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

April 16, 2019

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
1st Quarter 2019 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 3106RIVERRD) exceeded the limit for nitrate, samples are consistent with historic data the cause is attributed to agricultural impacts. No other MCL's were exceeded.
2. USEPA SMCL's exceedance report; sample 3088RIVERRD exceeded the limit for total dissolved solids and chloride; samples 3056RIVERRD, 3060RIVERRD, 3076RIVERRD, 3079RIVERRD and 3106RIVERRD 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 nrogers@lcswma.org.

Respectfully submitted,

Nick Rogers
Environmental Compliance Manager

Enclosures

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

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/29/2019
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 (DD° 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: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/19/2019 Sample Collection Time: 12:01 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 03/06/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS LCSWMA

Sample Date: 02/19/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	12	SM20-2321
CALCIUM, TOTAL	13.6	EPA 200.7
CALCIUM, DISSOLVED	12.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	21.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	200	EPA 200.7
IRON, DISSOLVED (ug/l)	160	EPA 200.7
MAGNESIUM, TOTAL	11	EPA 200.7
MAGNESIUM, DISSOLVED	10.1	EPA 200.7
MANGANESE, TOTAL (ug/l)	39	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	37	EPA 200.7
NITRATE-NITROGEN	18.9	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS LCSWMA

Sample Date: 02/19/2019

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)	5.19	FIELD
pH-LAB (SU)	6.31	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	0.87	EPA 200.7
SODIUM, TOTAL	8.6	EPA 200.7
SODIUM, DISSOLVED	7.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	231	FIELD
SPEC. COND., LAB (umhos/cm)	233	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	132	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	10.4	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: 02/19/2019

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)	4.1	EPA 524.2

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2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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PRIVATE WATER SUPPLY
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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: MILLER

Address: 3052 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft. Measured from: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/28/2019 Sample Collection Time: 12:00 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number) 34 Dogwood Lane

Middletown, PA 17057 (717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 03/12/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS MILLER

Sample Date: 02/28/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	9	SM20-2321
CALCIUM, TOTAL	16.6	EPA 200.7
CALCIUM, DISSOLVED	15.6	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	22.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	8.6	EPA 200.7
MAGNESIUM, DISSOLVED	8.3	EPA 200.7
MANGANESE, TOTAL (ug/l)	32	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	34	EPA 200.7
NITRATE-NITROGEN	18.5	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 MILLER

Sample Date: 02/28/2019

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)	6.22	FIELD
pH-LAB (SU)	6.32	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	0.87	EPA 200.7
SODIUM, TOTAL	7.4	EPA 200.7
SODIUM, DISSOLVED	6.9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	220	FIELD
SPEC. COND., LAB (umhos/cm)	213	EPA 120.1
SULFATE	2.2	EPA 300
ALKALINITY	9	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	168	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.55	SM20-5310B
TOTAL PHENOLICS (ug/l)	7	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 MILLER

Sample Date: 02/28/2019

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.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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FORM 52
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PRIVATE WATER SUPPLY
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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3056 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39 o 57 ' 28.44 " Longitude: 76 o 26 ' 10.43 "

Depth to Water Level: ft. Measured from: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/19/2019 Sample Collection Time: 12:15 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number) 34 Dogwood Lane

Middletown, PA 17057 (717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 03/06/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS LCSWMA

Sample Date: 02/19/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	6	SM20-2321
CALCIUM, TOTAL	8.9	EPA 200.7
CALCIUM, DISSOLVED	9.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	26.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	13.1	EPA 200.7
MAGNESIUM, DISSOLVED	13.4	EPA 200.7
MANGANESE, TOTAL (ug/l)	130	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	130	EPA 200.7
NITRATE-NITROGEN	18.3	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS LCSWMA

Sample Date: 02/19/2019

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)	5.03	FIELD
pH-LAB (SU)	6	SM4500B
POTASSIUM, TOTAL	1.8	EPA 200.7
POTASSIUM, DISSOLVED	1.5	EPA 200.7
SODIUM, TOTAL	8	EPA 200.7
SODIUM, DISSOLVED	7.8	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	252	FIELD
SPEC. COND., LAB (umhos/cm)	235	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	6	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	124	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: 02/19/2019

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.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
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BUREAU OF WASTE MANAGEMENT

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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 (DD° 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: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/19/2019 Sample Collection Time: 12:20 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number) 34 Dogwood Lane

Middletown, PA 17057 (717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 03/06/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS LCSWMA

Sample Date: 02/19/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	10	SM20-2321
CALCIUM, TOTAL	9.6	EPA 200.7
CALCIUM, DISSOLVED	9	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	16.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	11.4	EPA 200.7
MAGNESIUM, DISSOLVED	10.7	EPA 200.7
MANGANESE, TOTAL (ug/l)	100	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	95	EPA 200.7
NITRATE-NITROGEN	12.8	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS LCSWMA

Sample Date: 02/19/2019

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)	5.16	FIELD
pH-LAB (SU)	6.27	SM4500B
POTASSIUM, TOTAL	2	EPA 200.7
POTASSIUM, DISSOLVED	1.6	EPA 200.7
SODIUM, TOTAL	8	EPA 200.7
SODIUM, DISSOLVED	7.1	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	204	FIELD
SPEC. COND., LAB (umhos/cm)	200	EPA 120.1
SULFATE	10.4	EPA 300
ALKALINITY	10	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	128	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS LCSWMA

Sample Date: 02/19/2019

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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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 (DD° 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 o 57 ' 28.2 " Longitude: 76 o 26 ' 11.1 "

Depth to Water Level: ft. Measured from: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/28/2019 Sample Collection Time: 12:15 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number) 34 Dogwood Lane

Middletown, PA 17057 (717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 03/11/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS SENSENICH

Sample Date: 02/28/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.237	SM4500D
BICARBONATE ALKALINITY	11	SM20-2321
CALCIUM, TOTAL	15.4	EPA 200.7
CALCIUM, DISSOLVED	15.1	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	50.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	9.1	EPA 200.7
MAGNESIUM, DISSOLVED	9.1	EPA 200.7
MANGANESE, TOTAL (ug/l)	250	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	250	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: 02/28/2019

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)	6.19	FIELD
pH-LAB (SU)	6.24	SM4500B
POTASSIUM, TOTAL	3.2	EPA 200.7
POTASSIUM, DISSOLVED	2.7	EPA 200.7
SODIUM, TOTAL	20.2	EPA 200.7
SODIUM, DISSOLVED	20.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	283	FIELD
SPEC. COND., LAB (umhos/cm)	296	EPA 120.1
SULFATE	20.4	EPA 300
ALKALINITY	11	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	161	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.76	SM20-5310B
TOTAL PHENOLICS (ug/l)	8	EPA 420.4
TURBIDITY (NTU)	0.68	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: 02/28/2019

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.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/29/2019
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 (DD° 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: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/19/2019 Sample Collection Time: 3:00 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number) 34 Dogwood Lane

Middletown, PA 17057 (717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 03/06/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS LCSWMA

Sample Date: 02/19/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	32	SM20-2321
CALCIUM, TOTAL	9.5	EPA 200.7
CALCIUM, DISSOLVED	9.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	33.2	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	5.3	EPA 200.7
MAGNESIUM, DISSOLVED	5.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	270	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	270	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: 02/19/2019

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)	5.83	FIELD
pH-LAB (SU)	6.48	SM4500B
POTASSIUM, TOTAL	1.5	EPA 200.7
POTASSIUM, DISSOLVED	1.2	EPA 200.7
SODIUM, TOTAL	12.3	EPA 200.7
SODIUM, DISSOLVED	11.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	206	FIELD
SPEC. COND., LAB (umhos/cm)	183	EPA 120.1
SULFATE	16	EPA 300
ALKALINITY	32	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	157	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: 02/19/2019

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.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/29/2019
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 (DD° MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: WEBER

Address: 3088 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft. Measured from: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/19/2019 Sample Collection Time: 1:45 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 03/06/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS WEBER

Sample Date: 02/19/2019

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	0.13	EPA 200.7
CALCIUM, DISSOLVED	0.1 ND	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	297	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	0.11	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	8.2	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS WEBER

Sample Date: 02/19/2019

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)	6.51	FIELD
pH-LAB (SU)	7.46	SM4500B
POTASSIUM, TOTAL	2.3	EPA 200.7
POTASSIUM, DISSOLVED	2	EPA 200.7
SODIUM, TOTAL	208	EPA 200.7
SODIUM, DISSOLVED	228	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	938	FIELD
SPEC. COND., LAB (umhos/cm)	1380	EPA 120.1
SULFATE	3.5	EPA 300
ALKALINITY	152	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	680	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1	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: 02/19/2019

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.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/29/2019
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 (DD° 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 o 57 ' 17.9 " Longitude: 76 o 26 ' 6.28 "

Depth to Water Level: ft. Measured from: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/19/2019 Sample Collection Time: 1:55 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 03/06/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS KIRCHNER

Sample Date: 02/19/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	26	SM20-2321
CALCIUM, TOTAL	16.6	EPA 200.7
CALCIUM, DISSOLVED	16.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	16	EPA 410.2
CHLORIDE	41.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	6.6	EPA 200.7
MAGNESIUM, DISSOLVED	6.5	EPA 200.7
MANGANESE, TOTAL (ug/l)	12	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	13	EPA 200.7
NITRATE-NITROGEN	4.4	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS KIRCHNER

Sample Date: 02/19/2019

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)	6.32	FIELD
pH-LAB (SU)	6.36	SM4500B
POTASSIUM, TOTAL	1.1	EPA 200.7
POTASSIUM, DISSOLVED	0.87	EPA 200.7
SODIUM, TOTAL	14.4	EPA 200.7
SODIUM, DISSOLVED	14	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	249	FIELD
SPEC. COND., LAB (umhos/cm)	231	EPA 120.1
SULFATE	14.2	EPA 300
ALKALINITY	26	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	114	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS KIRCHNER

Sample Date: 02/19/2019

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.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/29/2019
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 (DD° MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: FRY

Address: 3106 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft. Measured from: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/28/2019 Sample Collection Time: 12:30 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 03/11/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS FRY

Sample Date: 02/28/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.324	SM4500D
BICARBONATE ALKALINITY	12	SM20-2321
CALCIUM, TOTAL	10.7	EPA 200.7
CALCIUM, DISSOLVED	10.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	17	EPA 410.2
CHLORIDE	67.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	41	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	7.8	EPA 200.7
MAGNESIUM, DISSOLVED	7.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	55	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	52	EPA 200.7
NITRATE-NITROGEN	12.1	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS FRY

Sample Date: 02/28/2019

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)	6.28	FIELD
pH-LAB (SU)	6.48	SM4500B
POTASSIUM, TOTAL	1.3	EPA 200.7
POTASSIUM, DISSOLVED	0.67	EPA 200.7
SODIUM, TOTAL	37.6	EPA 200.7
SODIUM, DISSOLVED	37	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	299	FIELD
SPEC. COND., LAB (umhos/cm)	342	EPA 120.1
SULFATE	11.3	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	198	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.68	SM20-5310B
TOTAL PHENOLICS (ug/l)	11	EPA 420.4
TURBIDITY (NTU)	0.27	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: 02/28/2019

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.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/29/2019
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 (DD° 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 o 57 ' 11.6 " Longitude: 76 o 26 ' 5.4 "

Depth to Water Level: ft. Measured from: [X] Land Surface [ ] TOC

Casing Stick Up: ft. Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft. Sampling Method: [ ] Pumped [ ] Bailed

Well Purged: [ ] Yes [X] No Well Volumes Purged:

Sample Field Filtered (must be 0.45 micron)?: [X] Yes [ ] No

Sample Date:(mm/dd/yy) 02/28/2019 Sample Collection Time: 12:50 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 03/11/2019

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

Comments:

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS BECK

Sample Date: 02/28/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.207	SM4500D
BICARBONATE ALKALINITY	174	SM20-2321
CALCIUM, TOTAL	0.21	EPA 200.7
CALCIUM, DISSOLVED	0.15	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	16	EPA 410.2
CHLORIDE	132	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	7.1	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS BECK

Sample Date: 02/28/2019

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)	7.79	FIELD
pH-LAB (SU)	7.82	SM4500B
POTASSIUM, TOTAL	0.7	EPA 200.7
POTASSIUM, DISSOLVED	0.5 ND	EPA 200.7
SODIUM, TOTAL	151	EPA 200.7
SODIUM, DISSOLVED	160	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	819	FIELD
SPEC. COND., LAB (umhos/cm)	845	EPA 120.1
SULFATE	27.6	EPA 300
ALKALINITY	174	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	457	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.3	SM20-5310B
TOTAL PHENOLICS (ug/l)	11	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number: 101389

Monitoring Point I.D. No.: PS BECK

Sample Date: 02/28/2019

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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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

March 7, 2019

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:	**3017251**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019-3044 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 19, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Mr. Jeff Musser

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

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3017251 1ST QTR 2019-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3017251001	3044 River Road, Conestoga, PA	Water	2/19/2019 12:01	2/19/2019 17:30	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3017251 1ST QTR 2019-3044 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 preformed 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.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

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: 3017251 1ST QTR 2019-3044 RIVER RD

Lab ID: **3017251001** Date Collected: 2/19/2019 12:01 Matrix: Water

Sample ID: **3044 River Road, Conestoga, PA** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Toluene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Total Xylenes	4.1		ug/L	3.0	SW846 8260B			2/22/19 04:24	PDK	J
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Trichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 04:24	PDK	J
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.5		%	62 - 133	SW846 8260B			2/22/19 04:24	PDK	J
4-Bromofluorobenzene (S)	110		%	79 - 114	SW846 8260B			2/22/19 04:24	PDK	J
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B			2/22/19 04:24	PDK	J
Toluene-d8 (S)	104		%	76 - 127	SW846 8260B			2/22/19 04:24	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	12		mg/L	5	SM2320B-2011			2/26/19 05:51	MSA	C
Alkalinity, Total	12	1	mg/L	5	SM2320B-2011			2/26/19 05:51	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			2/23/19 18:27	RXB	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			3/1/19 13:02	AK	B
Chloride	21.2		mg/L	2.0	EPA 300.0			2/20/19 13:33	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			2/20/19 13:33	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/5/19 16:33	PAG	I
Nitrate-N	18.9		mg/L	0.20	EPA 300.0			2/20/19 13:33	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			2/20/19 13:33	CHW	C
pH	6.31	2	pH_Units		S4500HB-11			2/26/19 05:51	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	2/21/19 12:00	RXB	2/21/19 14:29	RXB	H
Specific Conductance	233		umhos/cm	1	SM2510B-2011			2/26/19 05:51	MSA	C

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ANALYTICAL RESULTS

Workorder: 3017251 1ST QTR 2019-3044 RIVER RD

Lab ID: **3017251001** Date Collected: 2/19/2019 12:01 Matrix: Water

Sample ID: **3044 River Road, Conestoga, PA** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Sulfate	ND		mg/L	2.0	EPA 300.0			2/20/19 13:33	CHW	C
Total Dissolved Solids	132		mg/L	5	S2540C-11			2/21/19 14:40	EXS	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			2/21/19 00:18	PAG	F
Turbidity	10.4		NTU	0.10	SM2130B-2011			2/20/19 05:25	MBW	C
METALS										
Calcium, Total	13.6		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:30	MNP	D1
Calcium, Dissolved	12.2		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:32	MNP	E
Iron, Total	0.20		mg/L	0.030	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:09	MNP	D1
Iron, Dissolved	0.16		mg/L	0.060	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:32	MNP	E
Magnesium, Total	11.0		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:09	MNP	D1
Magnesium, Dissolved	10.1		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:32	MNP	E
Manganese, Total	0.039		mg/L	0.0025	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:09	MNP	D1
Manganese, Dissolved	0.037		mg/L	0.0050	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:32	MNP	E
Potassium, Total	1.4		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:30	MNP	D1
Potassium, Dissolved	0.87		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:32	MNP	E
Sodium, Total	8.6		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:09	MNP	D1
Sodium, Dissolved	7.6		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:32	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.19		pH_Units		Field			2/19/19 12:00	BGS	M
Specific Conductance, Field	231		umhos/cm	1	Field			2/19/19 12:00	BGS	M
Temperature	10.10		Deg. C		Field			2/19/19 12:00	BGS	M

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3017251 1ST QTR 2019-3044 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3017251001	1	3044 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3017251001	2	3044 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3017251 1ST QTR 2019-3044 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3017251001	3044 River Road, Conestoga, PA	D6919-09	
3017251001	3044 River Road, Conestoga, PA	EPA 200.7	EPA ACID
3017251001	3044 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
3017251001	3044 River Road, Conestoga, PA	EPA 300.0	
3017251001	3044 River Road, Conestoga, PA	EPA 410.4	
3017251001	3044 River Road, Conestoga, PA	EPA 420.4	420.4/9066
3017251001	3044 River Road, Conestoga, PA	Field	
3017251001	3044 River Road, Conestoga, PA	S2540C-11	
3017251001	3044 River Road, Conestoga, PA	S4500HB-11	
3017251001	3044 River Road, Conestoga, PA	SM2130B-2011	
3017251001	3044 River Road, Conestoga, PA	SM2320B-2011	
3017251001	3044 River Road, Conestoga, PA	SM2510B-2011	
3017251001	3044 River Road, Conestoga, PA	SM5310B-2011	
3017251001	3044 River Road, Conestoga, PA	SW846 8260B	
3017251001	3044 River Road, Conestoga, PA	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

COC
ALS

3017251

1 of 1

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

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 [X] 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

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**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, Tb, SpC	Alkalinity, HCO3
			Enter Number of Containers Per Sample or Field Results Below.											
1 3044RIVERRD	2/19/19	1201	G	DW	2	1	2	23	X	1	1	1	1	1
2								TW 2/19/19						
3														
4														
5														
6														
7														
8														
9														
10														

Receipt Information (completed by Receiving Lab)
Cooler Temp: 1 °C Therm ID: 352
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:

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/19/19	0730	2 TW PLS	2/19/19	1730
3			4		
5			6		
7			8		
9			10		

Data Deliverables: ☐Standard ☐CLP-like ☐USACE ☐
Special Processing: USACE ☐ Navy ☐ ☐
State Samples Collected In: ☐NY ☐NJ [X]PA ☐NC ☐
Reportable to PADEP? Yes ☐ PWSID # _____
Sample Disposal: Lab [X] Special ☐
EDDS: Format Type- _____

* G=Grab; C=Composite
**Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=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

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Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
LCSWMA	3017251	gw	2/19/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	(NO)
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____

Temperature (°C): 1°C

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

Rev. 1/10/2019

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

March 13, 2019

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:	**3019345**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019-3052 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, February 28, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Landowner , Mr. Jeff Musser

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

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3019345 1ST QTR 2019-3052 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3019345001	3052 River Road, Conestoga, PA	Water	2/28/2019 12:00	2/28/2019 14:58	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3019345 1ST QTR 2019-3052 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 preformed 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.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

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: 3019345 1ST QTR 2019-3052 RIVER RD

Lab ID: **3019345001** Date Collected: 2/28/2019 12:00 Matrix: Water

Sample ID: **3052 River Road, Conestoga, PA** Date Received: 2/28/2019 14:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Toluene	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/5/19 17:00	TMP	J
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 17:00	TMP	J
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.6		%	62 - 133	SW846 8260B			3/5/19 17:00	TMP	J
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B			3/5/19 17:00	TMP	J
Dibromofluoromethane (S)	87.1		%	78 - 116	SW846 8260B			3/5/19 17:00	TMP	J
Toluene-d8 (S)	97.7		%	76 - 127	SW846 8260B			3/5/19 17:00	TMP	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	9		mg/L	5	SM2320B-2011			3/5/19 11:49	MSA	C
Alkalinity, Total	9	1	mg/L	5	SM2320B-2011			3/5/19 11:49	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			3/12/19 01:51	NJA	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			3/11/19 11:18	AK	B
Chloride	22.6		mg/L	2.0	EPA 300.0			3/1/19 06:42	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/19 06:42	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/12/19 11:12	PAG	I
Nitrate-N	18.5		mg/L	0.20	EPA 300.0			3/1/19 06:42	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/19 06:42	CHW	C
pH	6.32	2	pH_Units		S4500HB-11			3/5/19 11:49	MSA	C
Phenolics	0.007		mg/L	0.005	EPA 420.4	3/4/19 12:00	RXB	3/6/19 13:45	RXB	H
Specific Conductance	213		umhos/cm	1	SM2510B-2011			3/5/19 11:49	MSA	C

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3019345 1ST QTR 2019-3052 RIVER RD

Lab ID: **3019345001** Date Collected: 2/28/2019 12:00 Matrix: Water

Sample ID: **3052 River Road, Conestoga, PA** Date Received: 2/28/2019 14:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Sulfate	2.2		mg/L	2.0	EPA 300.0			3/1/19 06:42	CHW	C
Total Dissolved Solids	168		mg/L	5	S2540C-11			3/5/19 16:10	EXS	C
Total Organic Carbon (TOC)	0.55		mg/L	0.50	SM5310B-2011			3/4/19 21:54	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			3/1/19 05:20	MBW	C
METALS										
Calcium, Total	16.6		mg/L	0.050	EPA 200.7	3/4/19 08:30	BMK	3/8/19 13:55	MNP	D1
Calcium, Dissolved	15.6		mg/L	0.10	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:38	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	3/4/19 08:30	BMK	3/8/19 13:55	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:38	MNP	E
Magnesium, Total	8.6		mg/L	0.050	EPA 200.7	3/4/19 08:30	BMK	3/8/19 13:55	MNP	D1
Magnesium, Dissolved	8.3		mg/L	0.10	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:38	MNP	E
Manganese, Total	0.032		mg/L	0.0025	EPA 200.7	3/4/19 08:30	BMK	3/8/19 13:55	MNP	D1
Manganese, Dissolved	0.034		mg/L	0.0050	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:38	MNP	E
Potassium, Total	1.4		mg/L	0.25	EPA 200.7	3/4/19 08:30	BMK	3/8/19 13:55	MNP	D1
Potassium, Dissolved	0.87		mg/L	0.50	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:38	MNP	E
Sodium, Total	7.4		mg/L	0.25	EPA 200.7	3/4/19 08:30	BMK	3/8/19 13:55	MNP	D1
Sodium, Dissolved	6.9		mg/L	0.50	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:38	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.22		pH_Units		Field			2/28/19 12:00	BGS	M
Specific Conductance, Field	220		umhos/cm	1	Field			2/28/19 12:00	BGS	M
Temperature	10.20		Deg. C		Field			2/28/19 12:00	BGS	M

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3019345 1ST QTR 2019-3052 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3019345001	1	3052 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3019345001	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.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3019345 1ST QTR 2019-3052 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3019345001	3052 River Road, Conestoga, PA	D6919-09	
3019345001	3052 River Road, Conestoga, PA	EPA 200.7	EPA ACID
3019345001	3052 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
3019345001	3052 River Road, Conestoga, PA	EPA 300.0	
3019345001	3052 River Road, Conestoga, PA	EPA 410.4	
3019345001	3052 River Road, Conestoga, PA	EPA 420.4	420.4/9066
3019345001	3052 River Road, Conestoga, PA	Field	
3019345001	3052 River Road, Conestoga, PA	S2540C-11	
3019345001	3052 River Road, Conestoga, PA	S4500HB-11	
3019345001	3052 River Road, Conestoga, PA	SM2130B-2011	
3019345001	3052 River Road, Conestoga, PA	SM2320B-2011	
3019345001	3052 River Road, Conestoga, PA	SM2510B-2011	
3019345001	3052 River Road, Conestoga, PA	SM5310B-2011	
3019345001	3052 River Road, Conestoga, PA	SW846 8260B	
3019345001	3052 River Road, Conestoga, PA	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

1 of 1

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

* 3 0 1 9 3 4 5 *

Client Name: LCSWMA - Gerald E. Miller, Sr.

Address: 3052 River Road
Conestoga, PA 17516

Contact: Gerald E. Miller, Sr.

Phone#: (717) 872-5117

Project Name/#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

TAT [X] 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	---	250 ml	125 ml	125 ml	500 ml	500 ml
Preservative	HCl	H2SO4	H2SO4	HCl	---	H2SO4	HNO3	HNO3	None	None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**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, Td, SpC	Alkalinity, HCO3
					Enter Number of Containers Per Sample or Field Results Below.									
1 3052RIVERRD	2/28/19	1200	G	DW	2	1	2	23	X	1	1	1	1	1
2								3/2/19						
3														
4														
5														
6														
7														
8														
9														
10														

Receipt Information (completed by Receiving Lab)

Cooler Temp: 7 Therm ID: 352

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:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/28/19	1KSB	2 [signature]	2/28	1458
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ] [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ] PWSID # _____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- _____

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

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Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
LCSWMA	3019345	QN	3/2/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number: _____			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	(N/A)	YES	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		YES	(NO)
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____ _____ _____ _____ _____ _____ _____ _____

Temperature (°C): 7°C _____ _____ _____ _____ _____ _____ _____

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

Sampled same day as received

Rev. 1/10/2019

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

March 7, 2019

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:	**3017250**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019 3056 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 19, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Mr. Jeff Musser

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

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3017250 1ST QTR 2019 3056 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3017250001	3056RIVERRD	Water	2/19/2019 12:15	2/19/2019 17:30	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3017250 1ST QTR 2019 3056 RIVER RD

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed 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.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

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: 3017250 1ST QTR 2019 3056 RIVER RD

Lab ID: **3017250001** Date Collected: 2/19/2019 12:15 Matrix: Water

Sample ID: **3056RIVERRD** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Toluene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Total Xylenes	ND		ug/L	3.0	SW846 8260B			2/22/19 04:01	PDK	J
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Trichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 04:01	PDK	J
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	97.9		%	62 - 133	SW846 8260B			2/22/19 04:01	PDK	J
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B			2/22/19 04:01	PDK	J
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B			2/22/19 04:01	PDK	J
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B			2/22/19 04:01	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	6		mg/L	5	SM2320B-2011			2/26/19 05:42	MSA	C
Alkalinity, Total	6	1	mg/L	5	SM2320B-2011			2/26/19 05:42	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			2/23/19 18:12	RXB	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			2/27/19 15:02	AK	B
Chloride	26.7		mg/L	2.0	EPA 300.0			2/20/19 13:20	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			2/20/19 13:20	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/5/19 15:44	PAG	I
Nitrate-N	18.3		mg/L	0.20	EPA 300.0			2/20/19 13:20	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			2/20/19 13:20	CHW	C
pH	6.00	2	pH_Units		S4500HB-11			2/26/19 05:42	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	2/21/19 12:00	RXB	2/21/19 14:29	RXB	H
Specific Conductance	235		umhos/cm	1	SM2510B-2011			2/26/19 05:42	MSA	C

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ANALYTICAL RESULTS

Workorder: 3017250 1ST QTR 2019 3056 RIVER RD

Lab ID: **3017250001** Date Collected: 2/19/2019 12:15 Matrix: Water

Sample ID: **3056RIVERRD** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Sulfate	ND		mg/L	2.0	EPA 300.0			2/20/19 13:20	CHW	C
Total Dissolved Solids	124		mg/L	5	S2540C-11			2/21/19 14:40	EXS	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			2/21/19 00:18	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			2/20/19 05:25	MBW	C
METALS										
Calcium, Total	8.9		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:26	MNP	D1
Calcium, Dissolved	9.2		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:28	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:06	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:28	MNP	E
Magnesium, Total	13.1		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:06	MNP	D1
Magnesium, Dissolved	13.4		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:28	MNP	E
Manganese, Total	0.13		mg/L	0.0025	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:06	MNP	D1
Manganese, Dissolved	0.13		mg/L	0.0050	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:28	MNP	E
Potassium, Total	1.8		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:26	MNP	D1
Potassium, Dissolved	1.5		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:28	MNP	E
Sodium, Total	8.0		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:06	MNP	D1
Sodium, Dissolved	7.8		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:28	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.03		pH_Units		Field			2/19/19 12:15	BGS	M
Specific Conductance, Field	252		umhos/cm	1	Field			2/19/19 12:15	BGS	M
Temperature	15.30		Deg. C		Field			2/19/19 12:15	BGS	M

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3017250 1ST QTR 2019 3056 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3017250001	1	3056RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3017250001	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: 3017250 1ST QTR 2019 3056 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3017250001	3056RIVERRD	D6919-09	
3017250001	3056RIVERRD	EPA 200.7	EPA ACID
3017250001	3056RIVERRD	EPA 200.7	EPA TRMD
3017250001	3056RIVERRD	EPA 300.0	
3017250001	3056RIVERRD	EPA 410.4	
3017250001	3056RIVERRD	EPA 420.4	420.4/9066
3017250001	3056RIVERRD	Field	
3017250001	3056RIVERRD	S2540C-11	
3017250001	3056RIVERRD	S4500HB-11	
3017250001	3056RIVERRD	SM2130B-2011	
3017250001	3056RIVERRD	SM2320B-2011	
3017250001	3056RIVERRD	SM2510B-2011	
3017250001	3056RIVERRD	SM5310B-2011	
3017250001	3056RIVERRD	SW846 8260B	
3017250001	3056RIVERRD	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

COC #

ALS C

1 of 1

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

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 [X] 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

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**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, Tb, SpC	Alkalinity, HCO3
			Enter Number of Containers Per Sample or Field Results Below.											
1 3056RIVERRD	2/19/19	1215	G	DW	2	1	2	3	X	1	1	1	1	1
2								2 2/19/19						
3														
4														
5														
6														
7														
8														
9														
10														

Cooler Temp: 1 °C Therm ID: 352

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:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/19/19	1800	2 [signature] ALS	2/19/19	1730
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ]

PWSID # _____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- _____

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Ol=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

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
LCSWMA	3017250	QW	2/19/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	(NO)
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____

Temperature (°C): 1°C

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

Rev. 1/10/2019

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March 7, 2019

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:	**3017249**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019 3060 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 19, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Mr. Jeff Musser

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

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3017249 1ST QTR 2019 3060 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3017249001	3060RIVERRD	Water	2/19/2019 12:20	2/19/2019 17:30	Mr. Brian G Shade

ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3017249 1ST QTR 2019 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 preformed 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.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

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: 3017249 1ST QTR 2019 3060 RIVER RD

Lab ID: **3017249001** Date Collected: 2/19/2019 12:20 Matrix: Water

Sample ID: **3060RIVERRD** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Toluene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Total Xylenes	ND		ug/L	3.0	SW846 8260B			2/22/19 03:38	PDK	J
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Trichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 03:38	PDK	J
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.6		%	62 - 133	SW846 8260B			2/22/19 03:38	PDK	J
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			2/22/19 03:38	PDK	J
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B			2/22/19 03:38	PDK	J
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B			2/22/19 03:38	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	10		mg/L	5	SM2320B-2011			2/26/19 05:32	MSA	C
Alkalinity, Total	10	1	mg/L	5	SM2320B-2011			2/26/19 05:32	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			2/23/19 17:57	RXB	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			2/27/19 15:02	AK	B
Chloride	16.4		mg/L	2.0	EPA 300.0			2/20/19 13:08	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			2/20/19 13:08	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/5/19 15:19	PAG	I
Nitrate-N	12.8		mg/L	0.20	EPA 300.0			2/20/19 13:08	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			2/20/19 13:08	CHW	C
pH	6.27	2	pH_Units		S4500HB-11			2/26/19 05:32	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	2/21/19 12:00	RXB	2/21/19 14:29	RXB	H
Specific Conductance	200		umhos/cm	1	SM2510B-2011			2/26/19 05:32	MSA	C

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3017249 1ST QTR 2019 3060 RIVER RD

Lab ID: **3017249001** Date Collected: 2/19/2019 12:20 Matrix: Water

Sample ID: **3060RIVERRD** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Sulfate	10.4		mg/L	2.0	EPA 300.0			2/20/19 13:08	CHW	C
Total Dissolved Solids	128		mg/L	5	S2540C-11			2/21/19 14:40	EXS	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			2/21/19 00:18	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			2/20/19 05:25	MBW	C
METALS										
Calcium, Total	9.6		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:23	MNP	D1
Calcium, Dissolved	9.0		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:25	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:03	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:25	MNP	E
Magnesium, Total	11.4		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:03	MNP	D1
Magnesium, Dissolved	10.7		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:25	MNP	E
Manganese, Total	0.10		mg/L	0.0025	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:03	MNP	D1
Manganese, Dissolved	0.095		mg/L	0.0050	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:25	MNP	E
Potassium, Total	2.0		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:23	MNP	D1
Potassium, Dissolved	1.6		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:25	MNP	E
Sodium, Total	8.0		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	2/27/19 18:03	MNP	D1
Sodium, Dissolved	7.1		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:25	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.16		pH_Units		Field			2/19/19 12:20	BGS	M
Specific Conductance, Field	204		umhos/cm	1	Field			2/19/19 12:20	BGS	M
Temperature	14.20		Deg. C		Field			2/19/19 12:20	BGS	M

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3017249 1ST QTR 2019 3060 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3017249001	1	3060RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3017249001	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: 3017249 1ST QTR 2019 3060 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3017249001	3060RIVERRD	D6919-09	
3017249001	3060RIVERRD	EPA 200.7	EPA ACID
3017249001	3060RIVERRD	EPA 200.7	EPA TRMD
3017249001	3060RIVERRD	EPA 300.0	
3017249001	3060RIVERRD	EPA 410.4	
3017249001	3060RIVERRD	EPA 420.4	420.4/9066
3017249001	3060RIVERRD	Field	
3017249001	3060RIVERRD	S2540C-11	
3017249001	3060RIVERRD	S4500HB-11	
3017249001	3060RIVERRD	SM2130B-2011	
3017249001	3060RIVERRD	SM2320B-2011	
3017249001	3060RIVERRD	SM2510B-2011	
3017249001	3060RIVERRD	SM5310B-2011	
3017249001	3060RIVERRD	SW846 8260B	
3017249001	3060RIVERRD	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

COC ALS

1 of 1

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

Client Name: Lancaster County Solid Waste MA	Container Type	AG	AN	AN	CG	---	PL	PL	PL	PL	PL
Address: 1299 Harrisburg Pike, P.O. Box 4424	Container Size	40 ml	125 ml	250 ml	40 ml	---	500 ml	250 ml	250 ml	2 L	500 ml
Lancaster, PA 17604	Preservative	HCl	H2SO4	H2SO4	HCl	---	H2SO4	HNO3	HNO3	None	None
Contact: Mark Reider	ANALYSES/METHOD REQUESTED										
Phone#: (717) 735-0193											
Project Name/#: LCSWMA - Quarterly											
Bill To: Lancaster County Solid Waste MA											
TAT [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.											
Date Required: _____ Approved By: _____											
Email? [ ]-Y _____											
Fax? [ ]-Y No.: _____											

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	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, Tb, SpC	Alkalinity, HCO3
			Enter Number of Containers Per Sample or Field Results Below.											
1 3060RIVERRD	2/19/19	1220	G	DW	2	1	2	23	X	1	1	1	1	1
2								QN 2/19/19						
3														
4														
5														
6														
7														
8														
9														
10														

Receipt Information (completed by Receiving Lab)

Cooler Temp: 1°C Therm ID: 352

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:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] AS	2/19/19	1720	2 QN PIO	2/19/19	1730
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ] [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ] PWSID # _____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- _____

* G=Grab; C=Composite

**Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Ol=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

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
LC3WMA	3017249	QW	2/19/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	(NO)
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____

Temperature (°C): 1°C

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

Rev. 1/10/2019

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March 13, 2019

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:	**3019341**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019-3076 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, February 28, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Landowner , Mr. Jeff Musser

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

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3019341 1ST QTR 2019-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3019341001	3076 River Road, Conestoga, PA	Water	2/28/2019 12:15	2/28/2019 14:58	Mr. Brian G Shade
3019341002	Field Blank	Water	2/28/2019 13:00	2/28/2019 14:58	Mr. Brian G Shade
3019341003	Trip Blank	Water	2/28/2019 14:58	2/28/2019 14:58	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3019341 1ST QTR 2019-3076 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 preformed 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”.
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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: 3019341 1ST QTR 2019-3076 RIVER RD

Lab ID: **3019341001** Date Collected: 2/28/2019 12:15 Matrix: Water

Sample ID: **3076 River Road, Conestoga, PA** Date Received: 2/28/2019 14:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Toluene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/5/19 16:36	TMP	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 16:36	TMP	K
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	95		%	62 - 133	SW846 8260B			3/5/19 16:36	TMP	K
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			3/5/19 16:36	TMP	K
Dibromofluoromethane (S)	88.7		%	78 - 116	SW846 8260B			3/5/19 16:36	TMP	K
Toluene-d8 (S)	98.4		%	76 - 127	SW846 8260B			3/5/19 16:36	TMP	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	11		mg/L	5	SM2320B-2011			3/5/19 10:22	MSA	C
Alkalinity, Total	11	1	mg/L	5	SM2320B-2011			3/5/19 10:22	MSA	C
Ammonia-N	0.237		mg/L	0.100	D6919-09			3/8/19 18:27	NJA	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			3/11/19 11:18	AK	B
Chloride	50.7		mg/L	2.0	EPA 300.0			3/1/19 05:50	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/19 05:50	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/11/19 16:11	PAG	I
Nitrate-N	12.0		mg/L	0.20	EPA 300.0			3/1/19 05:50	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/19 05:50	CHW	C
pH	6.24	2	pH_Units		S4500HB-11			3/5/19 10:22	MSA	C
Phenolics	0.008		mg/L	0.005	EPA 420.4	3/4/19 12:00	RXB	3/6/19 13:45	RXB	H
Specific Conductance	296		umhos/cm	1	SM2510B-2011			3/5/19 10:22	MSA	C

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3019341 1ST QTR 2019-3076 RIVER RD

Lab ID: **3019341001** Date Collected: 2/28/2019 12:15 Matrix: Water

Sample ID: **3076 River Road, Conestoga, PA** Date Received: 2/28/2019 14:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	20.4		mg/L	2.0	EPA 300.0			3/1/19 05:50	CHW	C
Total Dissolved Solids	161		mg/L	5	S2540C-11			3/5/19 16:10	EXS	C
Total Organic Carbon (TOC)	0.76		mg/L	0.50	SM5310B-2011			3/4/19 21:54	PAG	F
Turbidity	0.68		NTU	0.10	SM2130B-2011			3/1/19 05:20	MBW	C
METALS										
Calcium, Total	15.4		mg/L	0.050	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:27	MNP	D1
Calcium, Dissolved	15.1		mg/L	0.10	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:35	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:27	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:35	MNP	E
Magnesium, Total	9.1		mg/L	0.050	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:27	MNP	D1
Magnesium, Dissolved	9.1		mg/L	0.10	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:35	MNP	E
Manganese, Total	0.25		mg/L	0.0025	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:27	MNP	D1
Manganese, Dissolved	0.25		mg/L	0.0050	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:35	MNP	E
Potassium, Total	3.2		mg/L	0.25	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:27	MNP	D1
Potassium, Dissolved	2.7		mg/L	0.50	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:35	MNP	E
Sodium, Total	20.2		mg/L	0.25	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:27	MNP	D1
Sodium, Dissolved	20.2		mg/L	0.50	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:35	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.19		pH_Units		Field			2/28/19 12:15	BGS	N
Specific Conductance, Field	283		umhos/cm	1	Field			2/28/19 12:15	BGS	N
Temperature	11.90		Deg. C		Field			2/28/19 12:15	BGS	N

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3019341 1ST QTR 2019-3076 RIVER RD

Lab ID: **3019341002** Date Collected: 2/28/2019 13:00 Matrix: Water

Sample ID: **Field Blank** Date Received: 2/28/2019 14:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/5/19 13:31	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 13:31	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92		%	62 - 133	SW846 8260B			3/5/19 13:31	TMP	A
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B			3/5/19 13:31	TMP	A
Dibromofluoromethane (S)	86.8		%	78 - 116	SW846 8260B			3/5/19 13:31	TMP	A
Toluene-d8 (S)	98.2		%	76 - 127	SW846 8260B			3/5/19 13:31	TMP	A

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3019341 1ST QTR 2019-3076 RIVER RD

Lab ID: **3019341003** Date Collected: 2/28/2019 14:58 Matrix: Water

Sample ID: **Trip Blank** Date Received: 2/28/2019 14:58

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/5/19 13:54	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 13:54	TMP	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.2		%	62 - 133	SW846 8260B			3/5/19 13:54	TMP	A
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B			3/5/19 13:54	TMP	A
Dibromofluoromethane (S)	87		%	78 - 116	SW846 8260B			3/5/19 13:54	TMP	A
Toluene-d8 (S)	98.3		%	76 - 127	SW846 8260B			3/5/19 13:54	TMP	A

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3019341 1ST QTR 2019-3076 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3019341001	1	3076 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3019341001	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: 3019341 1ST QTR 2019-3076 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3019341001	3076 River Road, Conestoga, PA	D6919-09	
3019341001	3076 River Road, Conestoga, PA	EPA 200.7	EPA ACID
3019341001	3076 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
3019341001	3076 River Road, Conestoga, PA	EPA 300.0	
3019341001	3076 River Road, Conestoga, PA	EPA 410.4	
3019341001	3076 River Road, Conestoga, PA	EPA 420.4	420.4/9066
3019341001	3076 River Road, Conestoga, PA	Field	
3019341001	3076 River Road, Conestoga, PA	S2540C-11	
3019341001	3076 River Road, Conestoga, PA	S4500HB-11	
3019341001	3076 River Road, Conestoga, PA	SM2130B-2011	
3019341001	3076 River Road, Conestoga, PA	SM2320B-2011	
3019341001	3076 River Road, Conestoga, PA	SM2510B-2011	
3019341001	3076 River Road, Conestoga, PA	SM5310B-2011	
3019341001	3076 River Road, Conestoga, PA	SW846 8260B	
3019341001	3076 River Road, Conestoga, PA	SW846 9020B	
3019341002	Field Blank	SW846 8260B	
3019341003	Trip Blank	SW846 8260B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

30193541

1 of 1

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

Client Name: LCSWMA - Brian Sensenich
Address: 3076 Rover Road
Conestoga, PA 17516
Contact: Brian Sensenich
Phone#: (717) 676-5779
Project Name/#: LCSWMA - Quarterly
Bill To: LCSWMA - Brian Sensenich

TAT [X] 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	—	250 ml	125 ml	125 ml	500 ml	500 ml
Preservative	HCl	H2SO4	H2SO4	HCl	—	H2SO4	HNO3	HNO3	None	None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**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, Tb, SpC	Alkalinity, HCO3
					Enter Number of Containers Per Sample or Field Results Below.									
1 3076RIVERRD	2/28/19	1215	G	DW	2	1	2	3	X	1	1	1	1	1
2 Field Blank	1	1200	1	1				2						
3 Trip Blank	1	1458	1	1				2						
4									3/2/19					
5														
6														
7														
8														
9														
10														

Project Comments:

LOGGED BY(signature): DATE TIME
REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/28/19	1458	2 [signature]	3/1/19	1458
3			4		
5			6		
7			8		
9			10		

Receiving Lab)
Cooler Temp: 7 Therm ID: 352
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:

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] PWSID # _____
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type-

* G=Grab; C=Composite
**Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Oil=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

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
LCSWMA	3019341	QW	3/2/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	(YES)	NO
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		YES	(NO)
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____ _____ _____ _____ _____ _____ _____ _____

Temperature (°C): 7.5 _____ _____ _____ _____ _____ _____ _____

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

Sampled same day as received

Rev. 1/10/2019

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March 11, 2019

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:	**3017245**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019 3079 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 19, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Mr. Jeff Musser

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

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3017245 1ST QTR 2019 3079 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3017245001	3079RIVERRD	Water	2/19/2019 15:00	2/19/2019 17:30	Mr. Brian G Shade

ALS Environmental

301 Fulling Mill Road - Middletown, PA 17057 - Phone: 717-944-5541 - Fax: 717-944-1430 - www.alsglobal.com

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

SAMPLE SUMMARY

Workorder: 3017245 1ST QTR 2019 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 preformed 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.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

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: 3017245 1ST QTR 2019 3079 RIVER RD

Lab ID: **3017245001** Date Collected: 2/19/2019 15:00 Matrix: Water

Sample ID: **3079RIVERRD** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	3	ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			2/22/19 05:53	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 05:53	PDK	K
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	128		%	62 - 133	SW846 8260B			2/22/19 05:53	PDK	K
4-Bromofluorobenzene (S)	105		%	79 - 114	SW846 8260B			2/22/19 05:53	PDK	K
Dibromofluoromethane (S)	112		%	78 - 116	SW846 8260B			2/22/19 05:53	PDK	K
Toluene-d8 (S)	96.5		%	76 - 127	SW846 8260B			2/22/19 05:53	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	32		mg/L	5	SM2320B-2011			2/26/19 04:34	MSA	C
Alkalinity, Total	32	1	mg/L	5	SM2320B-2011			2/26/19 04:34	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			2/23/19 15:59	RXB	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			2/27/19 10:57	AK	B
Chloride	33.2		mg/L	2.0	EPA 300.0			2/20/19 10:50	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			2/20/19 10:50	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/5/19 12:37	PAG	I
Nitrate-N	ND		mg/L	0.20	EPA 300.0			2/20/19 10:50	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			2/20/19 10:50	CHW	C
pH	6.48	2	pH_Units		S4500HB-11			2/26/19 04:34	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	2/21/19 12:00	RXB	2/21/19 14:29	RXB	H
Specific Conductance	183		umhos/cm	1	SM2510B-2011			2/26/19 04:34	MSA	C

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ANALYTICAL RESULTS

Workorder: 3017245 1ST QTR 2019 3079 RIVER RD

Lab ID: **3017245001** Date Collected: 2/19/2019 15:00 Matrix: Water

Sample ID: **3079RIVERRD** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Sulfate	16.0		mg/L	2.0	EPA 300.0			2/20/19 10:50	CHW	C
Total Dissolved Solids	157		mg/L	5	S2540C-11			2/21/19 14:40	EXS	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			2/20/19 21:52	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			2/20/19 05:25	MBW	C
METALS										
Calcium, Total	9.5		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:07	MNP	D1
Calcium, Dissolved	9.2		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:08	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:53	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:08	MNP	E
Magnesium, Total	5.3		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:53	MNP	D1
Magnesium, Dissolved	5.2		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:08	MNP	E
Manganese, Total	0.27		mg/L	0.0025	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:53	MNP	D1
Manganese, Dissolved	0.27		mg/L	0.0050	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:08	MNP	E
Potassium, Total	1.5		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:07	MNP	D1
Potassium, Dissolved	1.2		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:08	MNP	E
Sodium, Total	12.3		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:53	MNP	D1
Sodium, Dissolved	11.6		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:08	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.83		pH_Units		Field			2/19/19 15:00	BGS	N
Specific Conductance, Field	206		umhos/cm	1	Field			2/19/19 15:00	BGS	N
Temperature	9.15		Deg. C		Field			2/19/19 15:00	BGS	N

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3017245 1ST QTR 2019 3079 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3017245001	1	3079RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3017245001	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.				
3017245001	3	3079RIVERRD	SW846 8260B	Benzene
A positive residual chlorine result was detected in the preservation check for the volatile organics analysis of this sample. This may be due to the presence of residual chlorine or another oxidizing agent.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3017245 1ST QTR 2019 3079 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3017245001	3079RIVERRD	D6919-09	
3017245001	3079RIVERRD	EPA 200.7	EPA ACID
3017245001	3079RIVERRD	EPA 200.7	EPA TRMD
3017245001	3079RIVERRD	EPA 300.0	
3017245001	3079RIVERRD	EPA 410.4	
3017245001	3079RIVERRD	EPA 420.4	420.4/9066
3017245001	3079RIVERRD	Field	
3017245001	3079RIVERRD	S2540C-11	
3017245001	3079RIVERRD	S4500HB-11	
3017245001	3079RIVERRD	SM2130B-2011	
3017245001	3079RIVERRD	SM2320B-2011	
3017245001	3079RIVERRD	SM2510B-2011	
3017245001	3079RIVERRD	SM5310B-2011	
3017245001	3079RIVERRD	SW846 8260B	
3017245001	3079RIVERRD	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

1 of 1

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

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 Fire Co.

Bill To: Lancaster County Solid Waste MA

TAT [X] 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	
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

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**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, Tb, SpC	Alkalinity, HCO3
					Enter Number of Containers Per Sample or Field Results Below.									
1 3079RIVERRD	2/19/19	1500	G	DW	2	1	2	3	X	1	1	1	1	1
2								2/19/19						
3														
4														
5														
6														
7														
8														
9														
10														

Cooler Temp: 1°C Therm ID: 352

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:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/19/19	1730	2 [signature] [signature]	2/19/19	1730
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ] [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ] PWSID # _____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- _____

* G=Grab; C=Composite **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Ol=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

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
LCSWMA	3017245	QW	2/19/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	(NO)
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____

Temperature (°C): 1 °C

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

Rev. 1/10/2019

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March 11, 2019

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:	**3017248**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019-3088 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 19, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Landowner , Mr. Jeff Musser

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

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3017248 1ST QTR 2019-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3017248001	3088 River Road, Conestoga PA	Water	2/19/2019 13:45	2/19/2019 17:30	Mr. Brian G Shade

ALS Environmental

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SAMPLE SUMMARY

Workorder: 3017248 1ST QTR 2019-3088 RIVER RD

Notes

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-- 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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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: 3017248 1ST QTR 2019-3088 RIVER RD

Lab ID: **3017248001** Date Collected: 2/19/2019 13:45 Matrix: Water

Sample ID: **3088 River Road, Conestoga PA** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Toluene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Total Xylenes	ND		ug/L	3.0	SW846 8260B			2/22/19 03:15	PDK	J
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Trichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 03:15	PDK	J
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	97.2		%	62 - 133	SW846 8260B			2/22/19 03:15	PDK	J
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B			2/22/19 03:15	PDK	J
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B			2/22/19 03:15	PDK	J
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B			2/22/19 03:15	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	152		mg/L	5	SM2320B-2011			2/26/19 05:23	MSA	C
Alkalinity, Total	152	1	mg/L	5	SM2320B-2011			2/26/19 05:23	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			2/23/19 17:43	RXB	B
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			2/27/19 15:02	AK	B
Chloride	297		mg/L	5.0	EPA 300.0			2/22/19 06:09	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			2/20/19 11:53	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/5/19 14:58	PAG	I
Nitrate-N	8.2		mg/L	0.20	EPA 300.0			2/20/19 11:53	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			2/20/19 11:53	CHW	C
pH	7.46	2	pH_Units		S4500HB-11			2/26/19 05:23	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	2/21/19 12:00	RXB	2/21/19 14:29	RXB	H
Specific Conductance	1380		umhos/cm	1	SM2510B-2011			2/26/19 05:23	MSA	C

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ANALYTICAL RESULTS

Workorder: 3017248 1ST QTR 2019-3088 RIVER RD

Lab ID: **3017248001** Date Collected: 2/19/2019 13:45 Matrix: Water

Sample ID: **3088 River Road, Conestoga PA** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Sulfate	3.5		mg/L	2.0	EPA 300.0			2/20/19 11:53	CHW	C
Total Dissolved Solids	680		mg/L	5	S2540C-11			2/21/19 14:40	EXS	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			2/21/19 00:18	PAG	F
Turbidity	0.10		NTU	0.10	SM2130B-2011			2/20/19 05:25	MBW	C
METALS										
Calcium, Total	0.13		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:20	MNP	D1
Calcium, Dissolved	ND		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:22	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:59	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:22	MNP	E
Magnesium, Total	0.11		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:59	MNP	D1
Magnesium, Dissolved	ND		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:22	MNP	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:59	MNP	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:22	MNP	E
Potassium, Total	2.3		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:20	MNP	D1
Potassium, Dissolved	2.0		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:22	MNP	E
Sodium, Total	208		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:59	MNP	D1
Sodium, Dissolved	228		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:22	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.51		pH_Units		Field			2/19/19 13:45	BGS	M
Specific Conductance, Field	938		umhos/cm	1	Field			2/19/19 13:45	BGS	M
Temperature	9.96		Deg. C		Field			2/19/19 13:45	BGS	M

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3017248 1ST QTR 2019-3088 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3017248001	1	3088 River Road, Conestoga PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3017248001	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.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3017248 1ST QTR 2019-3088 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3017248001	3088 River Road, Conestoga PA	D6919-09	
3017248001	3088 River Road, Conestoga PA	EPA 200.7	EPA ACID
3017248001	3088 River Road, Conestoga PA	EPA 200.7	EPA TRMD
3017248001	3088 River Road, Conestoga PA	EPA 300.0	
3017248001	3088 River Road, Conestoga PA	EPA 410.4	
3017248001	3088 River Road, Conestoga PA	EPA 420.4	420.4/9066
3017248001	3088 River Road, Conestoga PA	Field	
3017248001	3088 River Road, Conestoga PA	S2540C-11	
3017248001	3088 River Road, Conestoga PA	S4500HB-11	
3017248001	3088 River Road, Conestoga PA	SM2130B-2011	
3017248001	3088 River Road, Conestoga PA	SM2320B-2011	
3017248001	3088 River Road, Conestoga PA	SM2510B-2011	
3017248001	3088 River Road, Conestoga PA	SM5310B-2011	
3017248001	3088 River Road, Conestoga PA	SW846 8260B	
3017248001	3088 River Road, Conestoga PA	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

1 of 1

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

Client Name: LCSWMA - Hans Weber and Deb Kalbach	Container Type	AG	AN	AN	CG	—	PL	PL	PL	PL	/ Receiving Lab)
Address: 3088 River Road	Container Size	40 ml	125 ml	250 ml	40 ml	—	500 ml	250 ml	250 ml	2 L	500 ml
Conestoga, PA 17516	Preservative	HCl	H2SO4	H2SO4	HCl	---	H2SO4	HNO3	HNO3	None	None
Contact: Hans Weber and Deb Kalbach	ANALYSES/METHOD REQUESTED										
Phone#: (717) 419-7982											
Project Name/#: LCSWMA - Quarterly											
Bill To: LCSWMA - Hans Weber and Deb Kalbach											

Cooler Temp: 1°C Therm ID: 352

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 #:

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

Date Required: _____ Approved By: _____

Email? [ ] -Y _____

Fax? [ ] -Y No.: _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	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, Tb, SpC	Alkalinity, HCO3	Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below.										
1 3088RIVER RD	2/19/19	1345	G	DW	2	1	2	23	X	1	1	1	1	1	
2								2/19/19							
3															
4															
5															
6															
7															
8															
9															
10															

ALS Field Services: ☐Pickup ☐Labor ☐Composite_Sampling ☐Rental_Equipment ☐Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/19/19	1730	2 [signature] ALS	2/19/19	1730
3			4		
5			6		
7			8		
9			10		

Data Deliverables: ☐Standard ☐CLP-like ☐USACE ☐

Special Processing: USACE ☐ Navy ☐ ☐

State Samples Collected In: ☐NY ☐NJ [X]PA ☐NC ☐

Reportable to PADEP? Yes ☐ PWSID # _____

Sample Disposal: Lab [X] Special ☐

EDDS: Format Type- _____

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=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

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
LCSWMA	3017248	QW	2/19/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	(NO)
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____

Temperature (°C): 1°C

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

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March 11, 2019

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:	**3017247**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019-3100 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 19, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Landowner , Mr. Jeff Musser

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

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3017247 1ST QTR 2019-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3017247001	3100 River Road, Conestoga, PA	Water	2/19/2019 13:55	2/19/2019 17:30	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3017247 1ST QTR 2019-3100 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 preformed 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.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

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: 3017247 1ST QTR 2019-3100 RIVER RD

Lab ID: **3017247001** Date Collected: 2/19/2019 13:55 Matrix: Water

Sample ID: **3100 River Road, Conestoga, PA** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			2/22/19 02:52	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			2/22/19 02:52	PDK	K
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	98.6		%	62 - 133	SW846 8260B			2/22/19 02:52	PDK	K
4-Bromofluorobenzene (S)	108		%	79 - 114	SW846 8260B			2/22/19 02:52	PDK	K
Dibromofluoromethane (S)	102		%	78 - 116	SW846 8260B			2/22/19 02:52	PDK	K
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B			2/22/19 02:52	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	26		mg/L	5	SM2320B-2011			2/26/19 05:12	MSA	C
Alkalinity, Total	26	1	mg/L	5	SM2320B-2011			2/26/19 05:12	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			2/23/19 17:28	RXB	B
Chemical Oxygen Demand (COD)	16		mg/L	15	EPA 410.4			2/27/19 15:02	AK	B
Chloride	41.4		mg/L	2.0	EPA 300.0			2/20/19 11:40	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			2/20/19 11:40	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/5/19 13:10	PAG	I
Nitrate-N	4.4		mg/L	0.20	EPA 300.0			2/20/19 11:40	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			2/20/19 11:40	CHW	C
pH	6.36	2	pH_Units		S4500HB-11			2/26/19 05:12	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	2/21/19 12:00	RXB	2/21/19 14:29	RXB	H
Specific Conductance	231		umhos/cm	1	SM2510B-2011			2/26/19 05:12	MSA	C

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3017247 1ST QTR 2019-3100 RIVER RD

Lab ID: **3017247001** Date Collected: 2/19/2019 13:55 Matrix: Water

Sample ID: **3100 River Road, Conestoga, PA** Date Received: 2/19/2019 17:30

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	14.2		mg/L	2.0	EPA 300.0			2/20/19 11:40	CHW	C
Total Dissolved Solids	114		mg/L	5	S2540C-11			2/21/19 14:40	EXS	C
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			2/20/19 21:52	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			2/20/19 05:25	MBW	C
METALS										
Calcium, Total	16.6		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:16	MNP	D1
Calcium, Dissolved	16.2		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:18	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:56	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:18	MNP	E
Magnesium, Total	6.6		mg/L	0.050	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:56	MNP	D1
Magnesium, Dissolved	6.5		mg/L	0.10	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:18	MNP	E
Manganese, Total	0.012		mg/L	0.0025	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:56	MNP	D1
Manganese, Dissolved	0.013		mg/L	0.0050	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:18	MNP	E
Potassium, Total	1.1		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	3/1/19 15:16	MNP	D1
Potassium, Dissolved	0.87		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:18	MNP	E
Sodium, Total	14.4		mg/L	0.25	EPA 200.7	2/21/19 07:40	BMK	2/27/19 17:56	MNP	D1
Sodium, Dissolved	14.0		mg/L	0.50	EPA 200.7	2/22/19 07:33	SRT	3/6/19 14:18	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.32		pH_Units		Field			2/19/19 13:55	BGS	N
Specific Conductance, Field	249		umhos/cm	1	Field			2/19/19 13:55	BGS	N
Temperature	9.66		Deg. C		Field			2/19/19 13:55	BGS	N

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3017247 1ST QTR 2019-3100 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3017247001	1	3100 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3017247001	2	3100 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3017247 1ST QTR 2019-3100 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3017247001	3100 River Road, Conestoga, PA	D6919-09	
3017247001	3100 River Road, Conestoga, PA	EPA 200.7	EPA ACID
3017247001	3100 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
3017247001	3100 River Road, Conestoga, PA	EPA 300.0	
3017247001	3100 River Road, Conestoga, PA	EPA 410.4	
3017247001	3100 River Road, Conestoga, PA	EPA 420.4	420.4/9066
3017247001	3100 River Road, Conestoga, PA	Field	
3017247001	3100 River Road, Conestoga, PA	S2540C-11	
3017247001	3100 River Road, Conestoga, PA	S4500HB-11	
3017247001	3100 River Road, Conestoga, PA	SM2130B-2011	
3017247001	3100 River Road, Conestoga, PA	SM2320B-2011	
3017247001	3100 River Road, Conestoga, PA	SM2510B-2011	
3017247001	3100 River Road, Conestoga, PA	SM5310B-2011	
3017247001	3100 River Road, Conestoga, PA	SW846 8260B	
3017247001	3100 River Road, Conestoga, PA	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

1 of 1

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

Client Name: LCSWMA - Larry Kirchner	Container Type	AG	AN	AN	CG	---	PL	PL	PL	PL	PL
Address: 3100 River Road	Container Size	40 ml	125 ml	250 ml	40 ml	---	500 ml	250 ml	250 ml	2 L	500 ml
Conestoga, PA 17516	Preservative	HCl	H2SO4	H2SO4	HCl	---	H2SO4	HNO3	HNO3	None	None
Contact: Ann Kirchner	ANALYSES/METHOD REQUESTED										
Phone#: (717) 584-0030											
Project Name/#: LCSWMA - Quarterly											
Bill To: Lancaster County Solid Waste MA											
TAT [X] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.											
Date Required: _____ Approved By: _____											
Email? [ ]-Y _____											
Fax? [ ]-Y No.: _____											

Receipt Information: (Completed by Receiving Lab)

Cooler Temp: 1°C Therm ID: 352

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 Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**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, Tb, SpC	Alkalinity, HCO3	Sample/COC Comments
			Enter Number of Containers Per Sample or Field Results Below.												
1 3100RIVERRD	2/19/19	1355	G	DW	2	1	2	3	X	1	1	1	1	1	
2								2/19/19							
3															
4															
5															
6															
7															
8															
9															
10															

ALS Field Services: ☐Pickup ☐Labor ☐Composite_Sampling ☐Rental_Equipment ☐Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/19/19	1230	2 [signature] FX	2/19/19	1730
3			4		
5			6		
7			8		
9			10		

Data Deliverables: ☐Standard ☐CLP-like ☐USACE

Special Processing: USACE ☐ Navy ☐

State Samples Collected In: ☐NY ☐NJ [X] PA ☐NC ☐

Reportable to PADEP? Yes ☐ PWSID # _____

Sample Disposal: Lab [X] Special ☐

EDDS: Format Type- _____

* G=Grab; C=Composite ** Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; OI=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

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
LCSWMA	3017247	QW	2/19/19

1. Were airbills / tracking numbers present and recorded?	(NONE)	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody Seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present?		(YES)	NO
5. Are the COC and bottle labels complete, legible and in agreement?		(YES)	NO
5a. Does the COC contain sample locations?		(YES)	NO
5b. Does the COC contain date and time of sample collection for all samples?		(YES)	NO
5c. Does the COC contain sample collectors name?		(YES)	NO
5d. Does the COC note the type(s) of preservation for all bottles?		(YES)	NO
5e. Does the COC note the number of bottles submitted for each sample?		(YES)	NO
5f. Does the COC note the type of sample, composite or grab?		(YES)	NO
5g. Does the COC note the matrix of the sample(s)?		(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		(YES)	NO
8. Are all samples within holding times for the requested analyses?		(YES)	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	(NO)
11. Were the samples received on ice?		(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C		(YES)	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	(N/A)	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	(N/A)	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	(N/A)	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	(N/A)	YES	NO

Cooler #: _____

Temperature (°C): 1°C

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

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March 13, 2019

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:	**3019327**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019-3106 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, February 28, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Landowner , Mr. Jeff Musser

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

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3019327 1ST QTR 2019-3106 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3019327001	3106 River Road, Conestoga, PA	Water	2/28/2019 12:30	2/28/2019 14:50	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3019327 1ST QTR 2019-3106 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 preformed 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.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

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: 3019327 1ST QTR 2019-3106 RIVER RD

Lab ID: **3019327001** Date Collected: 2/28/2019 12:30 Matrix: Water

Sample ID: **3106 River Road, Conestoga, PA** Date Received: 2/28/2019 14:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Toluene	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/5/19 15:50	TMP	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 15:50	TMP	K
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	91.2		%	62 - 133	SW846 8260B			3/5/19 15:50	TMP	K
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			3/5/19 15:50	TMP	K
Dibromofluoromethane (S)	86.6		%	78 - 116	SW846 8260B			3/5/19 15:50	TMP	K
Toluene-d8 (S)	99.2		%	76 - 127	SW846 8260B			3/5/19 15:50	TMP	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	12		mg/L	5	SM2320B-2011			3/5/19 10:04	MSA	C
Alkalinity, Total	12	1	mg/L	5	SM2320B-2011			3/5/19 10:04	MSA	C
Ammonia-N	0.324		mg/L	0.100	D6919-09			3/8/19 17:57	NJA	B
Chemical Oxygen Demand (COD)	17		mg/L	15	EPA 410.4			3/11/19 11:18	AK	B
Chloride	67.2		mg/L	2.0	EPA 300.0			3/1/19 05:37	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/19 05:37	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/11/19 15:05	PAG	I
Nitrate-N	12.1		mg/L	0.20	EPA 300.0			3/1/19 05:37	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/19 05:37	CHW	C
pH	6.48	2	pH_Units		S4500HB-11			3/5/19 10:04	MSA	C
Phenolics	0.011		mg/L	0.005	EPA 420.4	3/4/19 12:00	RXB	3/6/19 13:45	RXB	H
Specific Conductance	342		umhos/cm	1	SM2510B-2011			3/5/19 10:04	MSA	C

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ANALYTICAL RESULTS

Workorder: 3019327 1ST QTR 2019-3106 RIVER RD

Lab ID: **3019327001** Date Collected: 2/28/2019 12:30 Matrix: Water

Sample ID: **3106 River Road, Conestoga, PA** Date Received: 2/28/2019 14:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Sulfate	11.3		mg/L	2.0	EPA 300.0			3/1/19 05:37	CHW	C
Total Dissolved Solids	198		mg/L	5	S2540C-11			3/5/19 16:10	EXS	C
Total Organic Carbon (TOC)	0.68		mg/L	0.50	SM5310B-2011			3/4/19 21:54	PAG	F
Turbidity	0.27		NTU	0.10	SM2130B-2011			3/1/19 05:20	MBW	C
METALS										
Calcium, Total	10.7		mg/L	0.050	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:20	MNP	D1
Calcium, Dissolved	10.8		mg/L	0.10	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:21	MNP	E
Iron, Total	0.041		mg/L	0.030	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:20	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:21	MNP	E
Magnesium, Total	7.8		mg/L	0.050	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:20	MNP	D1
Magnesium, Dissolved	7.9		mg/L	0.10	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:21	MNP	E
Manganese, Total	0.055		mg/L	0.0025	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:20	MNP	D1
Manganese, Dissolved	0.052		mg/L	0.0050	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:21	MNP	E
Potassium, Total	1.3		mg/L	0.25	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:20	MNP	D1
Potassium, Dissolved	0.67		mg/L	0.50	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:21	MNP	E
Sodium, Total	37.6		mg/L	0.25	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:20	MNP	D1
Sodium, Dissolved	37.0		mg/L	0.50	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:21	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.28		pH_Units		Field			2/28/19 12:30	BGS	N
Specific Conductance, Field	299		umhos/cm	1	Field			2/28/19 12:30	BGS	N
Temperature	10.10		Deg. C		Field			2/28/19 12:30	BGS	N

Susan J. Scherer

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ALS Environmental

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3019327 1ST QTR 2019-3106 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3019327001	1	3106 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3019327001	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: 3019327 1ST QTR 2019-3106 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3019327001	3106 River Road, Conestoga, PA	D6919-09	
3019327001	3106 River Road, Conestoga, PA	EPA 200.7	EPA ACID
3019327001	3106 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
3019327001	3106 River Road, Conestoga, PA	EPA 300.0	
3019327001	3106 River Road, Conestoga, PA	EPA 410.4	
3019327001	3106 River Road, Conestoga, PA	EPA 420.4	420.4/9066
3019327001	3106 River Road, Conestoga, PA	Field	
3019327001	3106 River Road, Conestoga, PA	S2540C-11	
3019327001	3106 River Road, Conestoga, PA	S4500HB-11	
3019327001	3106 River Road, Conestoga, PA	SM2130B-2011	
3019327001	3106 River Road, Conestoga, PA	SM2320B-2011	
3019327001	3106 River Road, Conestoga, PA	SM2510B-2011	
3019327001	3106 River Road, Conestoga, PA	SM5310B-2011	
3019327001	3106 River Road, Conestoga, PA	SW846 8260B	
3019327001	3106 River Road, Conestoga, PA	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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* 3 0 1 9 3 2 7 *

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

Client Name: LCSWMA - Aaron Fry

Address: 3106 River Road

Conestoga, PA 17516

Contact: Aaron Fry

Phone#: (717) 669-6831

Project Name/#: LCSWMA - Quarterly

Bill To: LCSWMA - Aaron Fry

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

Date Required: _____ Approved By: _____

Email? [ ] -Y _____

Fax? [ ] -Y No.: _____

Cooler Temp: 6 Therm ID: 352 (Receiving Lab)

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 #:

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**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, Tb, SpC	Alkalinity, HCO3	Sample/COC Comments
					Enter Number of Containers Per Sample or Field Results Below.										
1 3106RIVERRD	2/28/19	1230	G	DW	2	1	2	23	X	1	1	1	1	1	
2								W 3249							
3															
4															
5															
6															
7															
8															
9															
10															

ALS Field Services: [ ]Pickup [ ]Labor [ ]Composite_Sampling [ ]Rental_Equipment [ ]Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/28/19	1455	2 [signature] NI	3/1/19	1450
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ] [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ] PWSID # _____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- _____

* G=Grab; C=Composite

**Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client: LCSWMA Work Order #: 3019377 Initials: WJ Date: 3-7-19

1. Were airbills / tracking numbers present and recorded?	NONE	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	NONE	YES	NO
3. Are Custody Seals on sample containers intact?	NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present?		YES	NO
5. Are the COC and bottle labels complete, legible and in agreement?		YES	NO
5a. Does the COC contain sample locations?		YES	NO
5b. Does the COC contain date and time of sample collection for all samples?		YES	NO
5c. Does the COC contain sample collectors name?		YES	NO
5d. Does the COC note the type(s) of preservation for all bottles?		YES	NO
5e. Does the COC note the number of bottles submitted for each sample?		YES	NO
5f. Does the COC note the type of sample, composite or grab?		YES	NO
5g. Does the COC note the matrix of the sample(s)?		YES	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		YES	NO
8. Are all samples within holding times for the requested analyses?		YES	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		YES	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	NO
11. Were the samples received on ice?		YES	NO
12. Were sample temperatures measured at 0.0-6.0°C	WJ 3-7-19	YES	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	NO
13b. Did the client provide a SDWA PWS ID#?	N/A	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	N/A	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	N/A	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	N/A	YES	NO

Cooler #: _____

Temperature (°C): 6

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

3 8260 VOC vials
1 not reportable

Rev. 1/10/2019

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March 13, 2019

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:	**3019328**
Purchase Order:	**PO1000126**	Workorder ID:	**1ST QTR 2019-3125 RIVER RD**

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, February 28, 2019.

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.

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

CC: Mr. Nicholas Rogers , Ms. Jordan Gallagher , Landowner , Mr. Jeff Musser

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

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3019328 1ST QTR 2019-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3019328001	3125RIVERRD	Water	2/28/2019 12:50	2/28/2019 14:50	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3019328 1ST QTR 2019-3125 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 preformed 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.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

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: 3019328 1ST QTR 2019-3125 RIVER RD

Lab ID: **3019328001** Date Collected: 2/28/2019 12:50 Matrix: Water

Sample ID: **3125RIVERRD** Date Received: 2/28/2019 14:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Toluene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			3/5/19 16:13	TMP	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			3/5/19 16:13	TMP	K
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichloroethane-d4 (S)	92.1		%	62 - 133	SW846 8260B			3/5/19 16:13	TMP	K
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B			3/5/19 16:13	TMP	K
Dibromofluoromethane (S)	86.5		%	78 - 116	SW846 8260B			3/5/19 16:13	TMP	K
Toluene-d8 (S)	96.2		%	76 - 127	SW846 8260B			3/5/19 16:13	TMP	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	174		mg/L	5	SM2320B-2011			3/5/19 10:13	MSA	C
Alkalinity, Total	174	1	mg/L	5	SM2320B-2011			3/5/19 10:13	MSA	C
Ammonia-N	0.207		mg/L	0.100	D6919-09			3/8/19 17:42	NJA	B
Chemical Oxygen Demand (COD)	16		mg/L	15	EPA 410.4			3/11/19 11:18	AK	B
Chloride	132		mg/L	2.0	EPA 300.0			3/1/19 05:24	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/19 05:24	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/11/19 15:34	PAG	I
Nitrate-N	7.1		mg/L	0.20	EPA 300.0			3/1/19 05:24	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/19 05:24	CHW	C
pH	7.82	2	pH_Units		S4500HB-11			3/5/19 10:13	MSA	C
Phenolics	0.011		mg/L	0.005	EPA 420.4	3/4/19 12:00	RXB	3/6/19 13:45	RXB	H
Specific Conductance	845		umhos/cm	1	SM2510B-2011			3/5/19 10:13	MSA	C

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

ANALYTICAL RESULTS

Workorder: 3019328 1ST QTR 2019-3125 RIVER RD

Lab ID: **3019328001** Date Collected: 2/28/2019 12:50 Matrix: Water

Sample ID: **3125RIVERRD** Date Received: 2/28/2019 14:50

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	*Cntr*
Sulfate	27.6		mg/L	2.0	EPA 300.0			3/1/19 05:24	CHW	C
Total Dissolved Solids	457		mg/L	5	S2540C-11			3/5/19 16:10	EXS	C
Total Organic Carbon (TOC)	1.3		mg/L	0.50	SM5310B-2011			3/4/19 21:54	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			3/1/19 05:20	MBW	C
METALS										
Calcium, Total	0.21		mg/L	0.050	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:23	MNP	D1
Calcium, Dissolved	0.15		mg/L	0.10	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:31	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:23	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:31	MNP	E
Magnesium, Total	0.057		mg/L	0.050	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:23	MNP	D1
Magnesium, Dissolved	ND		mg/L	0.10	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:31	MNP	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:23	MNP	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:31	MNP	E
Potassium, Total	0.70		mg/L	0.25	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:23	MNP	D1
Potassium, Dissolved	ND		mg/L	0.50	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:31	MNP	E
Sodium, Total	151		mg/L	0.25	EPA 200.7	3/4/19 08:30	BMK	3/7/19 17:23	MNP	D1
Sodium, Dissolved	160		mg/L	0.50	EPA 200.7	3/4/19 14:09	MNP	3/7/19 13:31	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.79		pH_Units		Field			2/28/19 12:50	BGS	N
Specific Conductance, Field	819		umhos/cm	1	Field			2/28/19 12:50	BGS	N
Temperature	13.10		Deg. C		Field			2/28/19 12:50	BGS	N

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

ALS Environmental

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ANALYTICAL RESULTS

Workorder: 3019328 1ST QTR 2019-3125 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3019328001	1	3125RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3019328001	2	3125RIVERRD	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

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3019328 1ST QTR 2019-3125 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3019328001	3125RIVERRD	D6919-09	
3019328001	3125RIVERRD	EPA 200.7	EPA ACID
3019328001	3125RIVERRD	EPA 200.7	EPA TRMD
3019328001	3125RIVERRD	EPA 300.0	
3019328001	3125RIVERRD	EPA 410.4	
3019328001	3125RIVERRD	EPA 420.4	420.4/9066
3019328001	3125RIVERRD	Field	
3019328001	3125RIVERRD	S2540C-11	
3019328001	3125RIVERRD	S4500HB-11	
3019328001	3125RIVERRD	SM2130B-2011	
3019328001	3125RIVERRD	SM2320B-2011	
3019328001	3125RIVERRD	SM2510B-2011	
3019328001	3125RIVERRD	SM5310B-2011	
3019328001	3125RIVERRD	SW846 8260B	
3019328001	3125RIVERRD	SW846 9020B	

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

1 of 1

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

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

Date Required: _____ Approved By: _____

Email? [ ] -Y _____

Fax? [ ] -Y No.: _____

(Receiving Lab)

Cooler Temp: 7 Therm ID: 358

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 Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	Container Type	Container Size	Preservative	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, Tb, SpC	Alkalinity, HCO3	Sample/COC Comments
					AG	AN	AN	CG	—	PL	PL	PL	PL					
					40 ml	125 ml	250 ml	40 ml	—	250 ml	125 ml	125 ml	500 ml	500 ml				
					HCl	H2SO4	H2SO4	HCl	—	H2SO4	HNO3	HNO3	None	None				
					ANALYSES/METHOD REQUESTED													
					Enter Number of Containers Per Sample or Field Results Below.													
1 3125RIVERRD	2/28/19	1250	G	DW	2	1	2	23	X	1	1	1	1	1				
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

ALS Field Services: ☐Pickup ☐Labor ☐Composite_Sampling ☐Rental_Equipment ☐Other: _____

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2/28/19	1450	2 [signature] NC	2/1/19	1450
3			4		
5			6		
7			8		
9			10		

Data Deliverables: ☐Standard ☐CLP-like ☐USACE ☐

Special Processing: USACE ☐ Navy ☐ ☐

State Samples Collected In: ☐NY ☐NJ ☒PA ☐NC ☐

Reportable to PADEP? Yes ☐ PWSID # _____

Sample Disposal: Lab ☒ Special ☐

EDDS: Format Type- _____

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=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

ALS

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client: UCSuMA **Work Order #:** 3019328 **Initials:** VT **Date:** 3/8/19

1. Were airbills / tracking numbers present and recorded?	NONE	YES	NO
Tracking number:			
2. Are Custody Seals on shipping containers intact?	NONE	YES	NO
3. Are Custody Seals on sample containers intact?	NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present?		YES	NO
5. Are the COC and bottle labels complete, legible and in agreement?		YES	NO
5a. Does the COC contain sample locations?		YES	NO
5b. Does the COC contain date and time of sample collection for all samples?		YES	NO
5c. Does the COC contain sample collectors name?		YES	NO
5d. Does the COC note the type(s) of preservation for all bottles?		YES	NO
5e. Does the COC note the number of bottles submitted for each sample?		YES	NO
5f. Does the COC note the type of sample, composite or grab?		YES	NO
5g. Does the COC note the matrix of the sample(s)?		YES	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		YES	NO
8. Are all samples within holding times for the requested analyses?		YES	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		YES	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	NO
11. Were the samples received on ice?		YES	NO
12. Were sample temperatures measured at 0.0-6.0°C		YES	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	NO
13b. Did the client provide a SDWA PWS ID#?	N/A	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	N/A	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	N/A	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	N/A	YES	NO

Cooler #: _____

Temperature (°C): 7

Thermometer ID: 352

COMMENTS (Required for all NO responses above and any sample non-conformance):

Collected same day
Not reportable
3 8260 VOC Vials

Rev. 1/10/2019

Lancaster County Solid Waste Management Authority

Frey Farm Landfill

Exceedence Report

Parameter Name	Units	Concentration	Criteria Conc	Qualifiers	Criteria
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3044RIVERR	*3017251001*	*02/19/2019*	*WATER*		
NITRATE-NITROGEN	mg/l	18.90	10.00		EPA-MCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3052RIVERR	*3019345001*	*02/28/2019*	*WATER*		
NITRATE-NITROGEN	mg/l	18.50	10.00		EPA-MCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3056RIVERR	*3017250001*	*02/19/2019*	*WATER*		
NITRATE-NITROGEN	mg/l	18.30	10.00		EPA-MCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3060RIVERR	*3017249001*	*02/19/2019*	*WATER*		
NITRATE-NITROGEN	mg/l	12.80	10.00		EPA-MCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3076RIVERR	*3019341001*	*02/28/2019*	*WATER*		
NITRATE-NITROGEN	mg/l	12.00	10.00		EPA-MCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3106RIVERR	*3019327001*	*02/28/2019*	*WATER*		
NITRATE-NITROGEN	mg/l	12.10	10.00		EPA-MCL

Lancaster County Solid Waste Management Authority

Frey Farm Landfill

Exceedence Report

Parameter Name	Units	Concentration	Criteria Conc	Qualifiers	Criteria
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3056RIVERR	*3017250001*	*02/19/2019*	*WATER*		
MANGANESE, DISSOLVED	mg/l	0.13	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.13	0.05		EPA-SMCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3060RIVERR	*3017249001*	*02/19/2019*	*WATER*		
MANGANESE, DISSOLVED	mg/l	0.09	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.10	0.05		EPA-SMCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3076RIVERR	*3019341001*	*02/28/2019*	*WATER*		
MANGANESE, DISSOLVED	mg/l	0.25	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.25	0.05		EPA-SMCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3079RIVERR	*3017245001*	*02/19/2019*	*WATER*		
MANGANESE, DISSOLVED	mg/l	0.27	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.27	0.05		EPA-SMCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3088RIVERR	*3017248001*	*02/19/2019*	*WATER*		
CHLORIDE	mg/l	297.00	250.00		EPA-SMCL
TDS (TOT. DISSOLVED SOLIDS)	mg/l	680.00	500.00		EPA-SMCL
Location ID	**Sample Number**	**Sample Date**	**Sample Type**	**Sample Depth**	
3106RIVERR	*3019327001*	*02/28/2019*	*WATER*		
MANGANESE, DISSOLVED	mg/l	0.05	0.05		EPA-SMCL
MANGANESE, TOTAL	mg/l	0.05	0.05		EPA-SMCL