



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
05/20/2021

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3044 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

Sample Collection Time: 11:44 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

02/28/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	13	SM20-2321
CALCIUM, TOTAL	14.2	EPA 200.7
CALCIUM, DISSOLVED	14.4	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	21.3	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	10.5	EPA 200.7
MAGNESIUM, DISSOLVED	10.7	EPA 200.7
MANGANESE, TOTAL (ug/l)	16	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	16	EPA 200.7
NITRATE-NITROGEN	19.4	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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)	5.94	FIELD
pH-LAB (SU)	6.21	SM4500B
POTASSIUM, TOTAL	1.8	EPA 200.7
POTASSIUM, DISSOLVED	1.7	EPA 200.7
SODIUM, TOTAL	8.4	EPA 200.7
SODIUM, DISSOLVED	8.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	239	FIELD
SPEC. COND., LAB (umhos/cm)	225	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	13	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	149	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.55	SM 2130B

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FORM 52
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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE		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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SECTION A. SITE IDENTIFIER

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Site Name: Frey Farm Landfill

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SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: MILLER

Address: 3052 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

Sample Collection Time: 11:54 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

02/28/2021

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

Comments:

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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

02/19/2021

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	15.6	EPA 200.7
CALCIUM, DISSOLVED	14.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	22	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	10.1	EPA 200.7
MAGNESIUM, DISSOLVED	9.5	EPA 200.7
MANGANESE, TOTAL (ug/l)	48	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	45	EPA 200.7
NITRATE-NITROGEN	18.5	EPA 300

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FORM 52
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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

MILLER

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.08	FIELD
pH-LAB (SU)	5.85	SM4500B
POTASSIUM, TOTAL	2.1	EPA 200.7
POTASSIUM, DISSOLVED	1.9	EPA 200.7
SODIUM, TOTAL	8	EPA 200.7
SODIUM, DISSOLVED	7.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	249	FIELD
SPEC. COND., LAB (umhos/cm)	220	EPA 120.1
SULFATE	2	EPA 300
ALKALINITY	6	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	116	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.24	SM 2130B

T Please indicate detection limit if analyte is not detected.

FORM 52
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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

MILLER

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE		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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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3056 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

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

02/28/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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	12	EPA 200.7
CALCIUM, DISSOLVED	11.7	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	25.9	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	12.9	EPA 200.7
MAGNESIUM, DISSOLVED	12.5	EPA 200.7
MANGANESE, TOTAL (ug/l)	80	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	79	EPA 200.7
NITRATE-NITROGEN	18.7	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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)	5.84	FIELD
pH-LAB (SU)	6.06	SM4500B
POTASSIUM, TOTAL	2.2	EPA 200.7
POTASSIUM, DISSOLVED	2	EPA 200.7
SODIUM, TOTAL	8.6	EPA 200.7
SODIUM, DISSOLVED	8.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	227	FIELD
SPEC. COND., LAB (umhos/cm)	228	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	9	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	149	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

02/19/2021

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

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

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
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FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3060 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 27.63" Longitude: 76° 26' 10.01"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

Sample Collection Time: 12:07 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 02/28/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	11.2	EPA 200.7
CALCIUM, DISSOLVED	10.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	20.9	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	11.1	EPA 200.7
MAGNESIUM, DISSOLVED	10.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	110	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	110	EPA 200.7
NITRATE-NITROGEN	16.5	EPA 300

T Please indicate detection limit if analyte is not detected.

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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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)	5.37	FIELD
pH-LAB (SU)	5.65	SM4500B
POTASSIUM, TOTAL	2.4	EPA 200.7
POTASSIUM, DISSOLVED	2.4	EPA 200.7
SODIUM, TOTAL	8.3	EPA 200.7
SODIUM, DISSOLVED	8	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	246	FIELD
SPEC. COND., LAB (umhos/cm)	211	EPA 120.1
SULFATE	9.8	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	135	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

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Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE		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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INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: SENSENICH

Address: 3076 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

Sample Collection Time: 12:16 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 02/28/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	11	SM20-2321
CALCIUM, TOTAL	14	EPA 200.7
CALCIUM, DISSOLVED	13.7	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	53.1	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	31	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	8.9	EPA 200.7
MAGNESIUM, DISSOLVED	8.4	EPA 200.7
MANGANESE, TOTAL (ug/l)	170	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	160	EPA 200.7
NITRATE-NITROGEN	8.7	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/19/2021

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)	6.27	FIELD
pH-LAB (SU)	5.96	SM4500B
POTASSIUM, TOTAL	3.4	EPA 200.7
POTASSIUM, DISSOLVED	3.3	EPA 200.7
SODIUM, TOTAL	24.9	EPA 200.7
SODIUM, DISSOLVED	24.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	286	FIELD
SPEC. COND., LAB (umhos/cm)	287	EPA 120.1
SULFATE	10.8	EPA 300
ALKALINITY	11	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)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/19/2021

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

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

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
05/20/2021

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3079 RIVER ROAD

Phone No.:

Sampling Point: Latitude: 39° 57' 21.99" Longitude: 76° 26' 10.58"

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

Sample Collection Time: 1:49 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 03/09/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	33	SM20-2321
CALCIUM, TOTAL	9.6	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	6.2	EPA 200.7
MAGNESIUM, DISSOLVED	5.8	EPA 200.7
MANGANESE, TOTAL (ug/l)	130	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	120	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

02/19/2021

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)	6.18	FIELD
pH-LAB (SU)	6.47	SM4500B
POTASSIUM, TOTAL	2.4	EPA 200.7
POTASSIUM, DISSOLVED	2.2	EPA 200.7
SODIUM, TOTAL	14	EPA 200.7
SODIUM, DISSOLVED	13.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	257	FIELD
SPEC. COND., LAB (umhos/cm)	186	EPA 120.1
SULFATE	13.1	EPA 300
ALKALINITY	33	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	113	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

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE		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.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
05/20/2021

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: WEBER

Address: 3088 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

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

02/28/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	167	SM20-2321
CALCIUM, TOTAL	0.15	EPA 200.7
CALCIUM, DISSOLVED	0.15	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	241	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	0.078	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	6.7	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

02/19/2021

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)	7.11	FIELD
pH-LAB (SU)	7.22	SM4500B
POTASSIUM, TOTAL	2.5	EPA 200.7
POTASSIUM, DISSOLVED	2.4	EPA 200.7
SODIUM, TOTAL	214	EPA 200.7
SODIUM, DISSOLVED	222	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	1057	FIELD
SPEC. COND., LAB (umhos/cm)	1050	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	167	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	566	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

02/19/2021

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

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

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
05/20/2021

DEP USE ONLY

Date Received

FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: KIRCHNER

Address: 3100 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

Sample Collection Time: 12:38 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 02/28/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	17	SM20-2321
CALCIUM, TOTAL	13.8	EPA 200.7
CALCIUM, DISSOLVED	14	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	42	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	5.9	EPA 200.7
MAGNESIUM, DISSOLVED	5.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	6.4	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	7	EPA 200.7
NITRATE-NITROGEN	3.8	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 KIRCHNER

Sample Date

02/19/2021

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)	6.21	FIELD
pH-LAB (SU)	6.24	SM4500B
POTASSIUM, TOTAL	1.3	EPA 200.7
POTASSIUM, DISSOLVED	1.3	EPA 200.7
SODIUM, TOTAL	15.4	EPA 200.7
SODIUM, DISSOLVED	15.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	284	FIELD
SPEC. COND., LAB (umhos/cm)	212	EPA 120.1
SULFATE	7.8	EPA 300
ALKALINITY	17	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	184	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

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE		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.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
05/20/2021

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: FRY

Address: 3106 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

Sample Collection Time: 1:38 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

02/28/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS FRY

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	13	SM20-2321
CALCIUM, TOTAL	19.4	EPA 200.7
CALCIUM, DISSOLVED	17.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	90	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	34	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	13.1	EPA 200.7
MAGNESIUM, DISSOLVED	11.8	EPA 200.7
MANGANESE, TOTAL (ug/l)	46	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	40	EPA 200.7
NITRATE-NITROGEN	10	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

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.34	FIELD
pH-LAB (SU)	6.13	SM4500B
POTASSIUM, TOTAL	2.1	EPA 200.7
POTASSIUM, DISSOLVED	1.8	EPA 200.7
SODIUM, TOTAL	41.1	EPA 200.7
SODIUM, DISSOLVED	37.1	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	327	FIELD
SPEC. COND., LAB (umhos/cm)	422	EPA 120.1
SULFATE	4.8	EPA 300
ALKALINITY	13	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	300	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.56	SM20-5310B
TOTAL PHENOLICS (ug/l)	5	EPA 420.4
TURBIDITY (NTU)	1.7	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

02/19/2021

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

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

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
05/20/2021

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: BECK

Address: 3125 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/19/2021

Sample Collection Time: 12:51 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

34 Dogwood Lane

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

02/28/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.102	SM4500D
BICARBONATE ALKALINITY	187	SM20-2321
CALCIUM, TOTAL	36	EPA 200.7
CALCIUM, DISSOLVED	35.3	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	101	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	EPA 200.7
MAGNESIUM, DISSOLVED	5.1	EPA 200.7
MANGANESE, TOTAL (ug/l)	21	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	9.9	EPA 200.7
NITRATE-NITROGEN	5.3	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

BECK

Sample Date

02/19/2021

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)	7.28	FIELD
pH-LAB (SU)	7.56	SM4500B
POTASSIUM, TOTAL	3	EPA 200.7
POTASSIUM, DISSOLVED	3	EPA 200.7
SODIUM, TOTAL	106	EPA 200.7
SODIUM, DISSOLVED	110	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	649	FIELD
SPEC. COND., LAB (umhos/cm)	968	EPA 120.1
SULFATE	12.4	EPA 300
ALKALINITY	187	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	426	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.65	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

BECK

Sample Date

02/19/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
BENZENE	1 ND	EPA 524.2
1,2-DIBROMOETHANE		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.

March 2, 2021

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:	3158940
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 2021-3106 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

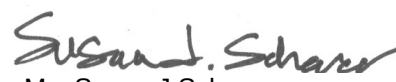
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

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

CC: Ms. Ashley Gichuki , 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.


Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**Workorder: 3158940 1ST QTR 2021-3106 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158940001	3106 River Road, Conestoga, PA	Water	2/19/2021 13:38	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158940 1ST QTR 2021-3106 RIVER RD

Notes

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

Standard Acronyms/Flags

C	Please reference the Project Summary section of this Certificate of Analysis for case narrative comments.
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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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

PROJECT SUMMARY

Workorder: 3158940 1ST QTR 2021-3106 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158940 1ST QTR 2021-3106 RIVER RD

Lab ID: **3158940001** Date Collected: 2/19/2021 13:38 Matrix: Water
Sample ID: **3106 River Road, Conestoga, PA** Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 14:56	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:56	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	108	C	%	62 - 133	SW846 8260B			2/24/21 14:56	DPC	K
4-Bromofluorobenzene (S)	88.1	C	%	79 - 114	SW846 8260B			2/24/21 14:56	DPC	K
Dibromofluoromethane (S)	106	C	%	78 - 116	SW846 8260B			2/24/21 14:56	DPC	K
Toluene-d8 (S)	95.9	C	%	76 - 127	SW846 8260B			2/24/21 14:56	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	13	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	13	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 22:52	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	90.0	C	mg/L	2.0	EPA 300.0			2/20/21 06:38	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 06:38	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/24/21 12:35	PAG	I
Nitrate-N	10	C	mg/L	0.20	EPA 300.0			2/20/21 06:38	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 06:38	MBW	C
pH	6.13	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	0.005	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	422	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	4.8	C	mg/L	2.0	EPA 300.0			2/20/21 06:38	MBW	C

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ANALYTICAL RESULTS

Workorder: 3158940 1ST QTR 2021-3106 RIVER RD

Lab ID: **3158940001**

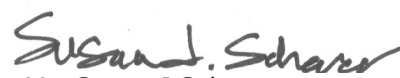
Date Collected: 2/19/2021 13:38

Matrix: Water

Sample ID: **3106 River Road, Conestoga, PA**

Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	300	C	mg/L	25	S2540C-11			2/24/21 12:16	KMM	C
Total Organic Carbon (TOC)	0.56	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	1.70	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	19.4	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:16	SRT	D1
Calcium, Dissolved	17.8	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:53	SRT	E
Iron, Total	0.034	C	mg/L	0.030	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:16	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:53	SRT	E
Magnesium, Total	13.1	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:16	SRT	D1
Magnesium, Dissolved	11.8	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:53	SRT	E
Manganese, Total	0.046	C	mg/L	0.0025	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:16	SRT	D1
Manganese, Dissolved	0.040	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:53	SRT	E
Potassium, Total	2.1	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:16	SRT	D1
Potassium, Dissolved	1.8	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:53	SRT	E
Sodium, Total	41.1	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:16	SRT	D1
Sodium, Dissolved	37.1	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:53	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.34	C	pH_Units		Field			2/19/21 13:38	BGS	M
Specific Conductance, Field	327	C	umhos/cm	1	Field			2/19/21 13:38	BGS	M
Temperature	12.60	C	Deg. C		Field			2/19/21 13:38	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158940 1ST QTR 2021-3106 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158940001	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.				
3158940001	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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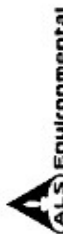
ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3158940 1ST QTR 2021-3106 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158940001	3106 River Road, Conestoga, PA	ASTM D6919-09		
3158940001	3106 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3158940001	3106 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3158940001	3106 River Road, Conestoga, PA	EPA 300.0		
3158940001	3106 River Road, Conestoga, PA	EPA 410.4		
3158940001	3106 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3158940001	3106 River Road, Conestoga, PA	Field		
3158940001	3106 River Road, Conestoga, PA	S2540C-11		
3158940001	3106 River Road, Conestoga, PA	S4500HB-11		
3158940001	3106 River Road, Conestoga, PA	SM2130B-2011		
3158940001	3106 River Road, Conestoga, PA	SM2320B-2011		
3158940001	3106 River Road, Conestoga, PA	SM2510B-2011		
3158940001	3106 River Road, Conestoga, PA	SM5310B-2011		
3158940001	3106 River Road, Conestoga, PA	SW846 8260B		
3158940001	3106 River Road, Conestoga, PA	SW846 9020B		

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301 Felling Mill Road • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

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

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Generated by ALS



3158940

1 of 1	
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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									
Cooler Temp: 2°C Therm ID: 504										No. of Coolers: Y N Initial										Custody Seals Present? (if present) Seals Intact?									
COCILabels 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:										State Samples Collected In									
Standard										CLP-like										USACE									
Deliverables										USACE										Navy									
Reportable to PADEP?										Yes										Sample Disposal									
PWSID #										Lab										Special									
EDDS: Format Type-																													
LOGGED BY (signature):										DATE:										TIME:									
REVIEWED BY (signature):										DATE:										TIME:									
Relinquished By / Company Name										Date										Time									
2/19/21										2/19/21										2/19/21									
1										2										3									
3										4										5									
5										6										7									
7										8										9									
9										10										11									
Sample Description/Location (as it will appear on the lab report)										Sample Date										Time									
1 3106RIVERRD										02/19/21										1338									
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
Project Comments:										Enter Number of Containers Per Sample or Field Results Below.										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																													
ANALYSES/METHOD REQUESTED																													
Container Type										AG										AN									
Container Size										40 ml										125 ml									
Preservative										HCl										H2SO4									
Matrix										G										DW									
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:									

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

Rev 8/04

ALS



301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-55

F: (717) 944-14

3158940

Condition of Sample Receipt Form

Client: LCSWMA

Lancaster County Solid Waste
Authority

Initials: AS

Date: 2/20/21

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 YES NO
5. Are the COC and bottle labels complete, legible and in agreement?..... YES YES NO
- 5a. Does the COC contain sample locations?..... YES YES NO
- 5b. Does the COC contain date and time of sample collection for all samples?..... YES YES NO
- 5c. Does the COC contain sample collectors name?..... YES YES NO
- 5d. Does the COC note the type(s) of preservation for all bottles?..... YES YES NO
- 5e. Does the COC note the number of bottles submitted for each sample?..... YES YES NO
- 5f. Does the COC note the type of sample, composite or grab?..... YES YES NO
- 5g. Does the COC note the matrix of the sample(s)?..... YES YES NO
6. Are all aqueous samples requiring preservation preserved correctly?¹..... N/A YES NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?..... YES YES NO
8. Are all samples within holding times for the requested analyses?..... YES YES NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)..... YES 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 YES NO
12. Were sample temperatures measured at 0.0-6.0°C..... YES YES NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below..... YES 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): 2 _____

Thermometer ID: 524 _____

Radiological (µCi): _____

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

No date/time on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 2, 2021

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:	3158939
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 2021-3100 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

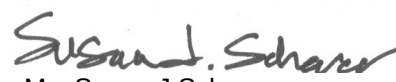
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

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

CC: Ms. Ashley Gichuki , 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.


Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**Workorder: 3158939 1ST QTR 2021-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158939001	3100 River Road, Conestoga, PA	Water	2/19/2021 12:38	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158939 1ST QTR 2021-3100 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 3158939 1ST QTR 2021-3100 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158939 1ST QTR 2021-3100 RIVER RD

Lab ID: **3158939001** Date Collected: 2/19/2021 12:38 Matrix: Water
Sample ID: **3100 River Road, Conestoga, PA** Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 14:33	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:33	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	109	C	%	62 - 133	SW846 8260B			2/24/21 14:33	DPC	K
4-Bromofluorobenzene (S)	87.3	C	%	79 - 114	SW846 8260B			2/24/21 14:33	DPC	K
Dibromofluoromethane (S)	105	C	%	78 - 116	SW846 8260B			2/24/21 14:33	DPC	K
Toluene-d8 (S)	96	C	%	76 - 127	SW846 8260B			2/24/21 14:33	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	17	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	17	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 22:39	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	42.0	C	mg/L	2.0	EPA 300.0			2/20/21 06:23	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 06:23	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/24/21 12:10	PAG	I
Nitrate-N	3.8	C	mg/L	0.20	EPA 300.0			2/20/21 06:23	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 06:23	MBW	C
pH	6.24	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	212	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	7.8	C	mg/L	2.0	EPA 300.0			2/20/21 06:23	MBW	C

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ANALYTICAL RESULTS

Workorder: 3158939 1ST QTR 2021-3100 RIVER RD

Lab ID: **3158939001**

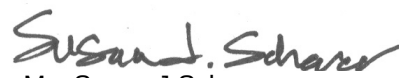
Date Collected: 2/19/2021 12:38

Matrix: Water

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

Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	184	C	mg/L	25	S2540C-11			2/24/21 12:16	KMM	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	ND	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	13.8	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:12	SRT	D1
Calcium, Dissolved	14.0	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:49	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:12	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:49	SRT	E
Magnesium, Total	5.9	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:12	SRT	D1
Magnesium, Dissolved	5.9	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:49	SRT	E
Manganese, Total	0.0064	C	mg/L	0.0025	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:12	SRT	D1
Manganese, Dissolved	0.0070	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:49	SRT	E
Potassium, Total	1.3	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:12	SRT	D1
Potassium, Dissolved	1.3	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:49	SRT	E
Sodium, Total	15.4	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:12	SRT	D1
Sodium, Dissolved	15.6	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:49	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.21	C	pH_Units		Field			2/19/21 12:38	BGS	M
Specific Conductance, Field	284	C	umhos/cm	1	Field			2/19/21 12:38	BGS	M
Temperature	12.50	C	Deg. C		Field			2/19/21 12:38	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158939 1ST QTR 2021-3100 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158939001	1	3100 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3158939001	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: 3158939 1ST QTR 2021-3100 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158939001	3100 River Road, Conestoga, PA	ASTM D6919-09		
3158939001	3100 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3158939001	3100 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3158939001	3100 River Road, Conestoga, PA	EPA 300.0		
3158939001	3100 River Road, Conestoga, PA	EPA 410.4		
3158939001	3100 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3158939001	3100 River Road, Conestoga, PA	Field		
3158939001	3100 River Road, Conestoga, PA	S2540C-11		
3158939001	3100 River Road, Conestoga, PA	S4500HB-11		
3158939001	3100 River Road, Conestoga, PA	SM2130B-2011		
3158939001	3100 River Road, Conestoga, PA	SM2320B-2011		
3158939001	3100 River Road, Conestoga, PA	SM2510B-2011		
3158939001	3100 River Road, Conestoga, PA	SM5310B-2011		
3158939001	3100 River Road, Conestoga, PA	SW846 8260B		
3158939001	3100 River Road, Conestoga, PA	SW846 9020B		

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301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5511

F: (717) 944-1411

3158939

Lancaster County Solid Waste
Authority

Condition of Sample Receipt Form

Client: LCSUMA

Initials: AS

Date: 2/20/21

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

Cooler #: _____

Temperature (°C): 2 _____

Thermometer ID: 524 _____

Radiological (µCi): _____

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

No date / time on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 2, 2021

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:	3158938
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 2021-3088 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

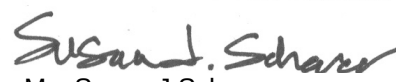
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Ashley Gichuki , 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.


Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 3158938 1ST QTR 2021-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158938001	3088 River Road, Conestoga PA	Water	2/19/2021 12:30	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158938 1ST QTR 2021-3088 RIVER RD

Notes

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

Standard Acronyms/Flags

C	Please reference the Project Summary section of this Certificate of Analysis for case narrative comments.
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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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

PROJECT SUMMARY

Workorder: 3158938 1ST QTR 2021-3088 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158938 1ST QTR 2021-3088 RIVER RD

Lab ID: **3158938001** Date Collected: 2/19/2021 12:30 Matrix: Water
Sample ID: **3088 River Road, Conestoga PA** Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 14:11	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 14:11	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	110	C	%	62 - 133	SW846 8260B			2/24/21 14:11	DPC	K
4-Bromofluorobenzene (S)	87.3	C	%	79 - 114	SW846 8260B			2/24/21 14:11	DPC	K
Dibromofluoromethane (S)	107	C	%	78 - 116	SW846 8260B			2/24/21 14:11	DPC	K
Toluene-d8 (S)	96.8	C	%	76 - 127	SW846 8260B			2/24/21 14:11	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	167	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	167	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 22:25	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	241	C	mg/L	5.0	EPA 300.0			2/26/21 05:43	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 06:08	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/24/21 11:39	PAG	I
Nitrate-N	6.7	C	mg/L	0.20	EPA 300.0			2/20/21 06:08	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 06:08	MBW	C
pH	7.22	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	1050	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	ND	C	mg/L	2.0	EPA 300.0			2/20/21 06:08	MBW	C

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ANALYTICAL RESULTS

Workorder: 3158938 1ST QTR 2021-3088 RIVER RD

Lab ID: **3158938001**

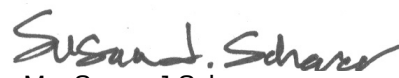
Date Collected: 2/19/2021 12:30

Matrix: Water

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

Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	566	C	mg/L	25	S2540C-11			2/23/21 14:47	KMM	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	ND	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	0.15	C	mg/L	0.050	EPA 200.7	2/22/21 15:58	SXC	2/23/21 11:12	SRT	D
Calcium, Dissolved	0.15	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:39	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	2/22/21 15:58	SXC	2/23/21 11:12	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:39	SRT	E
Magnesium, Total	0.078	C	mg/L	0.050	EPA 200.7	2/22/21 15:58	SXC	2/23/21 11:12	SRT	D
Magnesium, Dissolved	ND	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:39	SRT	E
Manganese, Total	ND	C	mg/L	0.0025	EPA 200.7	2/22/21 15:58	SXC	2/23/21 11:12	SRT	D
Manganese, Dissolved	ND	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:39	SRT	E
Potassium, Total	2.5	C	mg/L	0.25	EPA 200.7	2/22/21 15:58	SXC	2/23/21 11:12	SRT	D
Potassium, Dissolved	2.4	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:39	SRT	E
Sodium, Total	214	C	mg/L	0.25	EPA 200.7	2/22/21 15:58	SXC	2/23/21 11:12	SRT	D
Sodium, Dissolved	222	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:39	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.11	C	pH_Units		Field			2/19/21 12:30	BGS	M
Specific Conductance, Field	1057	C	umhos/cm	1	Field			2/19/21 12:30	BGS	M
Temperature	10.40	C	Deg. C		Field			2/19/21 12:30	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158938 1ST QTR 2021-3088 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158938001	1	3088 River Road, Conestoga PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3158938001	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: 3158938 1ST QTR 2021-3088 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158938001	3088 River Road, Conestoga PA	ASTM D6919-09		
3158938001	3088 River Road, Conestoga PA	EPA 200.7	EPA ACID	
3158938001	3088 River Road, Conestoga PA	EPA 200.7	EPA TRMD	
3158938001	3088 River Road, Conestoga PA	EPA 300.0		
3158938001	3088 River Road, Conestoga PA	EPA 410.4		
3158938001	3088 River Road, Conestoga PA	EPA 420.4	420.4/9066	
3158938001	3088 River Road, Conestoga PA	Field		
3158938001	3088 River Road, Conestoga PA	S2540C-11		
3158938001	3088 River Road, Conestoga PA	S4500HB-11		
3158938001	3088 River Road, Conestoga PA	SM2130B-2011		
3158938001	3088 River Road, Conestoga PA	SM2320B-2011		
3158938001	3088 River Road, Conestoga PA	SM2510B-2011		
3158938001	3088 River Road, Conestoga PA	SM5310B-2011		
3158938001	3088 River Road, Conestoga PA	SW846 8260B		
3158938001	3088 River Road, Conestoga PA	SW846 9020B		

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

Generated by ALS

1 of 1

3158938

Client Name: LCSWMA - Hans Weber and Deb Kalbach		Container Type		AG	AN	AN	CG	PL	PL	PL	PL	PL	by Receiving Lab)		
Address: 3088 River Road		Container Size		40 ml	125 ml	250 ml	40 ml	250 ml	125 ml	125 ml	500 ml	500 ml	Cooler Temp: 20°C Therm ID: 524		
Contact: Hans Weber and Deb Kalbach		Preservative		HCl	H2SO4	H2SO4	HCl	H2SO4	HNO3	HNO3	None	None	No. of Coolers: Y N Initial		
Phone#: (717) 419-7982		ANALYSES/METHOD REQUESTED													
Project Name/ID: LCSWMA - Quarterly		Enter Number of Containers Per Sample or Field Results Below.													
Bill To: LCSWMA - Hans Weber and Deb Kalbach		TAT ☒ Normal-Standard TAT is 10-12 business days.													
Date Required: _____		Rush-Subject to ALS approval and surcharges.													
Email? ☐ -Y		Approved By: _____													
Fax? ☐ -Y No.:		Sample Description/Location (as it will appear on the lab report)													
Sample Date		Sample Date		Sample Date		Sample Date		Sample Date		Sample Date		Sample Date		Sample Date	
1 3088 RIVER RD		02/19/21		1230		G DW		2		1		2		1	
2								2		1		2		1	
3								2		1		2		1	
4								2		1		2		1	
5								2		1		2		1	
6								2		1		2		1	
7								2		1		2		1	
8								2		1		2		1	
9								2		1		2		1	
10								2		1		2		1	
Project Comments:		LOGGED BY (signature):		REVIEWED BY (signature):		DATE		DATE		DATE		DATE		DATE	
Relinquished By / Company Name		Date		Time		Received By / Company Name		Date		Time		Data		Deliverables	
1 <i>[Signature]</i> ALS		2-14-21		1030		2		2-14-21		1030		AS		2-14-21	
3						4									
5						6									
7						8									
9						10									
ALS Field Services: ☐ Pickup ☐ Labor		Special Processing		Standard		CLP-like		USACE		Navy		USACE		State Samples Collected In	
☐ Composite Sampling ☐ Rental Equipment		Reportable to PADEP?		Yes ☐		PWSID #		EDDS: Format Type		Sample Disposal		Lab ☐ Special ☐		X PA NC	



301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

3158938

Lancaster County Solid Waste
Authority

dition of Sample Receipt Form

Client: LCSWMA

F Initials: AS

Date: 2/20/20

- | | | | |
|--|------|-----|----|
| 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 | YES | NO |
| 5. Are the COC and bottle labels complete, legible and in agreement?..... | YES | YES | NO |
| 5a. Does the COC contain sample locations?..... | YES | YES | NO |
| 5b. Does the COC contain date and time of sample collection for all samples?..... | YES | YES | NO |
| 5c. Does the COC contain sample collectors name?..... | YES | YES | NO |
| 5d. Does the COC note the type(s) of preservation for all bottles?..... | YES | YES | NO |
| 5e. Does the COC note the number of bottles submitted for each sample?..... | YES | YES | NO |
| 5f. Does the COC note the type of sample, composite or grab?..... | YES | YES | NO |
| 5g. Does the COC note the matrix of the sample(s)?..... | YES | YES | NO |
| 6. Are all aqueous samples requiring preservation preserved correctly? ¹ | N/A | YES | NO |
| 7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?..... | YES | YES | NO |
| 8. Are all samples within holding times for the requested analyses?..... | YES | YES | NO |
| 9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)..... | YES | 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 | YES | NO |
| 12. Were sample temperatures measured at 0.0-6.0°C..... | YES | YES | NO |
| 13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below..... | YES | 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): 2 _____

Thermometer ID: 524 _____

Radiological (µCi): _____

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

No date / time on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 12, 2021

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:	3158937
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 20213079 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

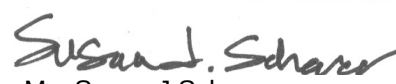
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Ashley Gichuki , Ms. Jordan Gallagher , Mr. Jeff Musser

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Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 3158937 1ST QTR 20213079 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158937001	3079RIVERRD	Water	2/19/2021 13:49	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158937 1ST QTR 20213079 RIVER RD

Notes

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

Standard Acronyms/Flags

C	Please reference the Project Summary section of this Certificate of Analysis for case narrative comments.
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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ALS Environmental



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

PROJECT SUMMARY

Workorder: 3158937 1ST QTR 20213079 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158937 1ST QTR 20213079 RIVER RD

Lab ID: **3158937001**
Sample ID: **3079RIVERRD**

Date Collected: 2/19/2021 13:49 Matrix: Water
Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 13:48	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:48	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	110	C	%	62 - 133	SW846 8260B			2/24/21 13:48	DPC	K
4-Bromofluorobenzene (S)	88	C	%	79 - 114	SW846 8260B			2/24/21 13:48	DPC	K
Dibromofluoromethane (S)	105	C	%	78 - 116	SW846 8260B			2/24/21 13:48	DPC	K
Toluene-d8 (S)	96.9	C	%	76 - 127	SW846 8260B			2/24/21 13:48	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	33	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	33	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 22:11	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			3/9/21 16:00	AK	B
Chloride	33.2	C	mg/L	2.0	EPA 300.0			2/20/21 14:48	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:48	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/24/21 11:14	PAG	I
Nitrate-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:48	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:48	MBW	C
pH	6.47	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	186	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	13.1	C	mg/L	2.0	EPA 300.0			2/20/21 14:48	MBW	C

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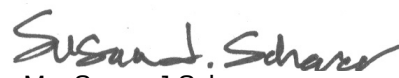
ANALYTICAL RESULTS

Workorder: 3158937 1ST QTR 20213079 RIVER RD

Lab ID: **3158937001**
Sample ID: **3079RIVERRD**

Date Collected: 2/19/2021 13:49 Matrix: Water
Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	113	C	mg/L	25	S2540C-11			2/23/21 14:47	KMM	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	ND	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	9.6	C	mg/L	0.050	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:21	SRT	D
Calcium, Dissolved	9.2	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:36	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:21	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:36	SRT	E
Magnesium, Total	6.2	C	mg/L	0.050	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:21	SRT	D
Magnesium, Dissolved	5.8	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:36	SRT	E
Manganese, Total	0.13	C	mg/L	0.0025	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:21	SRT	D
Manganese, Dissolved	0.12	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:36	SRT	E
Potassium, Total	2.4	C	mg/L	0.25	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:21	SRT	D
Potassium, Dissolved	2.2	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:36	SRT	E
Sodium, Total	14.0	C	mg/L	0.25	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:21	SRT	D
Sodium, Dissolved	13.5	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:36	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.18	C	pH_Units		Field			2/19/21 13:49	BGS	M
Specific Conductance, Field	257	C	umhos/cm	1	Field			2/19/21 13:49	BGS	M
Temperature	12.30	C	Deg. C		Field			2/19/21 13:49	BGS	M



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158937 1ST QTR 20213079 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158937001	1	3079RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3158937001	2	3079RIVERRD	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3158937 1ST QTR 20213079 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158937001	3079RIVERRD	ASTM D6919-09		
3158937001	3079RIVERRD	EPA 200.7	EPA ACID	
3158937001	3079RIVERRD	EPA 200.7	EPA TRMD	
3158937001	3079RIVERRD	EPA 300.0		
3158937001	3079RIVERRD	EPA 410.4		
3158937001	3079RIVERRD	EPA 420.4	420.4/9066	
3158937001	3079RIVERRD	Field		
3158937001	3079RIVERRD	S2540C-11		
3158937001	3079RIVERRD	S4500HB-11		
3158937001	3079RIVERRD	SM2130B-2011		
3158937001	3079RIVERRD	SM2320B-2011		
3158937001	3079RIVERRD	SM2510B-2011		
3158937001	3079RIVERRD	SM5310B-2011		
3158937001	3079RIVERRD	SW846 8260B		
3158937001	3079RIVERRD	SW846 9020B		

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301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

3158937

Lancaster County Solid Waste
Authority

dition of Sample Receipt Form

Client: LCSWMA

Initials: AS

Date: 2/20/21

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?¹..... 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): 2 _____

Thermometer ID: 524 _____

Radiological (µCi): _____

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

No date/time on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 2, 2021

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:	3158923
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 2021-3076 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

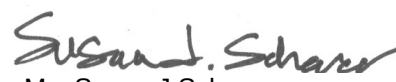
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Ashley Gichuki , 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.


Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 3158923 1ST QTR 2021-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158923001	3076 River Road, Conestoga, PA	Water	2/19/2021 12:16	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158923 1ST QTR 2021-3076 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).
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- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
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- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
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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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PROJECT SUMMARY

Workorder: 3158923 1ST QTR 2021-3076 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158923 1ST QTR 2021-3076 RIVER RD

Lab ID: **3158923001** Date Collected: 2/19/2021 12:16 Matrix: Water
Sample ID: **3076 River Road, Conestoga, PA** Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 13:26	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:26	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	109	C	%	62 - 133	SW846 8260B			2/24/21 13:26	DPC	K
4-Bromofluorobenzene (S)	89.5	C	%	79 - 114	SW846 8260B			2/24/21 13:26	DPC	K
Dibromofluoromethane (S)	104	C	%	78 - 116	SW846 8260B			2/24/21 13:26	DPC	K
Toluene-d8 (S)	96.2	C	%	76 - 127	SW846 8260B			2/24/21 13:26	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	11	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	11	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 21:30	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	53.1	C	mg/L	2.0	EPA 300.0			2/20/21 14:33	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:33	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/23/21 14:36	PAG	I
Nitrate-N	8.7	C	mg/L	0.20	EPA 300.0			2/20/21 14:33	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:33	MBW	C
pH	5.96	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C,3	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	287	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	10.8	C	mg/L	2.0	EPA 300.0			2/20/21 14:33	MBW	C

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ANALYTICAL RESULTS

Workorder: 3158923 1ST QTR 2021-3076 RIVER RD

Lab ID: **3158923001**

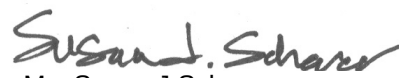
Date Collected: 2/19/2021 12:16

Matrix: Water

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

Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	132	C	mg/L	25	S2540C-11			2/23/21 14:47	KMM	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	ND	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	14.0	C	mg/L	0.050	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:31	SRT	D
Calcium, Dissolved	13.7	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:33	SRT	E
Iron, Total	0.031	C	mg/L	0.030	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:31	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:33	SRT	E
Magnesium, Total	8.9	C	mg/L	0.050	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:31	SRT	D
Magnesium, Dissolved	8.4	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:33	SRT	E
Manganese, Total	0.17	C	mg/L	0.0025	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:31	SRT	D
Manganese, Dissolved	0.16	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:33	SRT	E
Potassium, Total	3.4	C	mg/L	0.25	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:31	SRT	D
Potassium, Dissolved	3.3	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:33	SRT	E
Sodium, Total	24.9	C	mg/L	0.25	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:31	SRT	D
Sodium, Dissolved	24.4	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:33	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.27	C	pH_Units		Field			2/19/21 12:16	BGS	M
Specific Conductance, Field	286	C	umhos/cm	1	Field			2/19/21 12:16	BGS	M
Temperature	10.80	C	Deg. C		Field			2/19/21 12:16	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158923 1ST QTR 2021-3076 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158923001	1	3076 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3158923001	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.				
3158923001	3	3076 River Road, Conestoga, PA	EPA 420.4	Phenolics
The QC sample type MS for method 420.4 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 78.6 and the control limits were 90 to 110.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3158923 1ST QTR 2021-3076 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158923001	3076 River Road, Conestoga, PA	ASTM D6919-09		
3158923001	3076 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3158923001	3076 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3158923001	3076 River Road, Conestoga, PA	EPA 300.0		
3158923001	3076 River Road, Conestoga, PA	EPA 410.4		
3158923001	3076 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3158923001	3076 River Road, Conestoga, PA	Field		
3158923001	3076 River Road, Conestoga, PA	S2540C-11		
3158923001	3076 River Road, Conestoga, PA	S4500HB-11		
3158923001	3076 River Road, Conestoga, PA	SM2130B-2011		
3158923001	3076 River Road, Conestoga, PA	SM2320B-2011		
3158923001	3076 River Road, Conestoga, PA	SM2510B-2011		
3158923001	3076 River Road, Conestoga, PA	SM5310B-2011		
3158923001	3076 River Road, Conestoga, PA	SW846 8260B		
3158923001	3076 River Road, Conestoga, PA	SW846 9020B		

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

Generated by ALS

301 Filling Mill Road • Middletown, PA 17057 • 717-944-5541 • Fax: 717-944-1430

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		Container Type: AG Container Size: 40 ml Preservative: HCl		ANALYSES/METHOD REQUESTED		COOLERS Cooler Temp: 4°C Therm ID: 524 No. of Coolers: Y N Initial		1 of 1 d by Receiving Lab	
TAT ☒ Normal-Standard TAT is 10-12 business days. ☐ Rush-Subject to ALS approval and surcharges. Date Required: _____ Approved By: _____ Email? ☐ -Y Fax? ☐ -Y No.: _____		Matrix G or C		Enter Number of Containers Per Sample or Field Results Below.		Courier/Tracking #:		Sample/COC Comments	
Sample Description/Location (as it will appear on the lab report)		Sample Date		Time		Matrix G or C		Enter Number of Containers Per Sample or Field Results Below.	
1 3076RIVERRD		02/19/21		12:16		G		TOC 2 1 2 2 1 1 1 1 1 1 O-H 2 1 2 2 1 1 1 1 1 1 TOX 2 1 2 2 1 1 1 1 1 1 SW846-8260 VOCs 2 1 2 2 1 1 1 1 1 1 FM 2 1 2 2 1 1 1 1 1 1 NH3-N, COD 2 1 2 2 1 1 1 1 1 1 Dissolved Metals: Ca, Fe, Mg, Mn, K, Na 2 1 2 2 1 1 1 1 1 1 Metals: Ca, Fe, Mg, Mn, K, Na 2 1 2 2 1 1 1 1 1 1 pH, TDS, NO2, NO3, Cl, SO4, F, 2 1 2 2 1 1 1 1 1 1 TB, SPC 2 1 2 2 1 1 1 1 1 1 Alkalinity, HCO3 2 1 2 2 1 1 1 1 1 1	
2									
3									
4									
5									
6									
7									
8									
9									
10									
Project Comments:		LOGGED BY (signature):		REVIEWED BY (signature):		DATE:		TIME:	
Relinquished By / Company Name [Signature] ALS		Date 2/19/21		Time 16:30		Received By / Company Name [Signature] ALS		Date 2/19/21	
3									
5									
7									
9									
ALS Field Services: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:		Standard ☐ Standard ☐ CLP-like ☐ USACE		Deliverables ☐ USACE ☐ Navy ☐ USACE		Special Processing ☐ USACE ☐ Navy ☐ USACE		State Samples Collected In ☐ NY ☐ NJ ☒ PA ☐ NC	
Reportable to PADEP? Yes ☐ No ☒		Sample Disposal Lab ☒ Special ☐		PWSID #		EDDS: Format Type			

* G=Grab; C=Composite **Matrix - 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

3158923

Continuation of Sample Receipt Form

Lancaster County Solid Waste
Authority

Client: LC SUMA

Initials: AS

Date: 2/20/21

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

Cooler #: _____

Temperature (°C): 4 _____

Thermometer ID: SD4 _____

Radiological (µCi): _____

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

No date/time on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 2, 2021

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:	3158922
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 20213060 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

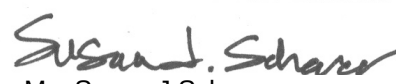
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Ashley Gichuki , 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

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**SAMPLE SUMMARY**Workorder: 3158922 1ST QTR 20213060 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158922001	3060RIVERRD	Water	2/19/2021 12:07	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158922 1ST QTR 20213060 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 3158922 1ST QTR 20213060 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158922 1ST QTR 20213060 RIVER RD

Lab ID: **3158922001**
Sample ID: **3060RIVERRD**

Date Collected: 2/19/2021 12:07 Matrix: Water
Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 13:03	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 13:03	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	107	C	%	62 - 133	SW846 8260B			2/24/21 13:03	DPC	K
4-Bromofluorobenzene (S)	87.5	C	%	79 - 114	SW846 8260B			2/24/21 13:03	DPC	K
Dibromofluoromethane (S)	105	C	%	78 - 116	SW846 8260B			2/24/21 13:03	DPC	K
Toluene-d8 (S)	95.6	C	%	76 - 127	SW846 8260B			2/24/21 13:03	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	ND	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 21:16	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	20.9	C	mg/L	2.0	EPA 300.0			2/20/21 14:18	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:18	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/23/21 12:59	PAG	I
Nitrate-N	16.5	C	mg/L	0.20	EPA 300.0			2/20/21 14:18	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:18	MBW	C
pH	5.65	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	211	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	9.8	C	mg/L	2.0	EPA 300.0			2/20/21 14:18	MBW	C

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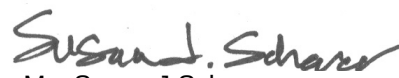
ANALYTICAL RESULTS

Workorder: 3158922 1ST QTR 20213060 RIVER RD

Lab ID: **3158922001**
Sample ID: **3060RIVERRD**

Date Collected: 2/19/2021 12:07 Matrix: Water
Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	135	C	mg/L	25	S2540C-11			2/23/21 14:47	KMM	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	ND	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	11.2	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:02	SRT	D1
Calcium, Dissolved	10.8	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:30	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:02	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:30	SRT	E
Magnesium, Total	11.1	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:02	SRT	D1
Magnesium, Dissolved	10.9	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:30	SRT	E
Manganese, Total	0.11	C	mg/L	0.0025	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:02	SRT	D1
Manganese, Dissolved	0.11	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:30	SRT	E
Potassium, Total	2.4	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:02	SRT	D1
Potassium, Dissolved	2.4	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:30	SRT	E
Sodium, Total	8.3	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:02	SRT	D1
Sodium, Dissolved	8.0	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:30	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.37	C	pH_Units		Field			2/19/21 12:07	BGS	M
Specific Conductance, Field	246	C	umhos/cm	1	Field			2/19/21 12:07	BGS	M
Temperature	11.40	C	Deg. C		Field			2/19/21 12:07	BGS	M



Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158922 1ST QTR 20213060 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158922001	1	3060RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3158922001	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: 3158922 1ST QTR 20213060 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158922001	3060RIVERRD	ASTM D6919-09		
3158922001	3060RIVERRD	EPA 200.7	EPA ACID	
3158922001	3060RIVERRD	EPA 200.7	EPA TRMD	
3158922001	3060RIVERRD	EPA 300.0		
3158922001	3060RIVERRD	EPA 410.4		
3158922001	3060RIVERRD	EPA 420.4	420.4/9066	
3158922001	3060RIVERRD	Field		
3158922001	3060RIVERRD	S2540C-11		
3158922001	3060RIVERRD	S4500HB-11		
3158922001	3060RIVERRD	SM2130B-2011		
3158922001	3060RIVERRD	SM2320B-2011		
3158922001	3060RIVERRD	SM2510B-2011		
3158922001	3060RIVERRD	SM5310B-2011		
3158922001	3060RIVERRD	SW846 8260B		
3158922001	3060RIVERRD	SW846 9020B		

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301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

3158922

dition of Sample Receipt Form

Lancaster County Solid Waste
Authority

Client: LCSWMA

Initials: AS

Date: 2/20/21

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?¹..... 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): 5 _____

Thermometer ID: 524 _____

Radiological (µCi): _____

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

No date / time on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 2, 2021

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:	3158921
Purchase Order:	PO-1000371	Workorder ID:	1st QTR 20213056 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

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

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

CC: Ms. Ashley Gichuki , 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

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**SAMPLE SUMMARY**

Workorder: 3158921 1st QTR 20213056 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158921001	3056RIVERRD	Water	2/19/2021 12:00	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158921 1st QTR 20213056 RIVER RD

Notes

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

Standard Acronyms/Flags

C	Please reference the Project Summary section of this Certificate of Analysis for case narrative comments.
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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ALS Environmental



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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

PROJECT SUMMARY

Workorder: 3158921 1st QTR 20213056 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158921 1st QTR 20213056 RIVER RD

Lab ID: **3158921001**
Sample ID: **3056RIVERRD**

Date Collected: 2/19/2021 12:00 Matrix: Water
Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 12:40	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:40	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	107	C	%	62 - 133	SW846 8260B			2/24/21 12:40	DPC	K
4-Bromofluorobenzene (S)	87	C	%	79 - 114	SW846 8260B			2/24/21 12:40	DPC	K
Dibromofluoromethane (S)	104	C	%	78 - 116	SW846 8260B			2/24/21 12:40	DPC	K
Toluene-d8 (S)	95.3	C	%	76 - 127	SW846 8260B			2/24/21 12:40	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	9	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	9	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 21:02	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	25.9	C	mg/L	2.0	EPA 300.0			2/20/21 14:03	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:03	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/23/21 12:33	PAG	I
Nitrate-N	18.7	C	mg/L	0.20	EPA 300.0			2/20/21 14:03	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 14:03	MBW	C
pH	6.06	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	228	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	ND	C	mg/L	2.0	EPA 300.0			2/20/21 14:03	MBW	C

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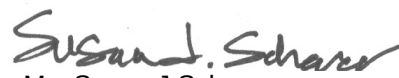
ANALYTICAL RESULTS

Workorder: 3158921 1st QTR 20213056 RIVER RD

Lab ID: **3158921001**
Sample ID: **3056RIVERRD**

Date Collected: 2/19/2021 12:00 Matrix: Water
Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	149	C	mg/L	25	S2540C-11			2/23/21 14:47	KMM	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	ND	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	12.0	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:46	SRT	D1
Calcium, Dissolved	11.7	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:20	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:46	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:20	SRT	E
Magnesium, Total	12.9	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:46	SRT	D1
Magnesium, Dissolved	12.5	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:20	SRT	E
Manganese, Total	0.080	C	mg/L	0.0025	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:46	SRT	D1
Manganese, Dissolved	0.079	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:20	SRT	E
Potassium, Total	2.2	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:46	SRT	D1
Potassium, Dissolved	2.0	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:20	SRT	E
Sodium, Total	8.6	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:46	SRT	D1
Sodium, Dissolved	8.4	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:20	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.84	C	pH_Units		Field			2/19/21 12:00	BGS	M
Specific Conductance, Field	227	C	umhos/cm	1	Field			2/19/21 12:00	BGS	M
Temperature	11.10	C	Deg. C		Field			2/19/21 12:00	BGS	M



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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158921 1st QTR 20213056 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158921001	1	3056RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3158921001	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: 3158921 1st QTR 20213056 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158921001	3056RIVERRD	ASTM D6919-09		
3158921001	3056RIVERRD	EPA 200.7	EPA ACID	
3158921001	3056RIVERRD	EPA 200.7	EPA TRMD	
3158921001	3056RIVERRD	EPA 300.0		
3158921001	3056RIVERRD	EPA 410.4		
3158921001	3056RIVERRD	EPA 420.4	420.4/9066	
3158921001	3056RIVERRD	Field		
3158921001	3056RIVERRD	S2540C-11		
3158921001	3056RIVERRD	S4500HB-11		
3158921001	3056RIVERRD	SM2130B-2011		
3158921001	3056RIVERRD	SM2320B-2011		
3158921001	3056RIVERRD	SM2510B-2011		
3158921001	3056RIVERRD	SM5310B-2011		
3158921001	3056RIVERRD	SW846 8260B		
3158921001	3056RIVERRD	SW846 9020B		

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Middletown, PA 17057

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F: (717) 944-1430

3158921

Condition of Sample Receipt Form

Lancaster County Solid Waste
Authority

Client: LCSWMA

Initials: AS

Date: 2/20/21

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

Cooler #: _____

Temperature (°C): 3 _____

Thermometer ID: 524 _____

Radiological (µCi): _____

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

No time / date on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 2, 2021

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:	3158920
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 2021-3052 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

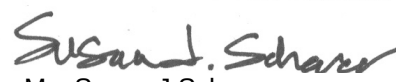
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

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

CC: Ms. Ashley Gichuki , 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.



Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**

Workorder: 3158920 1ST QTR 2021-3052 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158920001	3052 River Road, Conestoga, PA	Water	2/19/2021 11:54	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158920 1ST QTR 2021-3052 RIVER RD

Notes

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

Standard Acronyms/Flags

C	Please reference the Project Summary section of this Certificate of Analysis for case narrative comments.
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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ALS Environmental



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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

PROJECT SUMMARY

Workorder: 3158920 1ST QTR 2021-3052 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158920 1ST QTR 2021-3052 RIVER RD

Lab ID: **3158920001** Date Collected: 2/19/2021 11:54 Matrix: Water
Sample ID: **3052 River Road, Conestoga, PA** Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 12:17	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 12:17	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	108	C	%	62 - 133	SW846 8260B			2/24/21 12:17	DPC	K
4-Bromofluorobenzene (S)	88.7	C	%	79 - 114	SW846 8260B			2/24/21 12:17	DPC	K
Dibromofluoromethane (S)	107	C	%	78 - 116	SW846 8260B			2/24/21 12:17	DPC	K
Toluene-d8 (S)	97	C	%	76 - 127	SW846 8260B			2/24/21 12:17	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	6	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	6	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 20:49	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	22.0	C	mg/L	2.0	EPA 300.0			2/20/21 13:48	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 13:48	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/23/21 12:05	PAG	I
Nitrate-N	18.5	C	mg/L	0.20	EPA 300.0			2/20/21 13:48	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 13:48	MBW	C
pH	5.85	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	220	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	2.0	C	mg/L	2.0	EPA 300.0			2/20/21 13:48	MBW	C

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ANALYTICAL RESULTS

Workorder: 3158920 1ST QTR 2021-3052 RIVER RD

Lab ID: **3158920001**

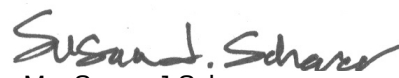
Date Collected: 2/19/2021 11:54

Matrix: Water

Sample ID: **3052 River Road, Conestoga, PA**

Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	116	C	mg/L	25	S2540C-11			2/23/21 14:47	KMM	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	0.24	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	15.6	C	mg/L	0.050	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:18	SRT	D
Calcium, Dissolved	14.8	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:17	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:18	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:17	SRT	E
Magnesium, Total	10.1	C	mg/L	0.050	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:18	SRT	D
Magnesium, Dissolved	9.5	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:17	SRT	E
Manganese, Total	0.048	C	mg/L	0.0025	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:18	SRT	D
Manganese, Dissolved	0.045	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:17	SRT	E
Potassium, Total	2.1	C	mg/L	0.25	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:18	SRT	D
Potassium, Dissolved	1.9	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:17	SRT	E
Sodium, Total	8.0	C	mg/L	0.25	EPA 200.7	2/23/21 15:40	SXC	2/24/21 13:18	SRT	D
Sodium, Dissolved	7.6	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:17	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.08	C	pH_Units		Field			2/19/21 11:54	BGS	M
Specific Conductance, Field	249	C	umhos/cm	1	Field			2/19/21 11:54	BGS	M
Temperature	11.30	C	Deg. C		Field			2/19/21 11:54	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158920 1ST QTR 2021-3052 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158920001	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 CaCO ₃ /L.				
3158920001	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: 3158920 1ST QTR 2021-3052 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158920001	3052 River Road, Conestoga, PA	ASTM D6919-09		
3158920001	3052 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3158920001	3052 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3158920001	3052 River Road, Conestoga, PA	EPA 300.0		
3158920001	3052 River Road, Conestoga, PA	EPA 410.4		
3158920001	3052 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3158920001	3052 River Road, Conestoga, PA	Field		
3158920001	3052 River Road, Conestoga, PA	S2540C-11		
3158920001	3052 River Road, Conestoga, PA	S4500HB-11		
3158920001	3052 River Road, Conestoga, PA	SM2130B-2011		
3158920001	3052 River Road, Conestoga, PA	SM2320B-2011		
3158920001	3052 River Road, Conestoga, PA	SM2510B-2011		
3158920001	3052 River Road, Conestoga, PA	SM5310B-2011		
3158920001	3052 River Road, Conestoga, PA	SW846 8260B		
3158920001	3052 River Road, Conestoga, PA	SW846 9020B		

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

Generated by ALS



3158920

1 of 1

Client Name: LCSWMA - Gerald E. Miller, Sr. Address: 3052 River Road Conestoga, PA 17516 Contact: Gerald E. Miller, Sr. Phone#: (717) 872-5117 Project Name#: LCSWMA - Quarterly Bill To: Lancaster County Solid Waste MA TAT: ☒ Normal-Standard TAT is 10-12 business days. ☐ Rush-Subject to ALS approval and surcharges. Date Required: _____ Approved By: _____ Email? ☐ -Y ☐ -N Fax? ☐ -Y ☐ -N		Container Type: _____ Container Size: _____ Preservative: _____		AG 40 ml AN 125 ml AN 250 ml CG 40 ml H2SO4 125 ml H2SO4 250 ml H2SO4 40 ml HNO3 125 ml HNO3 250 ml HNO3 40 ml PL 500 ml PL 500 ml PL 500 ml		Cooler Temp: _____ No. of Coolers: _____ 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: _____	
ANALYSES/METHOD REQUESTED									
Enter Number of Containers Per Sample or Field Results Below.		Matrix		Container Type		Container Size			
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, T, SPC		Alkalinity, HCO3		Alkalinity, HCO3		Alkalinity, HCO3			
1 3052RIVERRD		2		1		1			
2		2		2		2			
3		3		3		3			
4		4		4		4			
5		5		5		5			
6		6		6		6			
7		7		7		7			
8		8		8		8			
9		9		9		9			
10		10		10		10			
Project Comments: _____									
Relinquished By / Company Name		Date		Time		Received By / Company Name			
1		2/19/21		10:36		ALS			
3		2/19/21		10:36		ALS			
5		2/19/21		10:36		ALS			
7		2/19/21		10:36		ALS			
9		2/19/21		10:36		ALS			
LOGGED BY (signature): _____		DATE: _____		TIME: _____		REVIEWED BY (signature): _____			
Standard		CLP-like		USACE		State Samples Collected In			
USACE		USACE		USACE		NY			
USACE		USACE		USACE		NJ			
USACE		USACE		USACE		PA			
USACE		USACE		USACE		NC			
USACE		USACE		USACE		Other:			
ALS Field Services: ☐ Pickup ☐ Labor		Composite Sampling		Rental Equipment		Other:			
Reportable to PADEP?		Yes		No		Sample Disposal			
Yes		Yes		Yes		Lab			
No		No		No		Special			
PWSID #		PWSID #		PWSID #		EDDS: Formal Type:			
4		4		4		4			
6		6		6		6			
8		8		8		8			
10		10		10		10			



301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

3158920

tion of Sample Receipt Form

Lancaster County Solid Waste
Authority

Client: LCSWMA

Initials: AS

Date: 2/20/21

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?¹..... 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 AS 2/24/21
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 AS 2/20/21
- 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): 4 _____

Thermometer ID: 524 _____

Radiological (µCi): _____

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

No time / date on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 2, 2021

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:	3158919
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 2021-3044 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

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

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

CC: Ms. Ashley Gichuki , 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

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**SAMPLE SUMMARY**Workorder: 3158919 1ST QTR 2021-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158919001	3044 River Road, Conestoga, PA	Water	2/19/2021 11:44	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158919 1ST QTR 2021-3044 RIVER RD

Notes

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

Standard Acronyms/Flags

C	Please reference the Project Summary section of this Certificate of Analysis for case narrative comments.
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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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

PROJECT SUMMARY

Workorder: 3158919 1ST QTR 2021-3044 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158919 1ST QTR 2021-3044 RIVER RD

Lab ID: **3158919001** Date Collected: 2/19/2021 11:44 Matrix: Water
Sample ID: **3044 River Road, Conestoga, PA** Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 11:55	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 11:55	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	109	C	%	62 - 133	SW846 8260B			2/24/21 11:55	DPC	K
4-Bromofluorobenzene (S)	90.6	C	%	79 - 114	SW846 8260B			2/24/21 11:55	DPC	K
Dibromofluoromethane (S)	106	C	%	78 - 116	SW846 8260B			2/24/21 11:55	DPC	K
Toluene-d8 (S)	96.6	C	%	76 - 127	SW846 8260B			2/24/21 11:55	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	13	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	13	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			2/23/21 20:35	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	21.3	C	mg/L	2.0	EPA 300.0			2/20/21 13:33	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 13:33	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/23/21 11:26	PAG	I
Nitrate-N	19.4	C	mg/L	0.20	EPA 300.0			2/20/21 13:33	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 13:33	MBW	C
pH	6.21	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	225	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	ND	C	mg/L	2.0	EPA 300.0			2/20/21 13:33	MBW	C

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ANALYTICAL RESULTS

Workorder: 3158919 1ST QTR 2021-3044 RIVER RD

Lab ID: **3158919001**

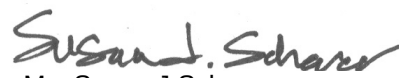
Date Collected: 2/19/2021 11:44

Matrix: Water

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

Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	149	C	mg/L	25	S2540C-11			2/23/21 14:47	KMM	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	0.55	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	14.2	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:43	SRT	D1
Calcium, Dissolved	14.4	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:13	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:43	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:13	SRT	E
Magnesium, Total	10.5	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:43	SRT	D1
Magnesium, Dissolved	10.7	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:13	SRT	E
Manganese, Total	0.016	C	mg/L	0.0025	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:43	SRT	D1
Manganese, Dissolved	0.016	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:13	SRT	E
Potassium, Total	1.8	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:43	SRT	D1
Potassium, Dissolved	1.7	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:13	SRT	E
Sodium, Total	8.4	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 13:43	SRT	D1
Sodium, Dissolved	8.6	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:13	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.94	C	pH_Units		Field			2/19/21 11:44	BGS	M
Specific Conductance, Field	239	C	umhos/cm	1	Field			2/19/21 11:44	BGS	M
Temperature	10.20	C	Deg. C		Field			2/19/21 11:44	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158919 1ST QTR 2021-3044 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158919001	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 CaCO ₃ /L.				
3158919001	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: 3158919 1ST QTR 2021-3044 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158919001	3044 River Road, Conestoga, PA	ASTM D6919-09		
3158919001	3044 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3158919001	3044 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3158919001	3044 River Road, Conestoga, PA	EPA 300.0		
3158919001	3044 River Road, Conestoga, PA	EPA 410.4		
3158919001	3044 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3158919001	3044 River Road, Conestoga, PA	Field		
3158919001	3044 River Road, Conestoga, PA	S2540C-11		
3158919001	3044 River Road, Conestoga, PA	S4500HB-11		
3158919001	3044 River Road, Conestoga, PA	SM2130B-2011		
3158919001	3044 River Road, Conestoga, PA	SM2320B-2011		
3158919001	3044 River Road, Conestoga, PA	SM2510B-2011		
3158919001	3044 River Road, Conestoga, PA	SM5310B-2011		
3158919001	3044 River Road, Conestoga, PA	SW846 8260B		
3158919001	3044 River Road, Conestoga, PA	SW846 9020B		

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301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-554
F: (717) 944-1431

3158919

Condition of Sample Receipt Form

Client: LCSWMA

Lancaster County Solid Waste
Authority

Initials: AS

Date: 2/20/21

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?¹..... 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): 5 _____

Thermometer ID: 504 _____

Radiological (µCi): _____

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

Containers do not have date, time or sampler initials. Additional VOC container received.

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis

March 2, 2021

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:	3158941
Purchase Order:	PO-1000371	Workorder ID:	1ST QTR 2020-3125 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, February 19, 2021.

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

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

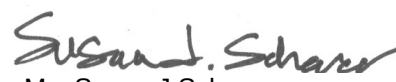
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Ashley Gichuki , 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.


Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**Workorder: 3158941 1ST QTR 2020-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3158941001	3125 River Road, Conestoga, PA	Water	2/19/2021 12:51	2/19/2021 16:36	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3158941 1ST QTR 2020-3125 RIVER RD

Notes

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

Standard Acronyms/Flags

C	Please reference the Project Summary section of this Certificate of Analysis for case narrative comments.
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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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

PROJECT SUMMARY

Workorder: 3158941 1ST QTR 2020-3125 RIVER RD

Workorder Comments

Temperature of sample taken at time of sample receipt in the laboratory. See chain of custody for actual temperature.

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ANALYTICAL RESULTS

Workorder: 3158941 1ST QTR 2020-3125 RIVER RD

Lab ID: **3158941001** Date Collected: 2/19/2021 12:51 Matrix: Water
Sample ID: **3125 River Road, Conestoga, PA** Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
Toluene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			2/24/21 15:18	DPC	K
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			2/24/21 15:18	DPC	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	107	C	%	62 - 133	SW846 8260B			2/24/21 15:18	DPC	K
4-Bromofluorobenzene (S)	86.6	C	%	79 - 114	SW846 8260B			2/24/21 15:18	DPC	K
Dibromofluoromethane (S)	106	C	%	78 - 116	SW846 8260B			2/24/21 15:18	DPC	K
Toluene-d8 (S)	95.3	C	%	76 - 127	SW846 8260B			2/24/21 15:18	DPC	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	187	C	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	C
Alkalinity, Total	187	C,1	mg/L	5	SM2320B-2011			2/28/21 01:37	LXZ	A
Ammonia-N	0.102	C	mg/L	0.100	ASTM D6919-09			2/23/21 23:06	JXL	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			2/28/21 02:30	JAM	B
Chloride	101	C	mg/L	2.0	EPA 300.0			2/20/21 06:53	MBW	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			2/20/21 06:53	MBW	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			2/24/21 14:26	PAG	I
Nitrate-N	5.3	C	mg/L	0.20	EPA 300.0			2/20/21 06:53	MBW	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			2/20/21 06:53	MBW	C
pH	7.56	C,2	pH_Units		S4500HB-11			2/24/21 18:15	LXZ	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	2/22/21 00:30	VXF	2/24/21 20:25	VXF	H
Specific Conductance	968	C	umhos/cm	1	SM2510B-2011			2/28/21 01:37	LXZ	C
Sulfate	12.4	C	mg/L	2.0	EPA 300.0			2/20/21 06:53	MBW	C

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ANALYTICAL RESULTS

Workorder: 3158941 1ST QTR 2020-3125 RIVER RD

Lab ID: **3158941001**

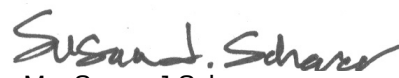
Date Collected: 2/19/2021 12:51

Matrix: Water

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

Date Received: 2/19/2021 16:36

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Dissolved Solids	426	C	mg/L	25	S2540C-11			2/24/21 12:16	KMM	C
Total Organic Carbon (TOC)	0.65	C	mg/L	0.50	SM5310B-2011			2/23/21 13:05	PAG	F
Turbidity	ND	C	NTU	0.10	SM2130B-2011			2/20/21 07:20	MBW	C
METALS										
Calcium, Total	36.0	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:19	SRT	D1
Calcium, Dissolved	35.3	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:56	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:19	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:56	SRT	E
Magnesium, Total	5.0	C	mg/L	0.050	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:19	SRT	D1
Magnesium, Dissolved	5.1	C	mg/L	0.10	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:56	SRT	E
Manganese, Total	0.021	C	mg/L	0.0025	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:19	SRT	D1
Manganese, Dissolved	0.0099	C	mg/L	0.0050	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:56	SRT	E
Potassium, Total	3.0	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:19	SRT	D1
Potassium, Dissolved	3.0	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:56	SRT	E
Sodium, Total	106	C	mg/L	0.25	EPA 200.7	2/22/21 06:08	EAD	2/23/21 14:19	SRT	D1
Sodium, Dissolved	110	C	mg/L	0.50	EPA 200.7	2/23/21 07:40	SRT	2/23/21 12:56	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.28	C	pH_Units		Field			2/19/21 12:51	BGS	M
Specific Conductance, Field	649	C	umhos/cm	1	Field			2/19/21 12:51	BGS	M
Temperature	13.10	C	Deg. C		Field			2/19/21 12:51	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3158941 1ST QTR 2020-3125 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3158941001	1	3125 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.				
3158941001	2	3125 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3158941 1ST QTR 2020-3125 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3158941001	3125 River Road, Conestoga, PA	ASTM D6919-09		
3158941001	3125 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3158941001	3125 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3158941001	3125 River Road, Conestoga, PA	EPA 300.0		
3158941001	3125 River Road, Conestoga, PA	EPA 410.4		
3158941001	3125 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3158941001	3125 River Road, Conestoga, PA	Field		
3158941001	3125 River Road, Conestoga, PA	S2540C-11		
3158941001	3125 River Road, Conestoga, PA	S4500HB-11		
3158941001	3125 River Road, Conestoga, PA	SM2130B-2011		
3158941001	3125 River Road, Conestoga, PA	SM2320B-2011		
3158941001	3125 River Road, Conestoga, PA	SM2510B-2011		
3158941001	3125 River Road, Conestoga, PA	SM5310B-2011		
3158941001	3125 River Road, Conestoga, PA	SW846 8260B		
3158941001	3125 River Road, Conestoga, PA	SW846 9020B		

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301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-554

F: (717) 944-143

3158941

Lancaster County Solid Waste
Authority

Condition of Sample Receipt Form

Client: LCSWMA

Initials: AS

Date: 2/20/21

1. Were airbills / tracking numbers present and recorded?.....	<u>NONE</u>	YES	NO
Tracking number: _____			
2. Are Custody Seals on shipping containers intact?.....	<u>NONE</u>	YES	NO
3. Are Custody Seals on sample containers intact?.....	<u>NONE</u>	YES	NO
4. Is there a COC (Chain-of-Custody) present?.....		<u>YES</u>	NO
5. Are the COC and bottle labels complete, legible and in agreement?.....		YES	<u>NO</u>
5a. Does the COC contain sample locations?.....		<u>YES</u>	NO
5b. Does the COC contain date and time of sample collection for all samples?.....		YES	<u>NO</u>
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? ¹	<u>N/A</u>	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)?.....	<u>N/A</u>	YES	NO
11. Were the samples received on ice?.....		<u>YES</u>	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?.....	<u>N/A</u>	YES	<u>NO</u>
13b. Did the client provide a SDWA PWS ID#?.....	<u>N/A</u>	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?.....	<u>N/A</u>	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?.....	<u>N/A</u>	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?.....	<u>N/A</u>	YES	NO

Cooler #: _____

Temperature (°C): 2 _____

Thermometer ID: 524 _____

Radiological (µCi): _____

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

No date/time on containers

¹Final determination of correct preservation for analysis such as volatiles, microbiology, and oil and grease is made in the analytical department at the time of or following the analysis