

August 1, 2018

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
2nd 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 and 3088RIVERRD) exceeded the limit for nitrate, samples are consistent with historic data the cause is attributed to agricultural impacts. No other MCL's were exceeded.
2. USEPA SMCL's exceedance report; sample 3088RIVERRD exceeded the limit for total dissolved solids; samples 3044RIVERRD, 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
Director of Environmental Compliance

Enclosures

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



Date Prepared/Revised 07/10/2018
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)	05/30/2018 Sample Collection Time: 3:37 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	06/13/2018
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

05/30/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.356	SM4500D
BICARBONATE ALKALINITY	23	SM20-2321
CALCIUM, TOTAL	21.6	EPA 200.7
CALCIUM, DISSOLVED	17.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	20.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	340	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	11.7	EPA 200.7
MAGNESIUM, DISSOLVED	11.1	EPA 200.7
MANGANESE, TOTAL (ug/l)	54	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	23	EPA 200.7
NITRATE-NITROGEN	19.4	EPA 300

T Please indicate detection limit if analyte is not detected.

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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

05/30/2018

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)	6.4	FIELD
pH-LAB (SU)	6.34	SM4500B
POTASSIUM, TOTAL	2	EPA 200.7
POTASSIUM, DISSOLVED	1.8	EPA 200.7
SODIUM, TOTAL	10.1	EPA 200.7
SODIUM, DISSOLVED	9.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	242	FIELD
SPEC. COND., LAB (umhos/cm)	238	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	23	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	164	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.54	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.35	SM 2130B

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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

05/30/2018

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
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 (DE° MM' SS.S")	
Facility Name:	Frey Farm Landfill
County:	Lancaster County
Township or Municipality:	MANOR TOWNSHIP
Landowner Name:	MILLER
Address:	3052 RIVER ROAD
Phone No.:	
Sampling Point:	Latitude: 39° 57' 29.85" Longitude: 76° 26' 11.45"
Depth to Water Level:	ft. Measured from: <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)	05/25/2018 Sample Collection Time: 11:43 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	06/13/2018
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

05/25/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.277	SM4500D
BICARBONATE ALKALINITY	9	SM20-2321
CALCIUM, TOTAL	15.6	EPA 200.7
CALCIUM, DISSOLVED	16	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	21	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	EPA 200.7
MAGNESIUM, DISSOLVED	9.6	EPA 200.7
MANGANESE, TOTAL (ug/l)	41	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	43	EPA 200.7
NITRATE-NITROGEN	18.1	EPA 300

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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

05/25/2018

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)	6.04	FIELD
pH-LAB (SU)	5.97	SM4500B
POTASSIUM, TOTAL	1.8	EPA 200.7
POTASSIUM, DISSOLVED	1.8	EPA 200.7
SODIUM, TOTAL	7.2	EPA 200.7
SODIUM, DISSOLVED	7.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	227	FIELD
SPEC. COND., LAB (umhos/cm)	215	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	9	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	170	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.68	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.27	SM 2130B

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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

05/25/2018

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

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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:	LCSWMA
Address:	3056 RIVER ROAD
Phone No.:	
Sampling Point:	Latitude: 39° 57' 28.44" Longitude: 76° 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)	05/30/2018 Sample Collection Time: 4:30 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	06/13/2018
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

05/30/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.267	SM4500D
BICARBONATE ALKALINITY	8	SM20-2321
CALCIUM, TOTAL	13.6	EPA 200.7
CALCIUM, DISSOLVED	13.6	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	24.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	45	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	13.2	EPA 200.7
MAGNESIUM, DISSOLVED	12.7	EPA 200.7
MANGANESE, TOTAL (ug/l)	66	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	62	EPA 200.7
NITRATE-NITROGEN	19.5	EPA 300

T Please indicate detection limit if analyte is not detected.

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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

05/30/2018

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)	4.8	FIELD
pH-LAB (SU)	5.87	SM4500B
POTASSIUM, TOTAL	2	EPA 200.7
POTASSIUM, DISSOLVED	2.1	EPA 200.7
SODIUM, TOTAL	9	EPA 200.7
SODIUM, DISSOLVED	8.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	249	FIELD
SPEC. COND., LAB (umhos/cm)	238	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	8	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	181	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.81	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

05/30/2018

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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Applicant/permittee:	Lancaster County Solid Waste Manage
Site Name:	Frey Farm Landfill
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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 ^o 57' 27.63" Longitude: 76 ^o 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)	05/30/2018 Sample Collection Time: 2:40 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	06/13/2018
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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QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

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Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/30/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.476	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	10.1	EPA 200.7
CALCIUM, DISSOLVED	10.7	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	20.1	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	10.8	EPA 200.7
MAGNESIUM, DISSOLVED	11	EPA 200.7
MANGANESE, TOTAL (ug/l)	81	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	82	EPA 200.7
NITRATE-NITROGEN	15.8	EPA 300

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PS LCSWMA

Sample Date

05/30/2018

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)	4.2	FIELD
pH-LAB (SU)	5.45	SM4500B
POTASSIUM, TOTAL	2	EPA 200.7
POTASSIUM, DISSOLVED	2.2	EPA 200.7
SODIUM, TOTAL	7.7	EPA 200.7
SODIUM, DISSOLVED	7.7	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	212	FIELD
SPEC. COND., LAB (umhos/cm)	204	EPA 120.1
SULFATE	13.8	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	161	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

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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

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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)	05/25/2018 Sample Collection Time: 11:23 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	06/13/2018
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

05/25/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.133	SM4500D
BICARBONATE ALKALINITY	11	SM20-2321
CALCIUM, TOTAL	15.1	EPA 200.7
CALCIUM, DISSOLVED	15.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	43.2	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	8.9	EPA 200.7
MAGNESIUM, DISSOLVED	9.4	EPA 200.7
MANGANESE, TOTAL (ug/l)	150	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	150	EPA 200.7
NITRATE-NITROGEN	12	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

05/25/2018

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)	6.05	FIELD
pH-LAB (SU)	5.98	SM4500B
POTASSIUM, TOTAL	3.1	EPA 200.7
POTASSIUM, DISSOLVED	3	EPA 200.7
SODIUM, TOTAL	19.3	EPA 200.7
SODIUM, DISSOLVED	20.1	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	280	FIELD
SPEC. COND., LAB (umhos/cm)	273	EPA 120.1
SULFATE	13	EPA 300
ALKALINITY	11	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	206	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.81	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

05/25/2018

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 07/10/2018
DEP USE ONLY
Date Received

**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:	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 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)	05/30/2018 Sample Collection Time: 12:10 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	06/13/2018
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

05/30/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.395	SM4500D
BICARBONATE ALKALINITY	29	SM20-2321
CALCIUM, TOTAL	10	EPA 200.7
CALCIUM, DISSOLVED	10.3	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	30	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	5.1	EPA 200.7
MAGNESIUM, DISSOLVED	5.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	64	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	62	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

05/30/2018

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)	5.14	FIELD
pH-LAB (SU)	6.38	SM4500B
POTASSIUM, TOTAL	1.5	EPA 200.7
POTASSIUM, DISSOLVED	1.6	EPA 200.7
SODIUM, TOTAL	11.1	EPA 200.7
SODIUM, DISSOLVED	11.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	197	FIELD
SPEC. COND., LAB (umhos/cm)	168	EPA 120.1
SULFATE	20.4	EPA 300
ALKALINITY	29	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	120	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

05/30/2018

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 07/10/2018
DEP USE ONLY
Date Received

**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 (DE° MM' SS.S")	
Facility Name:	Frey Farm Landfill
County:	Lancaster County
Township or Municipality:	MANOR TOWNSHIP
Landowner Name:	WEBER
Address:	3088 RIVER ROAD
Phone No.:	
Sampling Point: Latitude:	39° 57' 21" Longitude: 76° 26' 7.1"
Depth to Water Level:	ft. Measured from: <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)	05/25/2018 Sample Collection Time: 10:02 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	06/13/2018
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

05/25/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	152	SM20-2321
CALCIUM, TOTAL	0.11	EPA 200.7
CALCIUM, DISSOLVED	0.1	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	225	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	0.057	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	11.3	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 WEBER

Sample Date

05/25/2018

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)	7.41	FIELD
pH-LAB (SU)	7.32	SM4500B
POTASSIUM, TOTAL	1.9	EPA 200.7
POTASSIUM, DISSOLVED	1.7	EPA 200.7
SODIUM, TOTAL	190	EPA 200.7
SODIUM, DISSOLVED	217	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	1090	FIELD
SPEC. COND., LAB (umhos/cm)	1100	EPA 120.1
SULFATE	4.9	EPA 300
ALKALINITY	152	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	537	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.62	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

05/25/2018

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 07/10/2018
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 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)	05/25/2018 Sample Collection Time: 10:43 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	06/13/2018
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

05/25/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.385	SM4500D
BICARBONATE ALKALINITY	14	SM20-2321
CALCIUM, TOTAL	15.5	EPA 200.7
CALCIUM, DISSOLVED	16.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	51.1	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	7.3	EPA 200.7
MAGNESIUM, DISSOLVED	8	EPA 200.7
MANGANESE, TOTAL (ug/l)	7.6	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	8.4	EPA 200.7
NITRATE-NITROGEN	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 KIRCHNER

Sample Date

05/25/2018

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)	6.08	FIELD
pH-LAB (SU)	6.16	SM4500B
POTASSIUM, TOTAL	1.3	EPA 200.7
POTASSIUM, DISSOLVED	1.4	EPA 200.7
SODIUM, TOTAL	14.6	EPA 200.7
SODIUM, DISSOLVED	15.7	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	247	FIELD
SPEC. COND., LAB (umhos/cm)	239	EPA 120.1
SULFATE	6.2	EPA 300
ALKALINITY	14	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	190	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.52	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

05/25/2018

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 07/10/2018
DEP USE ONLY
Date Received

**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 (DE° 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° 57' 17.27" Longitude: 76° 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)	05/25/2018 Sample Collection Time: 10:29 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	06/07/2018
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 FRY

Sample Date

05/25/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.272	SM4500D
BICARBONATE ALKALINITY	15	SM20-2321
CALCIUM, TOTAL	11.3	EPA 200.7
CALCIUM, DISSOLVED	11.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	43.2	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	6.8	EPA 200.7
MAGNESIUM, DISSOLVED	7.3	EPA 200.7
MANGANESE, TOTAL (ug/l)	18	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	19	EPA 200.7
NITRATE-NITROGEN	8.3	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 FRY

Sample Date

05/25/2018

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)	6.34	FIELD
pH-LAB (SU)	6.27	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	1.3	EPA 200.7
SODIUM, TOTAL	22.4	EPA 200.7
SODIUM, DISSOLVED	23.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	249	FIELD
SPEC. COND., LAB (umhos/cm)	241	EPA 120.1
SULFATE	3.7	EPA 300
ALKALINITY	15	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	161	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.56	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.25	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

05/25/2018

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 07/10/2018
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)	05/25/2018 Sample Collection Time: 11:05 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	06/13/2018
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

05/25/2018

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	66	SM20-2321
CALCIUM, TOTAL	0.46	EPA 200.7
CALCIUM, DISSOLVED	0.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	176	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	0.3	EPA 200.7
MAGNESIUM, DISSOLVED	0.16	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	7.4	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 BECK

Sample Date

05/25/2018

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)	6.58	FIELD
pH-LAB (SU)	6.66	SM4500B
POTASSIUM, TOTAL	3.7	EPA 200.7
POTASSIUM, DISSOLVED	3.5	EPA 200.7
SODIUM, TOTAL	134	EPA 200.7
SODIUM, DISSOLVED	144	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	1430	FIELD
SPEC. COND., LAB (umhos/cm)	1420	EPA 120.1
SULFATE	22.1	EPA 300
ALKALINITY	66	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	417	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.28	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

05/25/2018

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.

June 18, 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:	2317658
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018-3044 RIVER RD

Dear Mr. Brown:

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

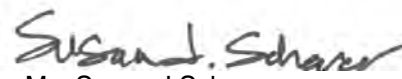
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317658 2ND QTR 2018-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317658001	3044 River Road, Conestoga, PA	Water	5/30/2018 15:37	5/30/2018 18:14	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2317658 2ND 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: 2317658 2ND QTR 2018-3044 RIVER RD

Lab ID: **2317658001** Date Collected: 5/30/2018 15:37 Matrix: Water
Sample ID: **3044 River Road, Conestoga, PA** Date Received: 5/30/2018 18:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/8/18 04:14	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/8/18 04:14	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)	113		%	62 - 133	SW846 8260B			6/8/18 04:14	PDK	K
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B			6/8/18 04:14	PDK	K
Dibromofluoromethane (S)	108		%	78 - 116	SW846 8260B			6/8/18 04:14	PDK	K
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			6/8/18 04:14	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	23		mg/L	5	S2320B-97			6/6/18 05:49	MSA	C
Alkalinity, Total	23	2	mg/L	5	S2320B-97			6/6/18 05:49	MSA	C
Ammonia-N	0.356		mg/L	0.100	D6919-09			6/8/18 15:43	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/6/18 13:45	AK	B
Chloride	20.8		mg/L	2.0	EPA 300.0			5/31/18 15:48	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/31/18 15:48	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/12/18 12:21	PAG	I
Nitrate-N	19.4		mg/L	0.20	EPA 300.0			5/31/18 15:48	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/31/18 15:48	CHW	C
pH	6.34	1	pH_Units		S4500HB-11			6/4/18 08:39	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/12/18 14:41	C_D	6/13/18 07:01	C_D	H
Specific Conductance	238		umhos/cm	1	S2510B-97			6/4/18 08:39	MSA	C

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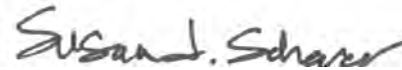
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ANALYTICAL RESULTS

Workorder: 2317658 2ND QTR 2018-3044 RIVER RD

Lab ID: **2317658001** Date Collected: 5/30/2018 15:37 Matrix: Water
Sample ID: **3044 River Road, Conestoga, PA** Date Received: 5/30/2018 18:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	ND		mg/L	2.0	EPA 300.0			5/31/18 15:48	CHW	C
Total Dissolved Solids	164		mg/L	5	S2540C-11			6/5/18 13:50	AB	C
Total Organic Carbon (TOC)	0.54		mg/L	0.50	S5310B-00			6/4/18 13:53	PAG	F
Turbidity	0.35		NTU	0.10	S2130B-01			6/1/18 01:00	MSA	C
METALS										
Calcium, Total	21.6		mg/L	0.050	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:25	DAG	D1
Calcium, Dissolved	17.5		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:51	DAG	E
Iron, Total	0.34		mg/L	0.030	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:25	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:51	DAG	E
Magnesium, Total	11.7		mg/L	0.050	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:25	DAG	D1
Magnesium, Dissolved	11.1		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:51	DAG	E
Manganese, Total	0.054		mg/L	0.0025	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:25	DAG	D1
Manganese, Dissolved	0.023		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:51	DAG	E
Potassium, Total	2.0		mg/L	0.25	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:25	DAG	D1
Potassium, Dissolved	1.8		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:51	DAG	E
Sodium, Total	10.1		mg/L	0.25	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:25	DAG	D1
Sodium, Dissolved	9.5		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:51	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.400		pH_Units		Field			5/30/18 15:37	BGS	N
Specific Conductance, Field	242		umhos/cm	1	Field			5/30/18 15:37	BGS	N
Temperature	15.30		Deg. C		Field			5/30/18 15:37	BGS	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317658 2ND QTR 2018-3044 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317658001	1	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.				
2317658001	2	3044 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2317658 2ND QTR 2018-3044 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317658001	3044 River Road, Conestoga, PA	D6919-09	
2317658001	3044 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2317658001	3044 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2317658001	3044 River Road, Conestoga, PA	EPA 300.0	
2317658001	3044 River Road, Conestoga, PA	EPA 410.4	
2317658001	3044 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2317658001	3044 River Road, Conestoga, PA	Field	
2317658001	3044 River Road, Conestoga, PA	S2130B-01	
2317658001	3044 River Road, Conestoga, PA	S2320B-97	
2317658001	3044 River Road, Conestoga, PA	S2510B-97	
2317658001	3044 River Road, Conestoga, PA	S2540C-11	
2317658001	3044 River Road, Conestoga, PA	S4500HB-11	
2317658001	3044 River Road, Conestoga, PA	S5310B-00	
2317658001	3044 River Road, Conestoga, PA	SW846 8260B	
2317658001	3044 River Road, Conestoga, PA	SW846 9020B	

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34 Dogwood Lane • Allentown, PA 17057 • Tel: 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.

COC # **ALSQ**



1 of 1

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.:

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

ANALYSES/METHOD REQUESTED

Matrix	TOC	O-OH	TOX	SW846-8260 VOCs	FM	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
G DW	2	1	2	23 x		1	1	1	1	1

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Enter Number of Containers Per Sample or Field Results Below.	Sample/COC Comments
1 3044RIVERRD	5-30-18	1537	1	
2				
3				
4				
5				
6				
7				
8				
9				
10				

Project Comments: _____

Relinquished By / Company Name: *Mark Reider* ALS

Date: 5-30-18 1914 2
Time: 1814

Received By / Company Name: *GR* ALS

Date: 5/30/18 1814

Time: 1814

Standard CLP-like USACE

Deliverables USACE

Special Processing: USACE Navy

State Samples Collected In: NY NJ PA NC

Sample Disposal: Lab Special

Reportable to PADEP? Yes No

PWSID # _____

EODS: Formal Type _____

Receipt Information (completed by receiving Lab)
Cooler Temp: 2°C Therm ID: 402
No. of Coolers: _____ Y N Initial *GR*
COC Labels Complete/Accurate?
Cont. in Good Cond.?
Correct Containers?
Correct Sample Volumes?
Correct Preservation?
Headspace/Volatiles?

Courier/Tracking #: _____
ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:



June 15, 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:	2317196
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018-3052 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 25, 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.

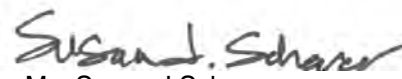
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317196 2ND QTR 2018-3052 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317196001	3052 River Road, Conestoga, PA	Water	5/25/2018 11:43	5/25/2018 13:35	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2317196 2ND QTR 2018-3052 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 2317196 2ND QTR 2018-3052 RIVER RD

Workorder Comments

The report was modified to correct the result for Methylene Chloride. JAH 6/12/18

Sample Comments

Lab ID: 2317196001

Sample ID: 3052 River Road,
Conestoga, PA

Sample Type: SAMPLE

Volatile organics SW846-8260B was performed after the 14 day holding time to confirm the original detectable result for methylene chloride. Carryover from a previous sample was suspected. The re-analysis result was reported for methylene chloride. SJS 06/12/18

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ANALYTICAL RESULTS

Workorder: 2317196 2ND QTR 2018-3052 RIVER RD

 Lab ID: **2317196001** Date Collected: 5/25/2018 11:43 Matrix: Water
 Sample ID: **3052 River Road, Conestoga, PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
Methylene Chloride	ND	3	ug/L	1.0	SW846 8260B			6/12/18 02:12	PDK	L
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/5/18 15:27	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 15:27	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			6/5/18 15:27	DD	K
1,2-Dichloroethane-d4 (S)	103		%	62 - 133	SW846 8260B			6/12/18 02:12	PDK	L
4-Bromofluorobenzene (S)	106		%	79 - 114	SW846 8260B			6/5/18 15:27	DD	K
4-Bromofluorobenzene (S)	96.9		%	79 - 114	SW846 8260B			6/12/18 02:12	PDK	L
Dibromofluoromethane (S)	92.8		%	78 - 116	SW846 8260B			6/5/18 15:27	DD	K
Dibromofluoromethane (S)	94.6		%	78 - 116	SW846 8260B			6/12/18 02:12	PDK	L
Toluene-d8 (S)	84.9		%	76 - 127	SW846 8260B			6/12/18 02:12	PDK	L
Toluene-d8 (S)	94		%	76 - 127	SW846 8260B			6/5/18 15:27	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	9		mg/L	5	S2320B-97			6/1/18 10:51	MSA	C
Alkalinity, Total	9	1	mg/L	5	S2320B-97			6/1/18 10:51	MSA	C
Ammonia-N	0.277		mg/L	0.100	D6919-09			6/8/18 04:09	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/5/18 16:17	AK	B
Chloride	21.0		mg/L	2.0	EPA 300.0			5/26/18 10:11	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/26/18 10:11	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/11/18 12:44	PAG	I
Nitrate-N	18.1		mg/L	0.20	EPA 300.0			5/26/18 10:11	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/26/18 10:11	CHW	C

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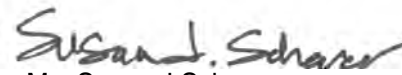
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ANALYTICAL RESULTS

Workorder: 2317196 2ND QTR 2018-3052 RIVER RD

Lab ID: **2317196001** Date Collected: 5/25/2018 11:43 Matrix: Water
Sample ID: **3052 River Road, Conestoga, PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
pH	5.97	2	pH_Units		S4500HB-11			6/1/18 10:51	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/5/18 17:16	C_D	6/13/18 07:01	C_D	H
Specific Conductance	215		umhos/cm	1	S2510B-97			6/1/18 10:51	MSA	C
Sulfate	ND		mg/L	2.0	EPA 300.0			5/26/18 10:11	CHW	C
Total Dissolved Solids	170		mg/L	5	S2540C-11			6/1/18 10:00	BMK	C
Total Organic Carbon (TOC)	0.68		mg/L	0.50	S5310B-00			5/29/18 12:08	PAG	F
Turbidity	0.27		NTU	0.10	S2130B-01			5/26/18 06:25	MBW	C
METALS										
Calcium, Total	15.6		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:17	DAG	D1
Calcium, Dissolved	16.0		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:57	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:17	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:57	DAG	E
Magnesium, Total	9.0		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:17	DAG	D1
Magnesium, Dissolved	9.6		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:57	DAG	E
Manganese, Total	0.041		mg/L	0.0025	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:17	DAG	D1
Manganese, Dissolved	0.043		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:57	DAG	E
Potassium, Total	1.8		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:17	DAG	D1
Potassium, Dissolved	1.8		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:57	DAG	E
Sodium, Total	7.2		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:17	DAG	D1
Sodium, Dissolved	7.5		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:57	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.040		pH_Units		Field			5/25/18 11:43	BGS	N
Specific Conductance, Field	227		umhos/cm	1	Field			5/25/18 11:43	BGS	N
Temperature	15.80		Deg. C		Field			5/25/18 11:43	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317196 2ND QTR 2018-3052 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317196001	1	3052 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2317196001	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.				
2317196001	3	3052 River Road, Conestoga, PA	SW846 8260B	Methylene Chloride
This volatile compound was analyzed past the method specified 14 day holding time at the client's request.				

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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: 2317196 2ND QTR 2018-3052 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317196001	3052 River Road, Conestoga, PA	D6919-09	
2317196001	3052 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2317196001	3052 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2317196001	3052 River Road, Conestoga, PA	EPA 300.0	
2317196001	3052 River Road, Conestoga, PA	EPA 410.4	
2317196001	3052 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2317196001	3052 River Road, Conestoga, PA	Field	
2317196001	3052 River Road, Conestoga, PA	S2130B-01	
2317196001	3052 River Road, Conestoga, PA	S2320B-97	
2317196001	3052 River Road, Conestoga, PA	S2510B-97	
2317196001	3052 River Road, Conestoga, PA	S2540C-11	
2317196001	3052 River Road, Conestoga, PA	S4500HB-11	
2317196001	3052 River Road, Conestoga, PA	S5310B-00	
2317196001	3052 River Road, Conestoga, PA	SW846 8260B	
2317196001	3052 River Road, Conestoga, PA	SW846 9020B	

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June 15, 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:	2317641
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018 3056 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory between Wednesday, May 30, 2018 and Thursday, May 31, 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.

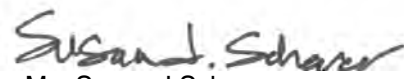
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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 , 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: 2317641 2ND QTR 2018 3056 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317641001	3056RIVERRD	Water	5/30/2018 16:30	5/30/2018 18:14	Mr. Jeff Musser

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SAMPLE SUMMARY

Workorder: 2317641 2ND 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.
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- The Chain of Custody document is included as part of this report.
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- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

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J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
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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: 2317641 2ND QTR 2018 3056 RIVER RD

Lab ID: **2317641001** Date Collected: 5/30/2018 16:30 Matrix: Water
Sample ID: **3056RIVERRD** Date Received: 5/30/2018 18:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/7/18 03:11	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/7/18 03:11	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			6/7/18 03:11	PDK	K
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B			6/7/18 03:11	PDK	K
Dibromofluoromethane (S)	92.5		%	78 - 116	SW846 8260B			6/7/18 03:11	PDK	K
Toluene-d8 (S)	94.4		%	76 - 127	SW846 8260B			6/7/18 03:11	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	8		mg/L	5	S2320B-97			6/4/18 05:06	MSA	C
Alkalinity, Total	8	1	mg/L	5	S2320B-97			6/4/18 05:06	MSA	C
Ammonia-N	0.267		mg/L	0.100	D6919-09			6/11/18 09:01	CMM	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/6/18 13:45	AK	B
Chloride	24.9		mg/L	2.0	EPA 300.0			5/31/18 06:38	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/31/18 06:38	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/11/18 15:17	PAG	I
Nitrate-N	19.5		mg/L	0.50	EPA 300.0			6/1/18 06:52	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/31/18 06:38	CHW	C
pH	5.87	2	pH_Units		S4500HB-11			6/4/18 05:06	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/12/18 14:41	C_D	6/13/18 07:01	C_D	H
Specific Conductance	238		umhos/cm	1	S2510B-97			6/4/18 05:06	MSA	C

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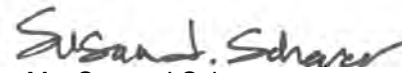
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ANALYTICAL RESULTS

Workorder: 2317641 2ND QTR 2018 3056 RIVER RD

Lab ID: **2317641001** Date Collected: 5/30/2018 16:30 Matrix: Water
Sample ID: **3056RIVERRD** Date Received: 5/30/2018 18:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	ND		mg/L	2.0	EPA 300.0			5/31/18 06:38	CHW	C
Total Dissolved Solids	181		mg/L	5	S2540C-11			6/5/18 13:50	AB	C
Total Organic Carbon (TOC)	0.81		mg/L	0.50	S5310B-00			6/1/18 12:18	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			6/1/18 01:00	MSA	C
METALS										
Calcium, Total	13.6		mg/L	0.050	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:06	DAG	D1
Calcium, Dissolved	13.6		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:41	DAG	E
Iron, Total	0.045		mg/L	0.030	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:06	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:41	DAG	E
Magnesium, Total	13.2		mg/L	0.050	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:06	DAG	D1
Magnesium, Dissolved	12.7		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:41	DAG	E
Manganese, Total	0.066		mg/L	0.0025	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:06	DAG	D1
Manganese, Dissolved	0.062		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:41	DAG	E
Potassium, Total	2.0		mg/L	0.25	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:06	DAG	D1
Potassium, Dissolved	2.1		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:41	DAG	E
Sodium, Total	9.0		mg/L	0.25	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:06	DAG	D1
Sodium, Dissolved	8.4		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:41	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	4.800		pH_Units		S4500HB-11			5/30/18 16:30	CLT	N
Specific Conductance, Field	249		umhos/cm	1	S2510B-97			5/30/18 16:30	CLT	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317641 2ND QTR 2018 3056 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317641001	1	3056RIVERRD	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2317641001	2	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.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2317641 2ND QTR 2018 3056 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317641001	3056RIVERRD	D6919-09	
2317641001	3056RIVERRD	EPA 200.7	EPA ACID
2317641001	3056RIVERRD	EPA 200.7	EPA TRMD
2317641001	3056RIVERRD	EPA 300.0	
2317641001	3056RIVERRD	EPA 410.4	
2317641001	3056RIVERRD	EPA 420.4	420.4/9066
2317641001	3056RIVERRD	S2130B-01	
2317641001	3056RIVERRD	S2320B-97	
2317641001	3056RIVERRD	S2510B-97	
2317641001	3056RIVERRD	S2540C-11	
2317641001	3056RIVERRD	S4500HB-11	
2317641001	3056RIVERRD	S5310B-00	
2317641001	3056RIVERRD	SW846 8260B	
2317641001	3056RIVERRD	SW846 9020B	

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34 Dogwood Lane • Middletown, PA 17057 • 717.944.5511 • 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 -N
Fax? -Y -N

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1 3056RIVERRD	5-30-18	1630
2		
3		
4		
5		
6		
7		
8		
9		
10		

Project Comments:
 Relinquished By / Company Name: _____
 Date: 5-30-18 1630
 Time: 1630
 Received By Company Name: *Mark Reider*
 Date: 5-30-18 1814
 Time: 1814

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

Generated by ALS

COC #: _____
ALS QI 2 3 1 7 6 4 1 *
 1 of 1

Container Type	AG	AN	AN	CG	PL	PL	PL	PL	PL	PL	PL	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	None	None	None	None	None	None	None	None	None
Preservative	HCl	H2SO4	H2SO4	HCl	H2SO4	HNO3	HNO3	HNO3	None	None	None	None	None	None	None	None	None	None

Matrix	TOC	O-OH	TOX	SW846-8260 VOCs	FM pH=4.8 SpC=249	NH3-N, COD	Disolved Metals: Ca, Fe, Mg, Mn, K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	PH, TDS, NO2, NO3, Cl, SO4, F, TB, SpC	Alkalinity, HCO3
G DW	2	1	2	23 X	1	1	1	1	1	1

ANALYSES/METHOD REQUESTED

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

Data Deliverables
 Standard CLP-like USACE
 Reportable to PADEP? Yes No
 PWSID # _____

EDDS: Format Type _____

Receipt Information (completed by Receiving Lab)
 Cooler Temp: 2.5 Therm ID: 402
 No. of Coolers: _____ Y N Initial *GR*
 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:



June 15, 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:	2317643
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018 3060 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory between Wednesday, May 30, 2018 and Thursday, May 31, 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.

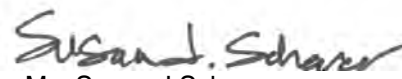
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317643 2ND QTR 2018 3060 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317643001	3060RIVERRD	Water	5/30/2018 14:40	5/30/2018 18:14	Mr. Jeff Musser

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SAMPLE SUMMARY

Workorder: 2317643 2ND QTR 2018 3060 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: 2317643 2ND QTR 2018 3060 RIVER RD

Lab ID: **2317643001** Date Collected: 5/30/2018 14:40 Matrix: Water
Sample ID: **3060RIVERRD** Date Received: 5/30/2018 18:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/7/18 03:33	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/7/18 03:33	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)	107		%	62 - 133	SW846 8260B			6/7/18 03:33	PDK	K
4-Bromofluorobenzene (S)	106		%	79 - 114	SW846 8260B			6/7/18 03:33	PDK	K
Dibromofluoromethane (S)	94.6		%	78 - 116	SW846 8260B			6/7/18 03:33	PDK	K
Toluene-d8 (S)	94.3		%	76 - 127	SW846 8260B			6/7/18 03:33	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND		mg/L	5	S2320B-97			6/4/18 05:13	MSA	C
Alkalinity, Total	ND	1	mg/L	5	S2320B-97			6/4/18 05:13	MSA	C
Ammonia-N	0.476		mg/L	0.100	D6919-09			6/8/18 15:12	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/6/18 13:45	AK	B
Chloride	20.1		mg/L	2.0	EPA 300.0			5/31/18 06:57	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/31/18 06:57	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/12/18 11:24	PAG	I
Nitrate-N	15.8		mg/L	0.20	EPA 300.0			5/31/18 06:57	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/31/18 06:57	CHW	C
pH	5.45	2	pH_Units		S4500HB-11			6/4/18 05:13	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/12/18 14:41	C_D	6/13/18 07:01	C_D	H
Specific Conductance	204		umhos/cm	1	S2510B-97			6/4/18 05:13	MSA	C

ALS Environmental Laboratory Locations Across North America

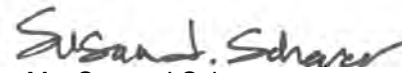
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ANALYTICAL RESULTS

Workorder: 2317643 2ND QTR 2018 3060 RIVER RD

Lab ID: **2317643001** Date Collected: 5/30/2018 14:40 Matrix: Water
Sample ID: **3060RIVERRD** Date Received: 5/30/2018 18:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	13.8		mg/L	2.0	EPA 300.0			5/31/18 06:57	CHW	C
Total Dissolved Solids	161		mg/L	5	S2540C-11			6/5/18 13:50	AB	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			6/1/18 12:18	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			6/1/18 01:00	MSA	C
METALS										
Calcium, Total	10.1		mg/L	0.050	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:10	DAG	D1
Calcium, Dissolved	10.7		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:44	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:10	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:44	DAG	E
Magnesium, Total	10.8		mg/L	0.050	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:10	DAG	D1
Magnesium, Dissolved	11.0		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:44	DAG	E
Manganese, Total	0.081		mg/L	0.0025	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:10	DAG	D1
Manganese, Dissolved	0.082		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:44	DAG	E
Potassium, Total	2.0		mg/L	0.25	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:10	DAG	D1
Potassium, Dissolved	2.2		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:44	DAG	E
Sodium, Total	7.7		mg/L	0.25	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:10	DAG	D1
Sodium, Dissolved	7.7		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:44	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	4.200		pH_Units		S4500HB-11			5/30/18 14:40	CLT	N
Specific Conductance, Field	212		umhos/cm	1	S2510B-97			5/30/18 14:40	CLT	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317643 2ND QTR 2018 3060 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317643001	1	3060RIVERRD	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2317643001	2	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.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2317643 2ND QTR 2018 3060 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317643001	3060RIVERRD	D6919-09	
2317643001	3060RIVERRD	EPA 200.7	EPA ACID
2317643001	3060RIVERRD	EPA 200.7	EPA TRMD
2317643001	3060RIVERRD	EPA 300.0	
2317643001	3060RIVERRD	EPA 410.4	
2317643001	3060RIVERRD	EPA 420.4	420.4/9066
2317643001	3060RIVERRD	S2130B-01	
2317643001	3060RIVERRD	S2320B-97	
2317643001	3060RIVERRD	S2510B-97	
2317643001	3060RIVERRD	S2540C-11	
2317643001	3060RIVERRD	S4500HB-11	
2317643001	3060RIVERRD	S5310B-00	
2317643001	3060RIVERRD	SW846 8260B	
2317643001	3060RIVERRD	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

COC #: **ALS Q1**



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	Matrix	TOC	O-OH	TOX	SW846-8260 VOCs	FM pH = 4.2 SPC = 212	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
1 3060RIVERRD	5:30 PM	G DW	2	1	2	23x		1	1	1	1	1
2												
3												
4												
5												
6												
7												
8												
9												
10												

Container Type
 40 ml
Container Size
 40 ml
Preservative
 HCl

ANALYSES/METHOD REQUESTED

AG	AN	AN	CG	PL	PL	PL	PL	PL	PL	PL	PL
40 ml	125 ml	250 ml	40 ml	500 ml	250 ml	250 ml	250 ml	250 ml	2 L	500 ml	None
HCl	H2SO4	H2SO4	HCl	H2SO4	HNO3	HNO3	HNO3	HNO3	None	None	None

Receipt Information (completed by Receiving Lab)
Cooler Temp: 1°C **Therm ID:** 402
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: _____

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other: _____

Project Comments:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Mark Reider	5-30-18	17:01	Mark Reider	5-30-18	17:01
Mark Reider	5-30-18	18:14	Mark Reider	5-30-18	18:14

Standard **Deliverables** **Data** **Reportable to PADEP?** Yes No
Special Processing USACE Navy
State Samples Collected In NY NJ PA NC
Sample Disposal Lab Special
PWSID # _____
EDDS: Format Type _____



June 15, 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:	2317195
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018-3076 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 25, 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.

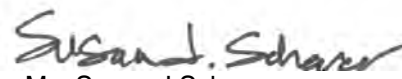
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317195 2ND QTR 2018-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317195001	3076 River Road, Conestoga, PA	Water	5/25/2018 11:23	5/25/2018 13:35	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2317195 2ND 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: 2317195 2ND QTR 2018-3076 RIVER RD

Lab ID: **2317195001** Date Collected: 5/25/2018 11:23 Matrix: Water
Sample ID: **3076 River Road, Conestoga, PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/5/18 01:30	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 01:30	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)	101		%	62 - 133	SW846 8260B			6/5/18 01:30	PDK	K
4-Bromofluorobenzene (S)	97.9		%	79 - 114	SW846 8260B			6/5/18 01:30	PDK	K
Dibromofluoromethane (S)	97.5		%	78 - 116	SW846 8260B			6/5/18 01:30	PDK	K
Toluene-d8 (S)	98.4		%	76 - 127	SW846 8260B			6/5/18 01:30	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	11		mg/L	5	S2320B-97			6/1/18 10:42	MSA	C
Alkalinity, Total	11	1	mg/L	5	S2320B-97			6/1/18 10:42	MSA	C
Ammonia-N	0.133		mg/L	0.100	D6919-09			6/8/18 03:54	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/5/18 16:17	AK	B
Chloride	43.2		mg/L	2.0	EPA 300.0			5/26/18 09:58	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/26/18 09:58	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/11/18 12:16	PAG	I
Nitrate-N	12.0		mg/L	0.20	EPA 300.0			5/26/18 09:58	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/26/18 09:58	CHW	C
pH	5.98	2	pH_Units		S4500HB-11			6/1/18 10:42	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/5/18 17:16	C_D	6/13/18 07:01	C_D	H
Specific Conductance	273		umhos/cm	1	S2510B-97			6/1/18 10:42	MSA	C

ALS Environmental Laboratory Locations Across North America

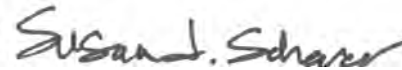
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ANALYTICAL RESULTS

Workorder: 2317195 2ND QTR 2018-3076 RIVER RD

Lab ID: **2317195001** Date Collected: 5/25/2018 11:23 Matrix: Water
Sample ID: **3076 River Road, Conestoga, PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	13.0		mg/L	2.0	EPA 300.0			5/26/18 09:58	CHW	C
Total Dissolved Solids	206		mg/L	5	S2540C-11			6/1/18 10:00	BMK	C
Total Organic Carbon (TOC)	0.81		mg/L	0.50	S5310B-00			5/29/18 12:08	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			5/26/18 06:25	MBW	C
METALS										
Calcium, Total	15.1		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:14	DAG	D1
Calcium, Dissolved	15.5		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:46	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:14	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:46	DAG	E
Magnesium, Total	8.9		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:14	DAG	D1
Magnesium, Dissolved	9.4		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:46	DAG	E
Manganese, Total	0.15		mg/L	0.0025	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:14	DAG	D1
Manganese, Dissolved	0.15		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:46	DAG	E
Potassium, Total	3.1		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:14	DAG	D1
Potassium, Dissolved	3.0		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:46	DAG	E
Sodium, Total	19.3		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:14	DAG	D1
Sodium, Dissolved	20.1		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:46	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.050		pH_Units		Field			5/25/18 11:23	BGS	N
Specific Conductance, Field	280		umhos/cm	1	Field			5/25/18 11:23	BGS	N
Temperature	15.80		Deg. C		Field			5/25/18 11:23	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317195 2ND QTR 2018-3076 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317195001	1	3076 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2317195001	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: 2317195 2ND QTR 2018-3076 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317195001	3076 River Road, Conestoga, PA	D6919-09	
2317195001	3076 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2317195001	3076 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2317195001	3076 River Road, Conestoga, PA	EPA 300.0	
2317195001	3076 River Road, Conestoga, PA	EPA 410.4	
2317195001	3076 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2317195001	3076 River Road, Conestoga, PA	Field	
2317195001	3076 River Road, Conestoga, PA	S2130B-01	
2317195001	3076 River Road, Conestoga, PA	S2320B-97	
2317195001	3076 River Road, Conestoga, PA	S2510B-97	
2317195001	3076 River Road, Conestoga, PA	S2540C-11	
2317195001	3076 River Road, Conestoga, PA	S4500HB-11	
2317195001	3076 River Road, Conestoga, PA	S5310B-00	
2317195001	3076 River Road, Conestoga, PA	SW846 8260B	
2317195001	3076 River Road, Conestoga, PA	SW846 9020B	

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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: **LCGWA A**

Contact (Report): **Bryan Sensesch**
Address: **3076 River Rd
Conestoga, PA**

Phone: _____

Bill to (if different than Report to): **LCGWA**

PO#: _____

Project Name/ID: **Form 52** ALS Quote #: _____

Date Required: _____
Approved By: _____

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
(as it will appear on the lab report)

1 **3076 RIVER RD**

COC Comments

Sample Date

Military Time

5-20-18 1120

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June 15, 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:	2317656
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018 3079 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory between Wednesday, May 30, 2018 and Thursday, May 31, 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.

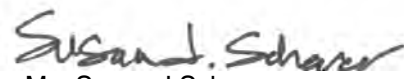
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317656 2ND QTR 2018 3079 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317656001	3079RIVERRD	Water	5/30/2018 12:10	5/30/2018 18:14	Mr. Jeff Musser

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SAMPLE SUMMARY

Workorder: 2317656 2ND 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: 2317656 2ND QTR 2018 3079 RIVER RD

Lab ID: **2317656001**
Sample ID: **3079RIVERRD**

Date Collected: 5/30/2018 12:10 Matrix: Water
Date Received: 5/30/2018 18:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/8/18 03:51	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/8/18 03:51	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			6/8/18 03:51	PDK	K
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			6/8/18 03:51	PDK	K
Dibromofluoromethane (S)	106		%	78 - 116	SW846 8260B			6/8/18 03:51	PDK	K
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			6/8/18 03:51	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	29		mg/L	5	S2320B-97			6/4/18 06:31	MSA	C
Alkalinity, Total	29	1	mg/L	5	S2320B-97			6/4/18 06:31	MSA	C
Ammonia-N	0.395		mg/L	0.100	D6919-09			6/8/18 15:27	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/6/18 13:45	AK	B
Chloride	30.0		mg/L	2.0	EPA 300.0			5/31/18 15:29	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/31/18 15:29	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/12/18 11:53	PAG	I
Nitrate-N	ND		mg/L	0.20	EPA 300.0			5/31/18 15:29	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/31/18 15:29	CHW	C
pH	6.38	2	pH_Units		S4500HB-11			6/4/18 06:31	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/12/18 14:41	C_D	6/13/18 07:01	C_D	H
Specific Conductance	168		umhos/cm	1	S2510B-97			6/4/18 06:31	MSA	C

ALS Environmental Laboratory Locations Across North America

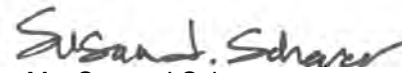
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ANALYTICAL RESULTS

Workorder: 2317656 2ND QTR 2018 3079 RIVER RD

Lab ID: **2317656001** Date Collected: 5/30/2018 12:10 Matrix: Water
Sample ID: **3079RIVERRD** Date Received: 5/30/2018 18:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	20.4		mg/L	2.0	EPA 300.0			5/31/18 15:29	CHW	C
Total Dissolved Solids	120		mg/L	5	S2540C-11			6/5/18 13:50	AB	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			6/4/18 13:53	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			6/1/18 01:00	MSA	C
METALS										
Calcium, Total	10		mg/L	0.050	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:22	DAG	D1
Calcium, Dissolved	10.3		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:47	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:22	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:47	DAG	E
Magnesium, Total	5.1		mg/L	0.050	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:22	DAG	D1
Magnesium, Dissolved	5.2		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:47	DAG	E
Manganese, Total	0.064		mg/L	0.0025	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:22	DAG	D1
Manganese, Dissolved	0.062		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:47	DAG	E
Potassium, Total	1.5		mg/L	0.25	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:22	DAG	D1
Potassium, Dissolved	1.6		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:47	DAG	E
Sodium, Total	11.1		mg/L	0.25	EPA 200.7	6/4/18 08:04	DXC	6/6/18 06:22	DAG	D1
Sodium, Dissolved	11.2		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:47	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.140		pH_Units		S4500HB-11			5/30/18 12:10	CLT	N
Specific Conductance, Field	197		umhos/cm	1	S2510B-97			5/30/18 12:10	CLT	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317656 2ND QTR 2018 3079 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317656001	1	3079RIVERRD	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2317656001	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: 2317656 2ND QTR 2018 3079 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317656001	3079RIVERRD	D6919-09	
2317656001	3079RIVERRD	EPA 200.7	EPA ACID
2317656001	3079RIVERRD	EPA 200.7	EPA TRMD
2317656001	3079RIVERRD	EPA 300.0	
2317656001	3079RIVERRD	EPA 410.4	
2317656001	3079RIVERRD	EPA 420.4	420.4/9066
2317656001	3079RIVERRD	S2130B-01	
2317656001	3079RIVERRD	S2320B-97	
2317656001	3079RIVERRD	S2510B-97	
2317656001	3079RIVERRD	S2540C-11	
2317656001	3079RIVERRD	S4500HB-11	
2317656001	3079RIVERRD	S5310B-00	
2317656001	3079RIVERRD	SW846 8260B	
2317656001	3079RIVERRD	SW846 9020B	

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June 15, 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:	2317194
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018-3088 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 25, 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.

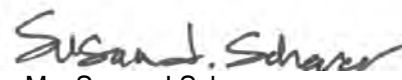
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317194 2ND QTR 2018-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317194001	3088 River Road, Conestoga PA	Water	5/25/2018 10:02	5/25/2018 13:35	Mr. Brian G Shade
2317194002	Field Blank	Water	5/25/2018 12:30	5/25/2018 13:35	Mr. Brian G Shade
2317194003	Trip Blank	Water	5/25/2018 13:35	5/25/2018 13:35	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2317194 2ND 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: 2317194 2ND QTR 2018-3088 RIVER RD

Lab ID: **2317194001** Date Collected: 5/25/2018 10:02 Matrix: Water
Sample ID: **3088 River Road, Conestoga PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/5/18 06:49	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 06:49	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			6/5/18 06:49	PDK	K
4-Bromofluorobenzene (S)	98.9		%	79 - 114	SW846 8260B			6/5/18 06:49	PDK	K
Dibromofluoromethane (S)	98.2		%	78 - 116	SW846 8260B			6/5/18 06:49	PDK	K
Toluene-d8 (S)	96.3		%	76 - 127	SW846 8260B			6/5/18 06:49	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	152		mg/L	5	S2320B-97			6/1/18 10:34	MSA	C
Alkalinity, Total	152	1	mg/L	5	S2320B-97			6/1/18 10:34	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			6/7/18 17:14	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/5/18 16:17	AK	B
Chloride	225		mg/L	5.0	EPA 300.0			5/30/18 15:26	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/26/18 09:45	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/11/18 11:43	PAG	I
Nitrate-N	11.3		mg/L	0.20	EPA 300.0			5/26/18 09:45	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/26/18 09:45	CHW	C
pH	7.32	2	pH_Units		S4500HB-11			6/1/18 10:34	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/5/18 17:16	C_D	6/13/18 07:01	C_D	H
Specific Conductance	1100		umhos/cm	1	S2510B-97			6/1/18 10:34	MSA	C

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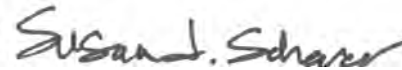
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ANALYTICAL RESULTS

Workorder: 2317194 2ND QTR 2018-3088 RIVER RD

Lab ID: **2317194001** Date Collected: 5/25/2018 10:02 Matrix: Water
Sample ID: **3088 River Road, Conestoga PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	4.9		mg/L	2.0	EPA 300.0			5/26/18 09:45	CHW	C
Total Dissolved Solids	537		mg/L	5	S2540C-11			6/1/18 10:00	BMK	C
Total Organic Carbon (TOC)	0.62		mg/L	0.50	S5310B-00			5/29/18 12:08	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			5/26/18 06:25	MBW	C
METALS										
Calcium, Total	0.11		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:12	DAG	D1
Calcium, Dissolved	0.10		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:43	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:12	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:43	DAG	E
Magnesium, Total	0.057		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:12	DAG	D1
Magnesium, Dissolved	ND		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:43	DAG	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:12	DAG	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:43	DAG	E
Potassium, Total	1.9		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:12	DAG	D1
Potassium, Dissolved	1.7		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:43	DAG	E
Sodium, Total	190		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:12	DAG	D1
Sodium, Dissolved	217		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:43	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.410		pH_Units		Field			5/25/18 10:02	BGS	N
Specific Conductance, Field	1090		umhos/cm	1	Field			5/25/18 10:02	BGS	N
Temperature	16.30		Deg. C		Field			5/25/18 10:02	BGS	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317194 2ND QTR 2018-3088 RIVER RD

Lab ID: **2317194002**

Date Collected: 5/25/2018 12:30

Matrix: Water

Sample ID: **Field Blank**

Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
Toluene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/6/18 00:41	PDK	B
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/6/18 00:41	PDK	B
<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)	98.6		%	62 - 133	SW846 8260B			6/6/18 00:41	PDK	B
4-Bromofluorobenzene (S)	106		%	79 - 114	SW846 8260B			6/6/18 00:41	PDK	B
Dibromofluoromethane (S)	90.3		%	78 - 116	SW846 8260B			6/6/18 00:41	PDK	B
Toluene-d8 (S)	98.2		%	76 - 127	SW846 8260B			6/6/18 00:41	PDK	B



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317194 2ND QTR 2018-3088 RIVER RD

Lab ID: **2317194003**

Date Collected: 5/25/2018 13:35

Matrix: Water

Sample ID: **Trip Blank**

Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
Toluene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/5/18 01:07	PDK	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	PDK	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 01:07	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)	99.1		%	62 - 133	SW846 8260B			6/5/18 01:07	PDK	A
4-Bromofluorobenzene (S)	100		%	79 - 114	SW846 8260B			6/5/18 01:07	PDK	A
Dibromofluoromethane (S)	96.9		%	78 - 116	SW846 8260B			6/5/18 01:07	PDK	A
Toluene-d8 (S)	97.4		%	76 - 127	SW846 8260B			6/5/18 01:07	PDK	A



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317194 2ND QTR 2018-3088 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317194001	1	3088 River Road, Conestoga PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2317194001	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

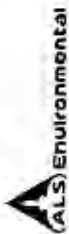
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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2317194 2ND QTR 2018-3088 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317194001	3088 River Road, Conestoga PA	D6919-09	
2317194001	3088 River Road, Conestoga PA	EPA 200.7	EPA ACID
2317194001	3088 River Road, Conestoga PA	EPA 200.7	EPA TRMD
2317194001	3088 River Road, Conestoga PA	EPA 300.0	
2317194001	3088 River Road, Conestoga PA	EPA 410.4	
2317194001	3088 River Road, Conestoga PA	EPA 420.4	420.4/9066
2317194001	3088 River Road, Conestoga PA	Field	
2317194001	3088 River Road, Conestoga PA	S2130B-01	
2317194001	3088 River Road, Conestoga PA	S2320B-97	
2317194001	3088 River Road, Conestoga PA	S2510B-97	
2317194001	3088 River Road, Conestoga PA	S2540C-11	
2317194001	3088 River Road, Conestoga PA	S4500HB-11	
2317194001	3088 River Road, Conestoga PA	S5310B-00	
2317194001	3088 River Road, Conestoga PA	SW846 8260B	
2317194001	3088 River Road, Conestoga PA	SW846 9020B	
2317194002	Field Blank	SW846 8260B	
2317194003	Trip Blank	SW846 8260B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #
ALS G



1 of 1

Client Name: LCSWMA - Hans Weber and Deb Kalbach
Address: 3088 River Road
Conestoga, PA 17516

Container Type	AG	AN	AN	CG	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
Preservative	HCl	H2SO4	H2SO4	HCl	H2SO4	HNO3	HNO3	HNO3	None

Receipt Information (completed by Receiving Lab)

Cooler Temp: 22 Therm ID: 407

No. of Coolers: Y N Initial [Signature]

Custody Seals Present? [Signature]

Labels Complete/Accurate? [Signature]

Cont. in Good Cont. [Signature]

Correct Containers? [Signature]

Correct Sample Volumes? [Signature]

Correct Preservation? [Signature]

Headspace/Volatiles? [Signature]

ANALYSIS METHOD REQUESTED

Matrix	TOC	O-OH	TOX	SW846-8260 VOCs	TM	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, TB, SPC	Alkalinity, HCO3
G or C	2	1	2	3	x	1	1	1	1	1

Sample	Date	Time	Matrix	TOC	O-OH	TOX	SW846-8260 VOCs	TM	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, TB, SPC	Alkalinity, HCO3
1 3088 RIVER RD	5-25-18	1002	G DW	2	1	2	3	x	1	1	1	1	1
2 Field Blank		1230	G DW				2						
3 Trip Blank		1335	G DW				2						
4													
5													
6													
7													
8													
9													
10													

Project Comments: [Signature]

LOGGED BY (signature): [Signature] Date: 5/25/18 Time: 1338

REVIEWED BY (signature): [Signature] Date: 5/25/18 Time: 1338

Relinquished By / Company Name: [Signature]

ALS Field Services: Pickup Labor Rental_Equipment

Composite_Sampling Other:

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

Reportable to PADEP? Yes No Sample Disposal: Lab Special

PWSID # [Blank] EDDS: Format Type [Blank]

* G=Grab; C=Composite *Matrix - A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Water; WW=Wastewater

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



June 15, 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:	2317188
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018-3100 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 25, 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.

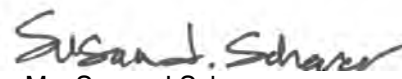
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317188 2ND QTR 2018-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317188001	3100 River Road, Conestoga, PA	Water	5/25/2018 10:43	5/25/2018 13:55	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2317188 2ND 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.
- 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: 2317188 2ND QTR 2018-3100 RIVER RD

Lab ID: **2317188001** Date Collected: 5/25/2018 10:43 Matrix: Water
Sample ID: **3100 River Road, Conestoga, PA** Date Received: 5/25/2018 13:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/6/18 00:37	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/6/18 00:37	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)	108		%	62 - 133	SW846 8260B			6/6/18 00:37	PDK	K
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			6/6/18 00:37	PDK	K
Dibromofluoromethane (S)	94.7		%	78 - 116	SW846 8260B			6/6/18 00:37	PDK	K
Toluene-d8 (S)	94.7		%	76 - 127	SW846 8260B			6/6/18 00:37	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	14		mg/L	5	S2320B-97			6/1/18 06:53	MSA	C
Alkalinity, Total	14	1	mg/L	5	S2320B-97			6/1/18 06:53	MSA	C
Ammonia-N	0.385		mg/L	0.100	D6919-09			6/8/18 09:34	TES	B
Chemical Oxygen Demand (COD)	ND	2	mg/L	15	EPA 410.4			6/5/18 16:17	AK	B
Chloride	51.1		mg/L	2.0	EPA 300.0			5/26/18 09:05	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/26/18 09:05	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/11/18 13:57	PAG	I
Nitrate-N	5.0		mg/L	0.20	EPA 300.0			5/26/18 09:05	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/26/18 09:05	CHW	C
pH	6.16	3	pH_Units		S4500HB-11			6/1/18 06:53	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/5/18 17:16	C_D	6/13/18 07:01	C_D	H
Specific Conductance	239		umhos/cm	1	S2510B-97			6/1/18 06:53	MSA	C

ALS Environmental Laboratory Locations Across North America

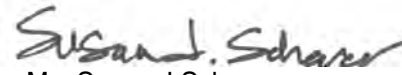
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ANALYTICAL RESULTS

Workorder: 2317188 2ND QTR 2018-3100 RIVER RD

Lab ID: **2317188001** Date Collected: 5/25/2018 10:43 Matrix: Water
Sample ID: **3100 River Road, Conestoga, PA** Date Received: 5/25/2018 13:55

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	6.2		mg/L	2.0	EPA 300.0			5/26/18 09:05	CHW	C
Total Dissolved Solids	190		mg/L	5	S2540C-11			6/1/18 10:00	BMK	C
Total Organic Carbon (TOC)	0.52		mg/L	0.50	S5310B-00			5/29/18 12:08	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			5/26/18 06:25	MBW	C
METALS										
Calcium, Total	15.5		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:20	DAG	D1
Calcium, Dissolved	16.5		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:01	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:20	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:01	DAG	E
Magnesium, Total	7.3		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:20	DAG	D1
Magnesium, Dissolved	8.0		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:01	DAG	E
Manganese, Total	0.0076		mg/L	0.0025	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:20	DAG	D1
Manganese, Dissolved	0.0084		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:01	DAG	E
Potassium, Total	1.3		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:20	DAG	D1
Potassium, Dissolved	1.4		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:01	DAG	E
Sodium, Total	14.6		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 08:20	DAG	D1
Sodium, Dissolved	15.7		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 06:01	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.080		pH_Units		Field			5/25/18 10:43	BGS	N
Specific Conductance, Field	247		umhos/cm	1	Field			5/25/18 10:43	BGS	N
Temperature	16.00		Deg. C		Field			5/25/18 10:43	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317188 2ND QTR 2018-3100 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317188001	1	3100 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
2317188001	2	3100 River Road, Conestoga, PA	EPA 410.4	Chemical Oxygen Demand (COD)
The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits.				
2317188001	3	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: 2317188 2ND QTR 2018-3100 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317188001	3100 River Road, Conestoga, PA	D6919-09	
2317188001	3100 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2317188001	3100 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2317188001	3100 River Road, Conestoga, PA	EPA 300.0	
2317188001	3100 River Road, Conestoga, PA	EPA 410.4	
2317188001	3100 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2317188001	3100 River Road, Conestoga, PA	Field	
2317188001	3100 River Road, Conestoga, PA	S2130B-01	
2317188001	3100 River Road, Conestoga, PA	S2320B-97	
2317188001	3100 River Road, Conestoga, PA	S2510B-97	
2317188001	3100 River Road, Conestoga, PA	S2540C-11	
2317188001	3100 River Road, Conestoga, PA	S4500HB-11	
2317188001	3100 River Road, Conestoga, PA	S5310B-00	
2317188001	3100 River Road, Conestoga, PA	SW846 8260B	
2317188001	3100 River Road, Conestoga, PA	SW846 9020B	

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

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COC #
ALS Q



1 of 1

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

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

Matrix	TOC	O-OH	TOX	SW846-8260 VOCs	FM	NH3-N, COD	Disolved 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
G DW	2	1	2	3	X	1	1	1	1	1
Enter Number of Containers Per Sample or Field Results Below.										

Sample Date	Time	Sample Date	Time
5-25-18	1043		

Project Comments: _____

LOGGED BY (signature): _____ **DATE:** 5/25/18

REVIEWED BY (signature): _____ **DATE:** 5/25/18

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Larry Kirchner ALS	5-25-18	1335	[Signature]	5/25/18	1355

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 _____

* 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



June 12, 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:	2317192
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018-3106 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 25, 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.

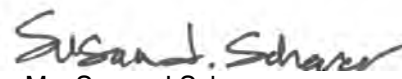
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317192 2ND QTR 2018-3106 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317192001	3106 River Road, Conestoga, PA	Water	5/25/2018 10:29	5/25/2018 13:35	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2317192 2ND 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: 2317192 2ND QTR 2018-3106 RIVER RD

Lab ID: **2317192001** Date Collected: 5/25/2018 10:29 Matrix: Water
Sample ID: **3106 River Road, Conestoga, PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/5/18 06:04	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 06:04	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)	100		%	62 - 133	SW846 8260B			6/5/18 06:04	PDK	K
4-Bromofluorobenzene (S)	97.8		%	79 - 114	SW846 8260B			6/5/18 06:04	PDK	K
Dibromofluoromethane (S)	98.5		%	78 - 116	SW846 8260B			6/5/18 06:04	PDK	K
Toluene-d8 (S)	94.9		%	76 - 127	SW846 8260B			6/5/18 06:04	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	15		mg/L	5	S2320B-97			6/1/18 08:49	MSA	C
Alkalinity, Total	15	1	mg/L	5	S2320B-97			6/1/18 08:49	MSA	C
Ammonia-N	0.272		mg/L	0.100	D6919-09			6/7/18 16:39	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/5/18 16:17	AK	B
Chloride	43.2		mg/L	2.0	EPA 300.0			5/26/18 09:18	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/26/18 09:18	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/7/18 11:51	PAG	I
Nitrate-N	8.3		mg/L	0.20	EPA 300.0			5/26/18 09:18	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/26/18 09:18	CHW	C
pH	6.27	2	pH_Units		S4500HB-11			6/1/18 08:49	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/5/18 17:16	C_D	6/6/18 14:17	C_D	H
Specific Conductance	241		umhos/cm	1	S2510B-97			6/1/18 08:49	MSA	C

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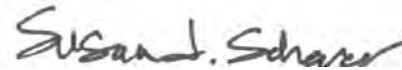
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ANALYTICAL RESULTS

Workorder: 2317192 2ND QTR 2018-3106 RIVER RD

Lab ID: **2317192001** Date Collected: 5/25/2018 10:29 Matrix: Water
Sample ID: **3106 River Road, Conestoga, PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	3.7		mg/L	2.0	EPA 300.0			5/26/18 09:18	CHW	C
Total Dissolved Solids	161		mg/L	5	S2540C-11			6/1/18 10:00	BMK	C
Total Organic Carbon (TOC)	0.56		mg/L	0.50	S5310B-00			5/29/18 12:08	PAG	F
Turbidity	0.25		NTU	0.10	S2130B-01			5/26/18 06:25	MBW	C
METALS										
Calcium, Total	11.3		mg/L	0.050	EPA 200.7	5/31/18 11:00	AHI	6/5/18 07:06	DAG	D1
Calcium, Dissolved	11.8		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:36	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	5/31/18 11:00	AHI	6/5/18 07:06	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:36	DAG	E
Magnesium, Total	6.8		mg/L	0.050	EPA 200.7	5/31/18 11:00	AHI	6/5/18 07:06	DAG	D1
Magnesium, Dissolved	7.3		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:36	DAG	E
Manganese, Total	0.018		mg/L	0.0025	EPA 200.7	5/31/18 11:00	AHI	6/5/18 07:06	DAG	D1
Manganese, Dissolved	0.019		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:36	DAG	E
Potassium, Total	1.4		mg/L	0.25	EPA 200.7	5/31/18 11:00	AHI	6/5/18 07:06	DAG	D1
Potassium, Dissolved	1.3		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:36	DAG	E
Sodium, Total	22.4		mg/L	0.25	EPA 200.7	5/31/18 11:00	AHI	6/5/18 07:06	DAG	D1
Sodium, Dissolved	23.5		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:36	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.340		pH_Units		Field			5/25/18 10:39	BGS	N
Specific Conductance, Field	249		umhos/cm	1	Field			5/25/18 10:39	BGS	N
Temperature	16.20		Deg. C		Field			5/25/18 10:39	BGS	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317192 2ND QTR 2018-3106 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317192001	1	3106 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2317192001	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.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 2317192 2ND QTR 2018-3106 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317192001	3106 River Road, Conestoga, PA	D6919-09	
2317192001	3106 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2317192001	3106 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2317192001	3106 River Road, Conestoga, PA	EPA 300.0	
2317192001	3106 River Road, Conestoga, PA	EPA 410.4	
2317192001	3106 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2317192001	3106 River Road, Conestoga, PA	Field	
2317192001	3106 River Road, Conestoga, PA	S2130B-01	
2317192001	3106 River Road, Conestoga, PA	S2320B-97	
2317192001	3106 River Road, Conestoga, PA	S2510B-97	
2317192001	3106 River Road, Conestoga, PA	S2540C-11	
2317192001	3106 River Road, Conestoga, PA	S4500HB-11	
2317192001	3106 River Road, Conestoga, PA	S5310B-00	
2317192001	3106 River Road, Conestoga, PA	SW846 8260B	
2317192001	3106 River Road, Conestoga, PA	SW846 9020B	

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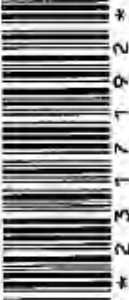
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**CHAIN OF CUSTODY/
 REQUEST FOR ANALYSIS**
**ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /
 SAMPLER. INSTRUCTIONS ON THE BACK.**

Generated by ALS

COC #: **ALS Q1**



1 of 1

Client Name: LCSWMA - Aaron Fry		AG		AN		AN		CG		PL		PL		PL		PL		PL		Receipt Information (completed by Receiving Lab)	
Address: 3106 River Road		40 ml		125 ml		250 ml		40 ml		500 ml		250 ml		250 ml		2L		500 ml		Cooler Temp: 10°C Therm ID: dec	
Conestoga, PA 17516		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		No. of Coolers: Y N Initial	
Contact: Aaron Fry		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		Custody Seals Present? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
Phone#: (717) 669-6831		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		COC Labels Completed/Accurate? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
Project Name#: LCSWMA - Quarterly		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		Received on Ice? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
Bill To: LCSWMA - Aaron Fry		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		COC Labels Correct/Accurate? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
TAT <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days.		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		Cont. in Good Cond.? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
Date Required: _____ Approved By: _____		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		Correct Containers? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
Email? <input type="checkbox"/> -Y <input type="checkbox"/> -N		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		Correct Sample Volumes? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
Fax? <input type="checkbox"/> -Y <input type="checkbox"/> -N		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		Correct Preservation? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
Sample Description/Location		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		Headspace/Volatiles? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Initial: <i>EF</i>	
(as it will appear on the lab report)		HCl		H2SO4		H2SO4		HCl		H2SO4		HNO3		HNO3		None		None		Courier/Tracking #:	
1 3106RIVERRD		G DW		2		1		2		3		x		1		1		1		Sample/COC Comments	
2		G DW		2		1		2		3		x		1		1		1			
3		G DW		2		1		2		3		x		1		1		1			
4		G DW		2		1		2		3		x		1		1		1			
5		G DW		2		1		2		3		x		1		1		1			
6		G DW		2		1		2		3		x		1		1		1			
7		G DW		2		1		2		3		x		1		1		1			
8		G DW		2		1		2		3		x		1		1		1			
9		G DW		2		1		2		3		x		1		1		1			
10		G DW		2		1		2		3		x		1		1		1			
Project Comments:		G DW		2		1		2		3		x		1		1		1		ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite_Sampling <input type="checkbox"/> Rental_Equipment <input type="checkbox"/> Other:	
Relinquished By / Company Name		G DW		2		1		2		3		x		1		1		1		Special Processing: <input type="checkbox"/> USACE <input type="checkbox"/> Navy <input type="checkbox"/> State Samples Collected In: <input type="checkbox"/> NY <input type="checkbox"/> NJ <input type="checkbox"/> PA <input type="checkbox"/> NC	
1 <i>K. Schenck</i> ALS		G DW		2		1		2		3		x		1		1		1		Sample Disposal: <input type="checkbox"/> Lab <input checked="" type="checkbox"/> X <input type="checkbox"/> Special <input type="checkbox"/>	
3		G DW		2		1		2		3		x		1		1		1		Reportable to PADEP? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X PWSID #	
5		G DW		2		1		2		3		x		1		1		1		EDDS: Formal Type:	
7		G DW		2		1		2		3		x		1		1		1			
9		G DW		2		1		2		3		x		1		1		1			
LOGGED BY (signature):		G DW		2		1		2		3		x		1		1		1			
REVIEWED BY (signature):		G DW		2		1		2		3		x		1		1		1			
Date		G DW		2		1		2		3		x		1		1		1			
Time		G DW		2		1		2		3		x		1		1		1			
Received By / Company Name		G DW		2		1		2		3		x		1		1		1			
1 <i>K. Schenck</i> ALS		G DW		2		1		2		3		x		1		1		1			
Date		G DW		2		1		2		3		x		1		1		1			
Time		G DW		2		1		2		3		x		1		1		1			
Received By / Company Name		G DW		2		1		2		3		x		1		1		1			
3 <i>K. Schenck</i> ALS		G DW		2		1		2		3		x		1		1		1			
Date		G DW		2		1		2		3		x		1		1		1			
Time		G DW		2		1		2		3		x		1		1		1			
Received By / Company Name		G DW		2		1		2		3		x		1		1		1			
5 <i>K. Schenck</i> ALS		G DW		2		1		2		3		x		1		1		1			
Date		G DW		2		1		2		3		x		1		1		1			
Time		G DW		2		1		2		3		x		1		1		1			
Received By / Company Name		G DW		2		1		2		3		x		1		1		1			
7 <i>K. Schenck</i> ALS		G DW		2		1		2		3		x		1		1		1			
Date		G DW		2		1		2		3		x		1		1		1			
Time		G DW		2		1		2		3		x		1		1		1			
Received By / Company Name		G DW		2		1		2		3		x		1		1		1			
9 <i>K. Schenck</i> ALS		G DW		2		1		2		3		x		1		1		1			



July 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- 3125 RIVER RD	Workorder:	2317193
Purchase Order:	PO1000126	Workorder ID:	2ND QTR 2018-3125 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 25, 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.

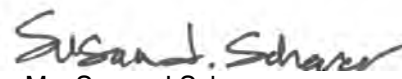
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications 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: 2317193 2ND QTR 2018-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2317193001	3125 River Road, Conestoga, PA	Water	5/25/2018 11:05	5/25/2018 13:35	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2317193 2ND 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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PROJECT SUMMARY

Workorder: 2317193 2ND QTR 2018-3125 RIVER RD

Workorder Comments

Based on the email request from Dan Brown on 06/14/18 the results for chloride, sulfate, and specific conductance were re-analyzed for confirmation purposes. The re-analysis matched the original data. Also, the field result for specific conductance was in agreement with the laboratory result. SJS 07/06/18

Could you please have someone double check wetchem results for 3125RIVERRD? Chlorides, Sulfate, Spec Cond, etc seem to be high.

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ANALYTICAL RESULTS

Workorder: 2317193 2ND QTR 2018-3125 RIVER RD

Lab ID: **2317193001** Date Collected: 5/25/2018 11:05 Matrix: Water
Sample ID: **3125 River Road, Conestoga, PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/5/18 06:27	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/5/18 06:27	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)	103		%	62 - 133	SW846 8260B			6/5/18 06:27	PDK	K
4-Bromofluorobenzene (S)	100		%	79 - 114	SW846 8260B			6/5/18 06:27	PDK	K
Dibromofluoromethane (S)	101		%	78 - 116	SW846 8260B			6/5/18 06:27	PDK	K
Toluene-d8 (S)	96.5		%	76 - 127	SW846 8260B			6/5/18 06:27	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	66		mg/L	5	S2320B-97			6/1/18 09:47	MSA	C
Alkalinity, Total	66	1	mg/L	5	S2320B-97			6/1/18 09:47	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			6/7/18 16:57	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			6/5/18 16:17	AK	B
Chloride	176		mg/L	2.0	EPA 300.0			5/26/18 09:32	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			5/26/18 09:32	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/11/18 11:09	PAG	I
Nitrate-N	7.4		mg/L	0.20	EPA 300.0			5/26/18 09:32	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/26/18 09:32	CHW	C
pH	6.66	2	pH_Units		S4500HB-11			6/1/18 09:47	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	6/5/18 17:16	C_D	6/13/18 07:01	C_D	H
Specific Conductance	1420		umhos/cm	1	S2510B-97			6/1/18 09:47	MSA	C

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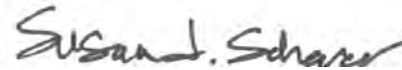
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ANALYTICAL RESULTS

Workorder: 2317193 2ND QTR 2018-3125 RIVER RD

Lab ID: **2317193001** Date Collected: 5/25/2018 11:05 Matrix: Water
Sample ID: **3125 River Road, Conestoga, PA** Date Received: 5/25/2018 13:35

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	22.1		mg/L	2.0	EPA 300.0			5/26/18 09:32	CHW	C
Total Dissolved Solids	417		mg/L	5	S2540C-11			6/1/18 10:00	BMK	C
Total Organic Carbon (TOC)	1.1		mg/L	0.50	S5310B-00			5/29/18 12:08	PAG	F
Turbidity	0.28		NTU	0.10	S2130B-01			5/26/18 06:25	MBW	C
METALS										
Calcium, Total	0.46		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:09	DAG	D1
Calcium, Dissolved	0.20		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:40	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:09	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:40	DAG	E
Magnesium, Total	0.30		mg/L	0.050	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:09	DAG	D1
Magnesium, Dissolved	0.16		mg/L	0.10	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:40	DAG	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:09	DAG	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:40	DAG	E
Potassium, Total	3.7		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:09	DAG	D1
Potassium, Dissolved	3.5		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:40	DAG	E
Sodium, Total	134		mg/L	0.25	EPA 200.7	6/2/18 10:00	AHI	6/5/18 07:09	DAG	D1
Sodium, Dissolved	144		mg/L	0.50	EPA 200.7	6/6/18 03:59	DAG	6/7/18 05:40	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.580		pH_Units		Field			5/25/18 11:05	BGS	N
Specific Conductance, Field	1430		umhos/cm	1	Field			5/25/18 11:05	BGS	N
Temperature	16.70		Deg. C		Field			5/25/18 11:05	BGS	N



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2317193 2ND QTR 2018-3125 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2317193001	1	3125 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2317193001	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: 2317193 2ND QTR 2018-3125 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
2317193001	3125 River Road, Conestoga, PA	D6919-09	
2317193001	3125 River Road, Conestoga, PA	EPA 200.7	EPA ACID
2317193001	3125 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
2317193001	3125 River Road, Conestoga, PA	EPA 300.0	
2317193001	3125 River Road, Conestoga, PA	EPA 410.4	
2317193001	3125 River Road, Conestoga, PA	EPA 420.4	420.4/9066
2317193001	3125 River Road, Conestoga, PA	Field	
2317193001	3125 River Road, Conestoga, PA	S2130B-01	
2317193001	3125 River Road, Conestoga, PA	S2320B-97	
2317193001	3125 River Road, Conestoga, PA	S2510B-97	
2317193001	3125 River Road, Conestoga, PA	S2540C-11	
2317193001	3125 River Road, Conestoga, PA	S4500HB-11	
2317193001	3125 River Road, Conestoga, PA	S5310B-00	
2317193001	3125 River Road, Conestoga, PA	SW846 8260B	
2317193001	3125 River Road, Conestoga, PA	SW846 9020B	

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

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

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 3125RIVERRD	5-25-18	1105
2		
3		
4		
5		
6		
7		
8		
9		
10		

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

Generated by ALS

COC:
ALS

1 of 1

Receipt (must be returned to ALS) _____ (SAMPLER) _____ (Lab)

Cooler Temp: 19c Therm ID: 402

No. of Coolers: _____ Y _____ N _____ Initial

Custody Seals Present? _____

(Present) Seals Intact? _____

Received on Ice? _____

COC Labels Complete/Accurate? _____

Cont. in Good Cond.? _____

Correct Containers? _____

Correct Sample Volumes? _____

Correct Preservation? _____

Headspaces/Volatiles? _____

Courier/Tracking #: _____ Sample/COC Comments

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

ANALYSES/METHOD REQUESTED

Matrix	TOC	O-OH	TOX	SWB46-8260 VOCs	FM	NH3-N, COD	Disolved Metals: Ca, Fe, Mg, Mn, K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	pH, TDS, NO2, NO3, Cl, SO4, F, TB, SpC	Alkalinity, HCO3
G DW	2	1	2	3	X	1	1	1	1	1

ALS Field Services: Pickup Labor

Composite_Sampling Rental_Equipment

Other: _____

Standard Special Processing State Samples Collected In

Deliverables USACE Navy NY

USACE NJ

Reportable to PADEP? Sample Disposal PA

Yes Lab NC

Special

PWSID # _____

EDDS: Format Type: _____

LOGGED BY (signature):	Date	Time	Received By / Company Name	Date	Time
<i>[Signature]</i>	5/25/18	1105	<i>[Signature]</i>	5/25/18	1105
REVIEWED BY (signature):					

Project Comments:	Delivered By / Company Name	Date	Time
1 <i>[Signature]</i>	ALS	5-25-18	1105
3			
5			
7			
9			



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	2317658001	05/30/2018	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>	
3052RIVERR	2317196001	05/25/2018	WATER		
NITRATE-NITROGEN	mg/l	18.10	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	2317641001	05/30/2018	WATER		
NITRATE-NITROGEN	mg/l	19.50	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	2317643001	05/30/2018	WATER		
NITRATE-NITROGEN	mg/l	15.80	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	2317195001	05/25/2018	WATER		
NITRATE-NITROGEN	mg/l	12.00	10.00		EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3088RIVERR	2317194001	05/25/2018	WATER		
NITRATE-NITROGEN	mg/l	11.30	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>	
3044RIVERR	2317658001	05/30/2018	WATER		
IRON, TOTAL	mg/l	0.34	0.30		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.05	0.05		EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3056RIVERR	2317641001	05/30/2018	WATER		
MANGANESE, DISSOLVED	mg/l	0.06	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.07	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	2317643001	05/30/2018	WATER		
MANGANESE, DISSOLVED	mg/l	0.08	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.08	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	2317195001	05/25/2018	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>	
3079RIVERR	2317656001	05/30/2018	WATER		
MANGANESE, DISSOLVED	mg/l	0.06	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.06	0.05		EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3088RIVERR	2317194001	05/25/2018	WATER		
TDS (TOT. DISSOLVED SOLIDS)	mg/l	537.00	500.00		EPA-SMCL