018.

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.

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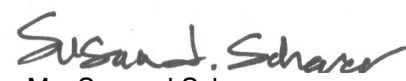
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , Landowner , Mr. Jeff Musser

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Project Coordinator

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SAMPLE SUMMARY

Workorder: 2334733 3RD QTR 2018-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334733001	3100 River Road, Conestoga, PA	Water	8/23/2018 14:38	8/23/2018 16:54	Mr. Brian G Shade
2334733002	Field Blank	Water	8/23/2018 15:55	8/23/2018 16:54	Mr. Brian G Shade
2334733003	Trip Blank	Water	8/23/2018 16:54	8/23/2018 16:54	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334733 3RD QTR 2018-3100 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.
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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: 2334733 3RD QTR 2018-3100 RIVER RD

Lab ID: 2334733001 **Date Collected:** 8/23/2018 14:38 **Matrix:** Water
Sample ID: 3100 River Road, Conestoga, PA **Date Received:** 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/30/18 02:04	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 02:04	PDK	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-Dichloroethane-d4 (S)	105		%	62 - 133	SW846 8260B			8/30/18 02:04	PDK	K
4-Bromofluorobenzene (S)	99.9		%	79 - 114	SW846 8260B			8/30/18 02:04	PDK	K
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B			8/30/18 02:04	PDK	K
Toluene-d8 (S)	98.1		%	76 - 127	SW846 8260B			8/30/18 02:04	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	15		mg/L	5	SM2320B-2011			8/28/18 04:48	MSA	C
Alkalinity, Total	15	1	mg/L	5	SM2320B-2011			8/28/18 04:48	MSA	C
Ammonia-N	0.129		mg/L	0.100	D6919-09			9/7/18 01:54	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/30/18 17:53	AK	B
Chloride	50.8		mg/L	2.0	EPA 300.0			8/24/18 12:52	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/24/18 12:52	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			9/5/18 15:06	PAG	I
Nitrate-N	6.9		mg/L	0.20	EPA 300.0			8/24/18 12:52	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/24/18 12:52	CHW	C
pH	6.05	2	pH_Units		S4500HB-11			8/28/18 04:48	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 15:58	C_D	9/6/18 17:39	RXB	H
Specific Conductance	261		umhos/cm	1	SM2510B-2011			8/28/18 04:48	MSA	C

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ANALYTICAL RESULTS

Workorder: 2334733 3RD QTR 2018-3100 RIVER RD

Lab ID: **2334733001** Date Collected: 8/23/2018 14:38 Matrix: Water
Sample ID: **3100 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	9.9		mg/L	2.0	EPA 300.0			8/24/18 12:52	CHW	C
Total Dissolved Solids	132		mg/L	5	S2540C-11			8/28/18 14:30	BMK	C
Total Organic Carbon (TOC)	0.50		mg/L	0.50	SM5310B-2011			8/30/18 19:38	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			8/25/18 01:59	MSA	C
METALS										
Calcium, Total	17.9		mg/L	0.050	EPA 200.7	8/29/18 08:25	DXC	8/30/18 04:03	DAG	D2
Calcium, Dissolved	18.0		mg/L	0.10	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:29	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/29/18 08:25	DXC	8/30/18 04:03	DAG	D2
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:29	DAG	E
Magnesium, Total	8.6		mg/L	0.050	EPA 200.7	8/29/18 08:25	DXC	8/30/18 04:03	DAG	D2
Magnesium, Dissolved	8.8		mg/L	0.10	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:29	DAG	E
Manganese, Total	0.0093		mg/L	0.0025	EPA 200.7	8/29/18 08:25	DXC	8/30/18 04:03	DAG	D2
Manganese, Dissolved	0.0094		mg/L	0.0050	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:29	DAG	E
Potassium, Total	1.6		mg/L	0.25	EPA 200.7	8/29/18 08:25	DXC	8/30/18 04:03	DAG	D2
Potassium, Dissolved	1.6		mg/L	0.50	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:29	DAG	E
Sodium, Total	15.6		mg/L	0.25	EPA 200.7	8/29/18 08:25	DXC	8/30/18 04:03	DAG	D2
Sodium, Dissolved	15.9		mg/L	0.50	EPA 200.7	9/2/18 23:58	DAG	9/6/18 04:29	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.600		pH_Units		Field			8/23/18 14:38	BGS	N
Specific Conductance, Field	302		umhos/cm	1	Field			8/23/18 14:38	BGS	N
Temperature	15.80		Deg. C		Field			8/23/18 14:38	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334733 3RD QTR 2018-3100 RIVER RD

Lab ID: **2334733002**

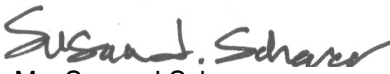
Date Collected: 8/23/2018 15:55

Matrix: Water

Sample ID: **Field Blank**

Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
Toluene	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/29/18 22:47	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/29/18 22:47	PDK	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-Dichloroethane-d4 (S)	105		%	62 - 133	SW846 8260B			8/29/18 22:47	PDK	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			8/29/18 22:47	PDK	A
Dibromofluoromethane (S)	97.6		%	78 - 116	SW846 8260B			8/29/18 22:47	PDK	A
Toluene-d8 (S)	100		%	76 - 127	SW846 8260B			8/29/18 22:47	PDK	A



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334733 3RD QTR 2018-3100 RIVER RD

Lab ID: **2334733003**

Date Collected: 8/23/2018 16:54

Matrix: Water

Sample ID: **Trip Blank**

Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
Toluene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/29/18 21:41	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/29/18 21:41	PDK	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-Dichloroethane-d4 (S)	102		%	62 - 133	SW846 8260B			8/29/18 21:41	PDK	A
4-Bromofluorobenzene (S)	100		%	79 - 114	SW846 8260B			8/29/18 21:41	PDK	A
Dibromofluoromethane (S)	96.5		%	78 - 116	SW846 8260B			8/29/18 21:41	PDK	A
Toluene-d8 (S)	98.9		%	76 - 127	SW846 8260B			8/29/18 21:41	PDK	A



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334733 3RD QTR 2018-3100 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334733001	1	3100 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2334733001	2	3100 River Road, Conestoga, PA	S4500HB-11	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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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334733 3RD QTR 2018-3100 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334733001	3100 River Road, Conestoga, PA	D6919-09	
2334733001	3100 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2334733001	3100 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2334733001	3100 River Road, Conestoga, PA	EPA 300.0	
2334733001	3100 River Road, Conestoga, PA	EPA 410.4	
2334733001	3100 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2334733001	3100 River Road, Conestoga, PA	Field	
2334733001	3100 River Road, Conestoga, PA	S2540C-11	
2334733001	3100 River Road, Conestoga, PA	S4500HB-11	
2334733001	3100 River Road, Conestoga, PA	SM2130B-2011	
2334733001	3100 River Road, Conestoga, PA	SM2320B-2011	
2334733001	3100 River Road, Conestoga, PA	SM2510B-2011	
2334733001	3100 River Road, Conestoga, PA	SM5310B-2011	
2334733001	3100 River Road, Conestoga, PA	SW846 8260B	
2334733001	3100 River Road, Conestoga, PA	SW846 9020B	
2334733002	Field Blank	SW846 8260B	
2334733003	Trip Blank	SW846 8260B	

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

COC #:
 ALS Quo



* 2 3 3 4 7 3 3 *

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 No.	Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Enter Number of Containers Per Sample or Field Results Below.										Matrix	G or C	Special Processing	State Samples Collected In
				TOC	O-H	TOX	NH3-N, COD	FM	Disolved Metals: Ca, Fe, Mg, Mn, K, Na	K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	pH, TDS, NO2, NO3, Cl, SO4, F, Pb, Spc	Alkalinity, HCO3				
1	13100RIVERRD	8-22-18	14:20	2	1	2	23	1	1	1	1	1	1	DW	G		
2	Field Blank	8-22-18	15:55				1							L			
3	Trip Blank	8-22-18	16:54				1							L			
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Project Comments: _____
 Relinquished By / Company Name: *[Signature]*
 Date: 8-22-18 16:54
 Received By / Company Name: *[Signature]*
 Date: 8/23/18 16:54



September 9, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3106 RIVER RD	Workorder:	2334478
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018-3106 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 23, 2018.

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.

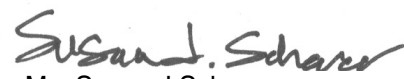
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: Ms. Jordan Gallagher , 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: 2334478 3RD QTR 2018-3106 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334478001	3106 River Road, Conestoga, PA	Water	8/23/2018 12:44	8/23/2018 16:54	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334478 3RD QTR 2018-3106 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: 2334478 3RD QTR 2018-3106 RIVER RD

Lab ID: **2334478001** Date Collected: 8/23/2018 12:44 Matrix: Water
Sample ID: **3106 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/30/18 02:25	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/30/18 02:25	PDK	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-Dichloroethane-d4 (S)	106		%	62 - 133	SW846 8260B			8/30/18 02:25	PDK	K
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B			8/30/18 02:25	PDK	K
Dibromofluoromethane (S)	103		%	78 - 116	SW846 8260B			8/30/18 02:25	PDK	K
Toluene-d8 (S)	99		%	76 - 127	SW846 8260B			8/30/18 02:25	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	16		mg/L	5	SM2320B-2011			8/27/18 19:39	MSA	C
Alkalinity, Total	16	1	mg/L	5	SM2320B-2011			8/27/18 19:39	MSA	C
Ammonia-N	0.392		mg/L	0.100	D6919-09			9/6/18 17:14	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/29/18 17:58	AK	B
Chloride	54.0		mg/L	2.0	EPA 300.0			8/24/18 09:40	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/24/18 09:40	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			9/5/18 12:18	PAG	I
Nitrate-N	10.1		mg/L	0.20	EPA 300.0			8/24/18 09:40	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/24/18 09:40	CHW	C
pH	6.16	2	pH_Units		S4500HB-11			8/27/18 19:39	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 15:58	C_D	9/6/18 17:39	RXB	H
Specific Conductance	283		umhos/cm	1	SM2510B-2011			8/27/18 19:39	MSA	C

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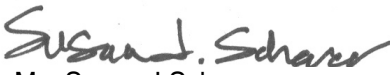
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ANALYTICAL RESULTS

Workorder: 2334478 3RD QTR 2018-3106 RIVER RD

Lab ID: **2334478001** Date Collected: 8/23/2018 12:44 Matrix: Water
Sample ID: **3106 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	6.2		mg/L	2.0	EPA 300.0			8/24/18 09:40	CHW	C
Total Dissolved Solids	153	3	mg/L	5	S2540C-11			8/31/18 14:05	BMK	C
Total Organic Carbon (TOC)	0.64		mg/L	0.50	SM5310B-2011			8/30/18 19:38	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			8/24/18 22:05	MSA	C
METALS										
Calcium, Total	12.5		mg/L	0.050	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:11	SRT	D1
Calcium, Dissolved	13.2		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:16	SRT	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:11	SRT	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:16	SRT	E
Magnesium, Total	7.7		mg/L	0.050	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:11	SRT	D1
Magnesium, Dissolved	7.9		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:16	SRT	E
Manganese, Total	0.023		mg/L	0.0025	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:11	SRT	D1
Manganese, Dissolved	0.022		mg/L	0.0050	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:16	SRT	E
Potassium, Total	1.5		mg/L	0.25	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:11	SRT	D1
Potassium, Dissolved	1.5		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:16	SRT	E
Sodium, Total	26.2		mg/L	0.25	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:11	SRT	D1
Sodium, Dissolved	26.3		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:16	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.710		pH_Units		Field			8/23/18 12:44	BGS	N
Specific Conductance, Field	319		umhos/cm	1	Field			8/23/18 12:44	BGS	N
Temperature	15.60		Deg. C		Field			8/23/18 12:44	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2334478 3RD QTR 2018-3106 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334478001	1	3106 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2334478001	2	3106 River Road, Conestoga, PA	S4500HB-11	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.				
2334478001	3	3106 River Road, Conestoga, PA	S2540C-11	Total Dissolved Solids
The sample was originally run within hold time, but required further analysis that exceeded hold time.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334478 3RD QTR 2018-3106 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334478001	3106 River Road, Conestoga, PA	D6919-09	
2334478001	3106 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2334478001	3106 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2334478001	3106 River Road, Conestoga, PA	EPA 300.0	
2334478001	3106 River Road, Conestoga, PA	EPA 410.4	
2334478001	3106 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2334478001	3106 River Road, Conestoga, PA	Field	
2334478001	3106 River Road, Conestoga, PA	S2540C-11	
2334478001	3106 River Road, Conestoga, PA	S4500HB-11	
2334478001	3106 River Road, Conestoga, PA	SM2130B-2011	
2334478001	3106 River Road, Conestoga, PA	SM2320B-2011	
2334478001	3106 River Road, Conestoga, PA	SM2510B-2011	
2334478001	3106 River Road, Conestoga, PA	SM5310B-2011	
2334478001	3106 River Road, Conestoga, PA	SW846 8260B	
2334478001	3106 River Road, Conestoga, PA	SW846 9020B	

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September 9, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3125 RIVER RD	Workorder:	2334477
Purchase Order:	PO1000126	Workorder ID:	3RD QTR 2018-3125 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 23, 2018.

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.

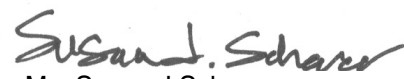
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: Ms. Jordan Gallagher , 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: 2334477 3RD QTR 2018-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2334477001	3125 River Road, Conestoga, PA	Water	8/23/2018 12:34	8/23/2018 16:54	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2334477 3RD QTR 2018-3125 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: 2334477 3RD QTR 2018-3125 RIVER RD

Lab ID: **2334477001** Date Collected: 8/23/2018 12:34 Matrix: Water
Sample ID: **3125 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
Toluene	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
Total Xylenes	ND		ug/L	3.0	SW846 8260B			8/31/18 21:54	TMP	L
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
Trichloroethene	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			8/31/18 21:54	TMP	L
<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-Dichloroethane-d4 (S)	91.5		%	62 - 133	SW846 8260B			8/31/18 21:54	TMP	L
4-Bromofluorobenzene (S)	97.7		%	79 - 114	SW846 8260B			8/31/18 21:54	TMP	L
Dibromofluoromethane (S)	97.8		%	78 - 116	SW846 8260B			8/31/18 21:54	TMP	L
Toluene-d8 (S)	91.6		%	76 - 127	SW846 8260B			8/31/18 21:54	TMP	L
WET CHEMISTRY										
Alkalinity, Bicarbonate	198		mg/L	5	SM2320B-2011			8/27/18 19:29	MSA	C
Alkalinity, Total	198	1	mg/L	5	SM2320B-2011			8/27/18 19:29	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			9/6/18 17:00	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			8/31/18 18:34	AK	B
Chloride	154		mg/L	2.0	EPA 300.0			8/24/18 09:15	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			8/24/18 09:15	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			9/5/18 11:28	PAG	I
Nitrate-N	7.5		mg/L	0.20	EPA 300.0			8/24/18 09:15	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			8/24/18 09:15	CHW	C
pH	7.45	2	pH_Units		S4500HB-11			8/27/18 19:29	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	8/29/18 15:58	C_D	9/6/18 17:39	RXB	H
Specific Conductance	969		umhos/cm	1	SM2510B-2011			8/27/18 19:29	MSA	C

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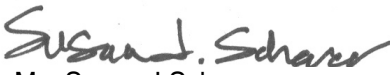
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ANALYTICAL RESULTS

Workorder: 2334477 3RD QTR 2018-3125 RIVER RD

Lab ID: **2334477001** Date Collected: 8/23/2018 12:34 Matrix: Water
Sample ID: **3125 River Road, Conestoga, PA** Date Received: 8/23/2018 16:54

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	27.2		mg/L	2.0	EPA 300.0			8/24/18 09:15	CHW	C
Total Dissolved Solids	472		mg/L	5	S2540C-11			8/27/18 15:00	BMK	C
Total Organic Carbon (TOC)	0.97		mg/L	0.50	SM5310B-2011			8/30/18 19:38	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			8/24/18 22:05	MSA	C
METALS										
Calcium, Total	0.97		mg/L	0.050	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:08	SRT	D1
Calcium, Dissolved	1.1		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:12	SRT	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:08	SRT	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:12	SRT	E
Magnesium, Total	0.12		mg/L	0.050	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:08	SRT	D1
Magnesium, Dissolved	0.13		mg/L	0.10	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:12	SRT	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:08	SRT	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:12	SRT	E
Potassium, Total	0.56		mg/L	0.25	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:08	SRT	D1
Potassium, Dissolved	0.65		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:12	SRT	E
Sodium, Total	167		mg/L	0.25	EPA 200.7	8/25/18 11:40	AHI	8/28/18 02:08	SRT	D1
Sodium, Dissolved	184		mg/L	0.50	EPA 200.7	8/27/18 23:30	DAG	8/28/18 05:12	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.250		pH_Units		Field			8/23/18 12:34	BGS	N
Specific Conductance, Field	425		umhos/cm	1	Field			8/23/18 12:34	BGS	N
Temperature	17.60		Deg. C		Field			8/23/18 12:34	BGS	N



Ms. Susan J Scherer
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ANALYTICAL RESULTS

Workorder: 2334477 3RD QTR 2018-3125 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2334477001	1	3125 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2334477001	2	3125 River Road, Conestoga, PA	S4500HB-11	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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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2334477 3RD QTR 2018-3125 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2334477001	3125 River Road, Conestoga, PA	D6919-09	
2334477001	3125 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2334477001	3125 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2334477001	3125 River Road, Conestoga, PA	EPA 300.0	
2334477001	3125 River Road, Conestoga, PA	EPA 410.4	
2334477001	3125 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2334477001	3125 River Road, Conestoga, PA	Field	
2334477001	3125 River Road, Conestoga, PA	S2540C-11	
2334477001	3125 River Road, Conestoga, PA	S4500HB-11	
2334477001	3125 River Road, Conestoga, PA	SM2130B-2011	
2334477001	3125 River Road, Conestoga, PA	SM2320B-2011	
2334477001	3125 River Road, Conestoga, PA	SM2510B-2011	
2334477001	3125 River Road, Conestoga, PA	SM5310B-2011	
2334477001	3125 River Road, Conestoga, PA	SW846 8260B	
2334477001	3125 River Road, Conestoga, PA	SW846 9020B	

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
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United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York
Mexico: Monterrey



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

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT
SAMPLER. INSTRUCTIONS ON THE BACK.



Generate

177
1 of 1

Client Name: LCSWMA - Christian C. Beck
Address: 3125 River Road
Conestoga, PA 17516
Contact: Christian C. Beck
Phone#: (717) 871-0448
Project Name#: LCSWMA - Quarterly
Bill To: Lancaster County Solid Waste MA

Container Type: AG 40 ml HCl
Container Size: AN 125 ml H2SO4
Preservative: HCl
Matrix: TOC
Sample Date: 8-23-18
Time: 12:34
Matrix: G DW
Sample Description/Location: 13125RIVERRD
Date: 8-23-18
Time: 12:34

Sample	Date	Time	Matrix	TOC	O-H	TOX	SW846-8260 VOCs	FM	NH3-N, COD	Dissolved Metals: Ca, Fe, Mg, Mn, K, Na	K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	PH, TDS, NO2, NO3, Cl, SO4, F, Pb, Spc	Alkalinity, HCO3
1	8-23-18	12:34	G DW	2	1	2	3X SIS		1	1	1	1	1	1
2														
3														
4														
5														
6														
7														
8														
9														
10														

Enter Number of Containers Per Sample or Field Results Below.

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:

Project Comments:

Relinquished By / Company Name: *[Signature]* AOS
Date: 8-23-18 / 6:54
Received By / Company Name: *[Signature]*
Date: 8-23-18 / 11:04

LOGGED BY (signature):
REVIEWED BY (signature):

State Samples Collected In: NY NJ PA NC

Special Processing: USACE Navy Other

Deliverables: Standard CLP-like USACE

Reportable to PADEP? Yes No

Sample Disposal: Lab Special

PWSID.#:
EDDS: Format Type:

*G=Grab; C=Composite *Matrix - A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057
Rev 8/04



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	2334257001	08/22/2018	WATER		
NITRATE-NITROGEN	mg/l	19.60	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	2334476001	08/23/2018	WATER		
NITRATE-NITROGEN	mg/l	18.30	10.00		EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3056RIVERR	2334256001	08/22/2018	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>	
3060RIVERR	2334255001	08/22/2018	WATER		
NITRATE-NITROGEN	mg/l	20.00	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	2334730001	08/23/2018	WATER		
NITRATE-NITROGEN	mg/l	10.40	10.00		EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3088RIVERR	2334731001	08/23/2018	WATER		
NITRATE-NITROGEN	mg/l	10.40	10.00		EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3106RIVERR	2334478001	08/23/2018	WATER		
NITRATE-NITROGEN	mg/l	10.10	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>	
3056RIVERR	2334256001	08/22/2018	WATER		
MANGANESE, DISSOLVED	mg/l	0.09	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.09	0.05		EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3060RIVERR	2334255001	08/22/2018	WATER		
MANGANESE, DISSOLVED	mg/l	0.15	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.15	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	2334730001	08/23/2018	WATER		
MANGANESE, DISSOLVED	mg/l	0.20	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.20	0.05		EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3079RIVERR	2334475001	08/23/2018	WATER		
MANGANESE, DISSOLVED	mg/l	0.07	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>	
3088RIVERR	2334731001	08/23/2018	WATER		
CHLORIDE	mg/l	257.00	250.00		EPA-SMCL
TDS (TOT. DISSOLVED SOLIDS)	mg/l	576.00	500.00		EPA-SMCL