



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised  
02/11/2022

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<sup>o</sup> 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) 11/05/2021

Sample Collection Time: 10:25 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 12/03/2021

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

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	27	SM20-2321
CALCIUM, TOTAL	18	EPA 200.7
CALCIUM, DISSOLVED	18.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	21.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	10.4	EPA 200.7
MAGNESIUM, DISSOLVED	11.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	11	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	10	EPA 200.7
NITRATE-NITROGEN	17.6	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/05/2021

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)	7.29	FIELD
pH-LAB (SU)	7.35	SM4500B
POTASSIUM, TOTAL	2.4	EPA 200.7
POTASSIUM, DISSOLVED	2.3	EPA 200.7
SODIUM, TOTAL	8.3	EPA 200.7
SODIUM, DISSOLVED	8.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	298	FIELD
SPEC. COND., LAB (umhos/cm)	342	EPA 120.1
SULFATE	2.6	EPA 300
ALKALINITY	27	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	200	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.31	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.



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## FORM 52

### MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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General Reference: Act 101 Section 1103

#### SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

#### SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: MILLER

Address: 3052 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 11/05/2021

Sample Collection Time: 10:50 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

11/21/2021

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 MILLER

Sample Date

11/05/2021

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	15.4	EPA 200.7
CALCIUM, DISSOLVED	15.6	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	23.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	37	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	8.3	EPA 200.7
MAGNESIUM, DISSOLVED	8.3	EPA 200.7
MANGANESE, TOTAL (ug/l)	27	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	27	EPA 200.7
NITRATE-NITROGEN	19.7	EPA 300

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

MILLER

Sample Date

11/05/2021

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)	6.69	FIELD
pH-LAB (SU)	6.64	SM4500B
POTASSIUM, TOTAL	2	EPA 200.7
POTASSIUM, DISSOLVED	2	EPA 200.7
SODIUM, TOTAL	7.5	EPA 200.7
SODIUM, DISSOLVED	7.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	273	FIELD
SPEC. COND., LAB (umhos/cm)	329	EPA 120.1
SULFATE	3.3	EPA 300
ALKALINITY	11	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	178	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.3	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

MILLER

Sample Date

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.





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

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General Reference: Act 101 Section 1103

### SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

### SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D<sup>o</sup> 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) 11/05/2021

Sample Collection Time: 3:37 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 11/18/2021

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

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.12	SM4500D
BICARBONATE ALKALINITY	14	SM20-2321
CALCIUM, TOTAL	10.4	EPA 200.7
CALCIUM, DISSOLVED	10.9	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	29.5	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	11.6	EPA 200.7
MAGNESIUM, DISSOLVED	11.8	EPA 200.7
MANGANESE, TOTAL (ug/l)	140	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	140	EPA 200.7
NITRATE-NITROGEN	16.6	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.32	EPA 300
pH-FIELD (SU)	6.84	FIELD
pH-LAB (SU)	6.7	SM4500B
POTASSIUM, TOTAL	2.1	EPA 200.7
POTASSIUM, DISSOLVED	2.3	EPA 200.7
SODIUM, TOTAL	8.3	EPA 200.7
SODIUM, DISSOLVED	8.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	316	FIELD
SPEC. COND., LAB (umhos/cm)	303	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	14	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	90	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.71	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

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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<sup>o</sup> 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) 11/05/2021

Sample Collection Time: 1:30 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

12/03/2021

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

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	32	SM20-2321
CALCIUM, TOTAL	10.2	EPA 200.7
CALCIUM, DISSOLVED	10.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	33.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	10.9	EPA 200.7
MAGNESIUM, DISSOLVED	11.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	110	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	99	EPA 200.7
NITRATE-NITROGEN	7.4	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/05/2021

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)	7.3	FIELD
pH-LAB (SU)	7.23	SM4500B
POTASSIUM, TOTAL	2.9	EPA 200.7
POTASSIUM, DISSOLVED	2.6	EPA 200.7
SODIUM, TOTAL	8.6	EPA 200.7
SODIUM, DISSOLVED	8.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	276	FIELD
SPEC. COND., LAB (umhos/cm)	372	EPA 120.1
SULFATE	28.4	EPA 300
ALKALINITY	32	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	188	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.11	SM 2130B

T Please indicate detection limit if analyte is not detected.

**FORM 52**  
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PS LCSWMA

Sample Date

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.





Date Prepared/Revised  
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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

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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<sup>o</sup> MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: SENSENICH

Address: 3076 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 11/05/2021

Sample Collection Time: 1:35 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 11/18/2021

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

11/05/2021

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	12.5	EPA 200.7
CALCIUM, DISSOLVED	12.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	58.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	57	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	7.8	EPA 200.7
MAGNESIUM, DISSOLVED	7.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	160	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

11/05/2021

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)	6.47	FIELD
pH-LAB (SU)	6.52	SM4500B
POTASSIUM, TOTAL	3.4	EPA 200.7
POTASSIUM, DISSOLVED	3.4	EPA 200.7
SODIUM, TOTAL	23.5	EPA 200.7
SODIUM, DISSOLVED	23.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	337	FIELD
SPEC. COND., LAB (umhos/cm)	418	EPA 120.1
SULFATE	12.5	EPA 300
ALKALINITY	11	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	210	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.14	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised  
02/11/2022

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<sup>o</sup> 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) 11/05/2021

Sample Collection Time: 9:10 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s)

22-293

Lab Analysis Date

11/18/2021

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

11/05/2021

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	9.3	EPA 200.7
CALCIUM, DISSOLVED	10.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	34.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	5.6	EPA 200.7
MAGNESIUM, DISSOLVED	6.4	EPA 200.7
MANGANESE, TOTAL (ug/l)	38	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	41	EPA 200.7
NITRATE-NITROGEN	0.22	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.3	EPA 300
pH-FIELD (SU)	7.24	FIELD
pH-LAB (SU)	7.1	SM4500B
POTASSIUM, TOTAL	2.1	EPA 200.7
POTASSIUM, DISSOLVED	2.1	EPA 200.7
SODIUM, TOTAL	12.8	EPA 200.7
SODIUM, DISSOLVED	13.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	237	FIELD
SPEC. COND., LAB (umhos/cm)	266	EPA 120.1
SULFATE	10.4	EPA 300
ALKALINITY	33	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	134	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

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.





COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised  
02/11/2022

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

**SECTION A. SITE IDENTIFIER**

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

**SECTION B. PRIVATE WATER SUPPLY INFORMATION**

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: 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) 11/05/2021

Sample Collection Time: 1:53 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 12/03/2021

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

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	164	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	255 E	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	0.07	EPA 200.7
MAGNESIUM, DISSOLVED	0.1 ND	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	7.7	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

11/05/2021

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)	8.26	FIELD
pH-LAB (SU)	8.17	SM4500B
POTASSIUM, TOTAL	2.5	EPA 200.7
POTASSIUM, DISSOLVED	2.3	EPA 200.7
SODIUM, TOTAL	249	EPA 200.7
SODIUM, DISSOLVED	261	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	349	FIELD
SPEC. COND., LAB (umhos/cm)	1580	EPA 120.1
SULFATE	2.8	EPA 300
ALKALINITY	164	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	688	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.14	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

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised  
02/11/2022

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<sup>o</sup> 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) 11/05/2021

Sample Collection Time: 12:07 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 12/03/2021

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

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	21	SM20-2321
CALCIUM, TOTAL	12.7	EPA 200.7
CALCIUM, DISSOLVED	12.6	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	39.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	5.7	EPA 200.7
MAGNESIUM, DISSOLVED	5.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	8.1	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	8	EPA 200.7
NITRATE-NITROGEN	4.2	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

11/05/2021

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)		FIELD
pH-LAB (SU)	6.88	SM4500B
POTASSIUM, TOTAL	1.6	EPA 200.7
POTASSIUM, DISSOLVED	1.4	EPA 200.7
SODIUM, TOTAL	16.1	EPA 200.7
SODIUM, DISSOLVED	15.3	EPA 200.7
SPEC. COND., FIELD (umhos/cm)		FIELD
SPEC. COND., LAB (umhos/cm)	286	EPA 120.1
SULFATE	8.6	EPA 300
ALKALINITY	21	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	156	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.17	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

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.





COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised  
02/11/2022

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<sup>o</sup> 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) 11/05/2021

Sample Collection Time: 12:34 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 11/18/2021

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

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	100	SM20-2321
CALCIUM, TOTAL	46.7	EPA 200.7
CALCIUM, DISSOLVED	59.7	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	105	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	16.8	EPA 200.7
MAGNESIUM, DISSOLVED	21.6	EPA 200.7
MANGANESE, TOTAL (ug/l)	61	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	52	EPA 200.7
NITRATE-NITROGEN	11.1	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

FRY

Sample Date

11/05/2021

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)	8.06	FIELD
pH-LAB (SU)	7.97	SM4500B
POTASSIUM, TOTAL	2.3	EPA 200.7
POTASSIUM, DISSOLVED	2.3	EPA 200.7
SODIUM, TOTAL	39.9	EPA 200.7
SODIUM, DISSOLVED	41.9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	473	FIELD
SPEC. COND., LAB (umhos/cm)	887	EPA 120.1
SULFATE	5.4	EPA 300
ALKALINITY	100	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	390	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.26	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

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised  
02/11/2022

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

**SECTION A. SITE IDENTIFIER**

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

**SECTION B. PRIVATE WATER SUPPLY INFORMATION**

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: BECK

Address: 3125 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 11/05/2021

Sample Collection Time: 12:49 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 11/21/2021

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

11/05/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	165	SM20-2321
CALCIUM, TOTAL	0.25	EPA 200.7
CALCIUM, DISSOLVED	0.25	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	108	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	88	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	0.058	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	5.4	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

BECK

Sample Date

11/05/2021

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)	7.88	FIELD
pH-LAB (SU)	8.06	SM4500B
POTASSIUM, TOTAL	3.4	EPA 200.7
POTASSIUM, DISSOLVED	3.3	EPA 200.7
SODIUM, TOTAL	148	EPA 200.7
SODIUM, DISSOLVED	152	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	502	FIELD
SPEC. COND., LAB (umhos/cm)	916	EPA 120.1
SULFATE	15.5	EPA 300
ALKALINITY	165	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	426	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

BECK

Sample Date

11/05/2021

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

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

T Please indicate detection limit if analyte is not detected.





**ALS Environmental**



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

December 1, 2021

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

## Certificate of Analysis

Project Name:	<b>CONTIGUOUS LANDOWNER- 3106 RIVER RD</b>	Workorder:	<b>3210967</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 2021-3106 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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: 3210967 4TH QTR 2021-3106 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3210967001	3106 River Road, Conestoga, PA	Water	11/5/2021 12:34	11/5/2021 17:10	Mr. Brian G Shade
3210967002	Trip Blank	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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



## SAMPLE SUMMARY

Workorder: 3210967 4TH 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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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey



**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

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## PROJECT SUMMARY

Workorder: 3210967 4TH QTR 2021-3106 RIVER RD

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### Workorder Comments

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

### Sample Comments

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**Lab ID:** 3210967002

**Sample ID:** Trip Blank

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

---

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## ANALYTICAL RESULTS

Workorder: 3210967 4TH QTR 2021-3106 RIVER RD

Lab ID: **3210967001**

Date Collected: 11/5/2021 12:34

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:36	PDK	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	86.1	C	%	70 - 130	EPA 524.2			11/12/21 01:36	PDK	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	100	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	100	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/18/21 08:30	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/12/21 09:05	ALK	B
Chloride	105	C	mg/L	2.0	EPA 300.0			11/6/21 17:46	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			11/6/21 17:46	GJB	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			11/16/21 15:53	PAG	I
Nitrate-N	11.1	C	mg/L	0.20	EPA 300.0			11/6/21 17:46	GJB	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			11/6/21 17:46	GJB	C
pH	7.97	C,2	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	887	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	5.4	C	mg/L	2.0	EPA 300.0			11/6/21 17:46	GJB	C
Total Dissolved Solids	390	C	mg/L	25	S2540C-11			11/12/21 11:11	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 02:54	PAG	F

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



## ANALYTICAL RESULTS

Workorder: 3210967 4TH QTR 2021-3106 RIVER RD

Lab ID: **3210967001**

Date Collected: 11/5/2021 12:34

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.26	C	NTU	0.10	SM2130B-2011			11/6/21 10:51	LXZ	C
<b>METALS</b>										
Calcium, Total	46.7	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:51	SRT	D
Calcium, Dissolved	59.7	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:32	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:51	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:32	SRT	E
Magnesium, Total	16.8	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:51	SRT	D
Magnesium, Dissolved	21.6	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:32	SRT	E
Manganese, Total	0.061	C	mg/L	0.0025	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:51	SRT	D
Manganese, Dissolved	0.052	C	mg/L	0.0050	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:32	SRT	E
Potassium, Total	2.3	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:51	SRT	D
Potassium, Dissolved	2.3	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:32	SRT	E
Sodium, Total	39.9	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:51	SRT	D
Sodium, Dissolved	41.9	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:32	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	8.06	C	pH_Units		Field			11/5/21 12:34	BGS	N
Specific Conductance, Field	473	C	umhos/cm	1	Field			11/5/21 12:34	BGS	N
Temperature	14.50	C	Deg. C		Field			11/5/21 12:34	BGS	N

*Susan J. Scherer*

Ms. Susan J Scherer

Project Coordinator

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

## ANALYTICAL RESULTS

Workorder: 3210967 4TH QTR 2021-3106 RIVER RD

Lab ID: **3210967002**  
Sample ID: **Trip Blank**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
------------	---------	------	-------	-----	--------	----------	----	----------	----	------

### ADMINISTRATIVE

Sample Cancelled

CANCEL C

11/15/21 09:04 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3210967 4TH QTR 2021-3106 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>3210967001</b>	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 CaCO <sub>3</sub> /L.				
<b>3210967001</b>	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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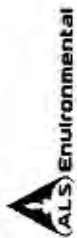
**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3210967 4TH QTR 2021-3106 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3210967001	3106 River Road, Conestoga, PA	ASTM D6919-09		
3210967001	3106 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3210967001	3106 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3210967001	3106 River Road, Conestoga, PA	EPA 300.0		
3210967001	3106 River Road, Conestoga, PA	EPA 410.4		
3210967001	3106 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3210967001	3106 River Road, Conestoga, PA	EPA 524.2		
3210967001	3106 River Road, Conestoga, PA	Field		
3210967001	3106 River Road, Conestoga, PA	S2540C-11		
3210967001	3106 River Road, Conestoga, PA	S4500HB-11		
3210967001	3106 River Road, Conestoga, PA	SM2130B-2011		
3210967001	3106 River Road, Conestoga, PA	SM2320B-2011		
3210967001	3106 River Road, Conestoga, PA	SM2510B-2011		
3210967001	3106 River Road, Conestoga, PA	SM5310B-2011		
3210967001	3106 River Road, Conestoga, PA	SW846 9020B		

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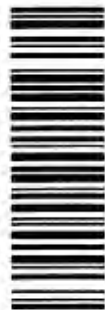
# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

Generated by ALS

COC #:

ALS Quot:



3210967

Client Name: LCSWMA - Aaron Fry		Container Type	AG	AN	AN	CG	PL	PL	PL	PL	PL	PL	PL	Receipt Information (completed by receiving Lab)																																																																																																																																														
Address: 3106 River Road		Container Size	40 ml	125 ml	250 ml	40 ml	250 ml	125 ml	125 ml	125 ml	500 ml	500 ml	500 ml	Cooler Temp: <u>574</u>																																																																																																																																														
Contact: Aaron Fry		Preservative	HCl	H2SO4	H2SO4	AspHCl	H2SO4	HNO3	HNO3	HNO3	None	None	None	No. of Coolers: <u>Y</u> <u>N</u> Initial																																																																																																																																														
Phone#: (717) 669-6831		ANALYSES/METHOD REQUESTED																																																																																																																																																										
Project Name/ID: LCSWMA - Quarterly		Enter Number of Containers Per Sample or Field Results Below.																																																																																																																																																										
Bill To: LCSWMA - Aaron Fry		<table border="1"> <tr> <th>Sample Description/Location (as it will appear on the lab report)</th> <th>Sample Date</th> <th>Time</th> <th>TOC</th> <th>O-OH</th> <th>TOX</th> <th>524 VOC</th> <th>FM</th> <th>NH3-N, COD</th> <th>Dissolved Metals: Ca, Fe, Mg, Mn, K, Na</th> <th>Metals: Ca, Fe, Mg, Mn, K, Na</th> <th>pH, TDS, NO2, NO3, Cl, SO4, F, TP, SpC</th> <th>Alkalinity, HCO3</th> </tr> <tr> <td>1 3106RIVERRD</td> <td>11/05/21</td> <td>1234</td> <td>2</td> <td>1</td> <td>2</td> <td>3</td> <td>X</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>2 Trip Blank</td> <td>11/05/21</td> <td>1240</td> <td></td> <td></td> <td></td> <td>2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>												Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	TOC	O-OH	TOX	524 VOC	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, TP, SpC	Alkalinity, HCO3	1 3106RIVERRD	11/05/21	1234	2	1	2	3	X	1	1	1	1	1	2 Trip Blank	11/05/21	1240				2							3													4													5													6													7													8													9													10												
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Date Required: <input type="checkbox"/> Rush-Subject to ALS approval and surcharges.		Received on Ice? <input type="checkbox"/>																																																																																																																																																										
Email? <input type="checkbox"/> -Y		COC Labels Complete/Accurate? <input type="checkbox"/>																																																																																																																																																										
Fax? <input type="checkbox"/> -Y No.:		Cont. in Good Cond.? <input type="checkbox"/>																																																																																																																																																										
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		Correct Preservation? <input type="checkbox"/>																																																																																																																																																										
		Headspace/Volatiles? <input type="checkbox"/>																																																																																																																																																										
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5		<table border="1"> <tr> <th>Standard</th> <th>Deliverables</th> <th>Special Processing</th> <th>State Samples Collected In</th> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>USACE</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>Navy</td> <td><input type="checkbox"/></td> </tr> <tr> <td><input type="checkbox"/></td> <td><input type="checkbox"/></td> <td>USACE</td> <td><input type="checkbox"/></td> </tr> </table>												Standard	Deliverables	Special Processing	State Samples Collected In	<input type="checkbox"/>	<input type="checkbox"/>	USACE	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Navy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	USACE	<input type="checkbox"/>																																																																																																																															
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7		Reportable to PADEP? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																																																										
9		Sample Disposal: <input type="checkbox"/> Lab <input checked="" type="checkbox"/> Special <input type="checkbox"/>																																																																																																																																																										
		PWSID # <u>11/5/21/1710</u>																																																																																																																																																										
		EDDS: Format Type <u>10</u>																																																																																																																																																										

\* 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

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Rev 8/04

ALS





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Middletown, PA 17057

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F: (717) 944-1430

## Condition of Sample Receipt Form

Client: \_\_\_\_\_ Work Order #: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: 6/11/20

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	NO
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	NO
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? <sup>1</sup> .....	<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>	<u>YES</u>	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): 0 \_\_\_\_\_

Thermometer ID: 574 \_\_\_\_\_

Radiological (µCi): \_\_\_\_\_

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

<sup>1</sup>Final 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



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December 11, 2021

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

## Certificate of Analysis

Project Name:	<b>CONTIGUOUS LANDOWNER- 3100 RIVER RD</b>	Workorder:	<b>3211110</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 2021-3100 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

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## SAMPLE SUMMARY

Workorder: 3211110 4TH QTR 2021-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3211110001	3100 River Road, Conestoga, PA	Water	11/5/2021 12:07	11/5/2021 17:10	Mr. Brian G Shade
3211110002	TRIP BLANK	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3211110 4TH 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: 3211110 4TH 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.

### Sample Comments

**Lab ID:** 3211110001

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

**Sample Type:** SAMPLE

This sample was filtered in the laboratory.

**Lab ID:** 3211110002

**Sample ID:** TRIP BLANK

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

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## ANALYTICAL RESULTS

Workorder: 3211110 4TH QTR 2021-3100 RIVER RD

Lab ID: **3211110001**

Date Collected: 11/5/2021 12:07

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:55	PDK	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	85.2	C	%	70 - 130	EPA 524.2			11/12/21 06:55	PDK	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	21	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	21	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/19/21 09:28	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/12/21 08:45	ALK	B
Chloride	39.7	C	mg/L	2.0	EPA 300.0			12/3/21 20:16	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			12/3/21 20:16	GJB	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			11/17/21 12:11	PAG	I
Nitrate-N	4.2	C,2	mg/L	0.20	EPA 300.0			12/3/21 20:16	GJB	C
Nitrite-N	ND	C,3	mg/L	0.20	EPA 300.0			12/3/21 20:16	GJB	C
pH	6.88	C,4	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	286	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	8.6	C	mg/L	2.0	EPA 300.0			12/3/21 20:16	GJB	C
Total Dissolved Solids	156	C	mg/L	25	S2540C-11			11/12/21 11:34	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 22:12	PAG	F

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## ANALYTICAL RESULTS

Workorder: 3211110 4TH QTR 2021-3100 RIVER RD

Lab ID: **3211110001**

Date Collected: 11/5/2021 12:07

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.17	C,5	NTU	0.10	SM2130B-2011			12/1/21 13:02	BXD	C
<b>METALS</b>										
Calcium, Total	12.7	C	mg/L	0.050	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:57	SRT	D
Calcium, Dissolved	12.6	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:46	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:57	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:46	SRT	E
Magnesium, Total	5.7	C	mg/L	0.050	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:57	SRT	D
Magnesium, Dissolved	5.9	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:46	SRT	E
Manganese, Total	0.0081	C	mg/L	0.0025	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:57	SRT	D
Manganese, Dissolved	0.0080	C	mg/L	0.0050	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:46	SRT	E
Potassium, Total	1.6	C	mg/L	0.25	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:57	SRT	D
Potassium, Dissolved	1.4	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:46	SRT	E
Sodium, Total	16.1	C	mg/L	0.25	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:57	SRT	D
Sodium, Dissolved	15.3	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:46	SRT	E

*Susan J. Scherer*

Ms. Susan J Scherer

Project Coordinator

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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

## ANALYTICAL RESULTS

Workorder: 3211110 4TH QTR 2021-3100 RIVER RD

Lab ID: **3211110002**  
Sample ID: **TRIP BLANK**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
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### ADMINISTRATIVE

Sample Cancelled

CANCEL C

11/15/21 09:09 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3211110 4TH QTR 2021-3100 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>3211110001</b>	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 <sub>3</sub> /L.				
<b>3211110001</b>	2	3100 River Road, Conestoga, PA	EPA 300.0	Nitrate-N
Analyte was analyzed past the 48 hour holding time.				
<b>3211110001</b>	3	3100 River Road, Conestoga, PA	EPA 300.0	Nitrite-N
Analyte was analyzed past the 48 hour holding time.				
<b>3211110001</b>	4	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.				
<b>3211110001</b>	5	3100 River Road, Conestoga, PA	SM2130B-2011	Turbidity
This sample was analyzed after the 48 hour holding time for Turbidity as required by the method.				

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## ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

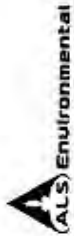
Workorder: 3211110 4TH QTR 2021-3100 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3211110001	3100 River Road, Conestoga, PA	ASTM D6919-09		
3211110001	3100 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3211110001	3100 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3211110001	3100 River Road, Conestoga, PA	EPA 300.0		
3211110001	3100 River Road, Conestoga, PA	EPA 410.4		
3211110001	3100 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3211110001	3100 River Road, Conestoga, PA	EPA 524.2		
3211110001	3100 River Road, Conestoga, PA	S2540C-11		
3211110001	3100 River Road, Conestoga, PA	S4500HB-11		
3211110001	3100 River Road, Conestoga, PA	SM2130B-2011		
3211110001	3100 River Road, Conestoga, PA	SM2320B-2011		
3211110001	3100 River Road, Conestoga, PA	SM2510B-2011		
3211110001	3100 River Road, Conestoga, PA	SM5310B-2011		
3211110001	3100 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

Client Name: LCSWMA - Larry Kirchner

Address: 3100 River Road

Contestoga, PA 17516

Contact: Larry Kirchner

Phone#: (717) 584-0030

Project Name#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

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

☐ Rush-Subject to ALS approval and surcharges.

Date Required: \_\_\_\_\_ Approved By: \_\_\_\_\_

Email? ☐ -Y

Fax? ☐ -Y

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

1. 3100RIVERRD 11/05/21 1207 G DW

2. Trip Blank 11/05/21 1710 G DW

3

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9

10

Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):

Date Time

Received By / Company Name

Date Time

11/5/21 1210 20

11/5/21 1710

4

6

8

10

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Client Name: LCSWMA - Larry Kirchner

Address: 3100 River Road

Contestoga, PA 17516

Contact: Larry Kirchner

Phone#: (717) 584-0030

Project Name#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

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Email? ☐ -Y

Fax? ☐ -Y

Sample Description/Location  
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Contact: Larry Kirchner

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11/5/21 1710

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Contestoga, PA 17516

Contact: Larry Kirchner

Phone#: (717) 584-0030

Project Name#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

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Date Required: \_\_\_\_\_ Approved By: \_\_\_\_\_

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Fax? ☐ -Y

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Fax? ☐ -Y

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Project Name#: LCSWMA - Quarterly

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Email? ☐ -Y

Fax? ☐ -Y

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Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):





301 Fulling Mill Road  
Middletown, PA 17057

P: (717) 644-5541

F: (717)

**3211110**

## Condition of Sample Receipt Form

Client:

Lancaster County Solid Waste  
Authority

Initials:

ASC

Date:

11/10/21

1. Were airbills / tracking numbers present and received?.....	<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	NO
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>none=unp</u>	YES	<u>NO</u>
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?.....	N/A	<u>YES</u>	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)?.....	N/A	<u>YES</u>	NO
11. Were the samples received on ice?.....		<u>YES</u>	NO
12. Were sample temperatures measured at 0.0-6.0°C.....	<u>ASC 11/10/21</u>	<u>YES</u>	<u>NO</u>
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?.....	N/A	YES	<u>NO</u>
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): 11

Thermometer ID: 574

Radiological (µCi): \_\_\_\_\_

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

same day collection

<sup>1</sup>Final 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

Rev 1/20/2020



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

December 16, 2021

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

## Certificate of Analysis

Project Name:	<b>CONTIGUOUS LANDOWNER- 3088 RIVER RD</b>	Workorder:	<b>3211109</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 2021-3088 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

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## SAMPLE SUMMARY

Workorder: 3211109 4TH QTR 2021-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3211109001	3088 River Road, Conestoga PA	Water	11/5/2021 13:53	11/5/2021 17:10	Mr. Brian G Shade
3211109002	TRIP BLANK	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3211109 4TH 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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## PROJECT SUMMARY

Workorder: 3211109 4TH QTR 2021-3088 RIVER RD

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### Workorder Comments

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

### Sample Comments

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**Lab ID:** 3211109002

**Sample ID:** TRIP BLANK

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

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## ANALYTICAL RESULTS

Workorder: 3211109 4TH QTR 2021-3088 RIVER RD

Lab ID: **3211109001**

Date Collected: 11/5/2021 13:53

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:29	PDK	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	90.9	C	%	70 - 130	EPA 524.2			11/12/21 06:29	PDK	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	164	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	164	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/19/21 09:58	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/12/21 08:45	ALK	B
Chloride	255	C,E	mg/L	2.0	EPA 300.0			12/3/21 20:02	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			12/3/21 20:02	GJB	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			11/17/21 11:44	PAG	I
Nitrate-N	7.7	C,2	mg/L	0.20	EPA 300.0			12/3/21 20:02	GJB	C
Nitrite-N	ND	C,3	mg/L	0.20	EPA 300.0			12/3/21 20:02	GJB	C
pH	8.17	C,4	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	1580	C	umhos/cm	2	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	2.8	C	mg/L	2.0	EPA 300.0			12/3/21 20:02	GJB	C
Total Dissolved Solids	688	C	mg/L	25	S2540C-11			11/12/21 11:34	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 22:12	PAG	F

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Workorder: 3211109 4TH QTR 2021-3088 RIVER RD

Lab ID: **3211109001**

Date Collected: 11/5/2021 13:53

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.14	C,5	NTU	0.10	SM2130B-2011			12/1/21 13:02	BXD	C
<b>METALS</b>										
Calcium, Total	0.15	C	mg/L	0.050	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:39	SRT	D
Calcium, Dissolved	0.15	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:42	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:39	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:42	SRT	E
Magnesium, Total	0.070	C	mg/L	0.050	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:39	SRT	D
Magnesium, Dissolved	ND	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:42	SRT	E
Manganese, Total	ND	C	mg/L	0.0025	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:39	SRT	D
Manganese, Dissolved	ND	C	mg/L	0.0050	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:42	SRT	E
Potassium, Total	2.5	C	mg/L	0.25	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:39	SRT	D
Potassium, Dissolved	2.3	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:42	SRT	E
Sodium, Total	249	C	mg/L	0.25	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:39	SRT	D
Sodium, Dissolved	261	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:42	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	8.26	C	pH_Units		Field			11/5/21 13:53	BGS	N
Specific Conductance, Field	349	C	umhos/cm	1	Field			11/5/21 13:53	BGS	N
Temperature	17.20	C	Deg. C		Field			11/5/21 13:53	BGS	N

Ms. Susan J Scherer

Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 3211109 4TH QTR 2021-3088 RIVER RD

Lab ID: **3211109002**  
Sample ID: **TRIP BLANK**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
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### ADMINISTRATIVE

Sample Cancelled

CANCEL C

11/15/21 09:08 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3211109 4TH QTR 2021-3088 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
3211109001	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 <sub>3</sub> /L.				
3211109001	2	3088 River Road, Conestoga PA	EPA 300.0	Nitrate-N
Analyte was analyzed past the 48 hour holding time.				
3211109001	3	3088 River Road, Conestoga PA	EPA 300.0	Nitrite-N
Analyte was analyzed past the 48 hour holding time.				
3211109001	4	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.				
3211109001	5	3088 River Road, Conestoga PA	SM2130B-2011	Turbidity
This sample was analyzed after the 48 hour holding time for Turbidity as required by the method.				
3211109001	E	3088 River Road, Conestoga PA	EPA 300.0	Chloride
Result reported exceeds instrument calibration				

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## ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3211109 4TH QTR 2021-3088 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3211109001	3088 River Road, Conestoga PA	ASTM D6919-09		
3211109001	3088 River Road, Conestoga PA	EPA 200.7	EPA ACID	
3211109001	3088 River Road, Conestoga PA	EPA 200.7	EPA TRMD	
3211109001	3088 River Road, Conestoga PA	EPA 300.0		
3211109001	3088 River Road, Conestoga PA	EPA 410.4		
3211109001	3088 River Road, Conestoga PA	EPA 420.4	420.4/9066	
3211109001	3088 River Road, Conestoga PA	EPA 524.2		
3211109001	3088 River Road, Conestoga PA	Field		
3211109001	3088 River Road, Conestoga PA	S2540C-11		
3211109001	3088 River Road, Conestoga PA	S4500HB-11		
3211109001	3088 River Road, Conestoga PA	SM2130B-2011		
3211109001	3088 River Road, Conestoga PA	SM2320B-2011		
3211109001	3088 River Road, Conestoga PA	SM2510B-2011		
3211109001	3088 River Road, Conestoga PA	SM5310B-2011		
3211109001	3088 River Road, Conestoga PA	SW846 9020B		

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301 Fulling Mill Road  
Middletown, PA

P: (717) 94

F: (717) 94

3211109

Lancaster County Solid Waste  
Authority

## Condition of Sample Receipt Form

Client:

Initials:

ASC

Date:

11/10/21

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?..... 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..... Same day collection 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):

11

Thermometer ID:

574

Radiological (µCi):

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

<sup>1</sup>Final 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



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December 1, 2021

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

## Certificate of Analysis

Project Name:	<b>FREY FARM</b>	Workorder:	<b>3210970</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 20213079 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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: 3210970 4TH QTR 20213079 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3210970001	3079RIVERRD	Water	11/5/2021 09:10	11/5/2021 17:10	Mr. Brian G Shade
3210970002	TRIP BLANK	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3210970 4TH QTR 20213079 RIVER RD

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N	Indicates presumptive evidence of the presence of a compound
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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: 3210970 4TH QTR 20213079 RIVER RD

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### Workorder Comments

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

### Sample Comments

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**Lab ID:** 3210970002

**Sample ID:** TRIP BLANK

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

---

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## ANALYTICAL RESULTS

Workorder: 3210970 4TH QTR 20213079 RIVER RD

Lab ID: **3210970001**  
Sample ID: **3079RIVERRD**

Date Collected: 11/5/2021 09:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 02:56	PDK	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	88.2	C	%	70 - 130	EPA 524.2			11/12/21 02:56	PDK	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	33	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	33	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/18/21 07:13	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/12/21 09:05	ALK	B
Chloride	34.2	C	mg/L	2.0	EPA 300.0			11/6/21 16:23	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			11/6/21 16:23	GJB	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			11/16/21 16:31	PAG	I
Nitrate-N	0.22	C	mg/L	0.20	EPA 300.0			11/6/21 16:23	GJB	C
Nitrite-N	0.30	C	mg/L	0.20	EPA 300.0			11/6/21 16:23	GJB	C
pH	7.10	C,2	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	266	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	10.4	C	mg/L	2.0	EPA 300.0			11/6/21 16:23	GJB	C
Total Dissolved Solids	134	C	mg/L	25	S2540C-11			11/12/21 11:11	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 22:12	PAG	F

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## ANALYTICAL RESULTS

Workorder: 3210970 4TH QTR 20213079 RIVER RD

Lab ID: **3210970001**  
Sample ID: **3079RIVERRD**

Date Collected: 11/5/2021 09:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	ND	C	NTU	0.10	SM2130B-2011			11/6/21 10:51	LXZ	C
<b>METALS</b>										
Calcium, Total	9.3	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:55	SRT	D
Calcium, Dissolved	10.5	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:35	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:55	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:35	SRT	E
Magnesium, Total	5.6	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:55	SRT	D
Magnesium, Dissolved	6.4	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:35	SRT	E
Manganese, Total	0.038	C	mg/L	0.0025	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:55	SRT	D
Manganese, Dissolved	0.041	C	mg/L	0.0050	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:35	SRT	E
Potassium, Total	2.1	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:55	SRT	D
Potassium, Dissolved	2.1	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:35	SRT	E
Sodium, Total	12.8	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:55	SRT	D
Sodium, Dissolved	13.6	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:35	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	7.24	C	pH_Units		Field			11/5/21 09:10	BGS	N
Specific Conductance, Field	237	C	umhos/cm	1	Field			11/5/21 09:10	BGS	N
Temperature	14.90	C	Deg. C		Field			11/5/21 09:10	BGS	N

Ms. Susan J Scherer  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 3210970 4TH QTR 20213079 RIVER RD

Lab ID: **3210970002**  
Sample ID: **TRIP BLANK**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
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### ADMINISTRATIVE

Sample Cancelled CANCEL C 11/15/21 09:05 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3210970 4TH QTR 20213079 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>3210970001</b>	1	3079RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO <sub>3</sub> /L.				
<b>3210970001</b>	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.				

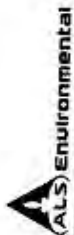
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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3210970 4TH QTR 20213079 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3210970001	3079RIVERRD	ASTM D6919-09		
3210970001	3079RIVERRD	EPA 200.7	EPA ACID	
3210970001	3079RIVERRD	EPA 200.7	EPA TRMD	
3210970001	3079RIVERRD	EPA 300.0		
3210970001	3079RIVERRD	EPA 410.4		
3210970001	3079RIVERRD	EPA 420.4	420.4/9066	
3210970001	3079RIVERRD	EPA 524.2		
3210970001	3079RIVERRD	Field		
3210970001	3079RIVERRD	S2540C-11		
3210970001	3079RIVERRD	S4500HB-11		
3210970001	3079RIVERRD	SM2130B-2011		
3210970001	3079RIVERRD	SM2320B-2011		
3210970001	3079RIVERRD	SM2510B-2011		
3210970001	3079RIVERRD	SM5310B-2011		
3210970001	3079RIVERRD	SW846 9020B		

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Client Name: Lancaster County Solid Waste MA  
Address: 1299 Harrisburg Pike, P.O. Box 4424  
Lancaster, PA 17604  
Contact: Dan Brown  
Phone#: (717) 735-0193  
Project Name#: LCSWMA - Quarterly Fire Co.  
Bill To: Lancaster County Solid Waste MA

# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS SAMPLER. INSTRUCTIONS ON THE BACK.

Generated by ALS

COC # **3210970**  
ALS **3210970**

Therm ID: **574**

No. of Coolers: **Y** **N** Initial

Custody Seals Present? **(if present) Seals Intact?**  
Received on Ice?  
COC Labels Complete/Accurate?  
Cont. in Good Cond.?  
Correct Containers?  
Correct Sample Volumes?  
Correct Preservation?  
Headspace/Volatiles?

Courier/Tracking #:

Sample/COC Comments

11062021113

ALS Field Services: ☐ Pickup ☐ Labor

☐ Composite Sampling ☐ Rental Equipment

☐ Other:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time	Data		Special Processing		State Samples	
						Deliverables	Standard	USACE	USACE	Collected In	Collected In
1. <i>[Signature]</i>	11/5/21	17:10	2. <i>[Signature]</i>	11/5/21	17:10	Yes	Reportable to PADEP?	USACE	USACE	NY	NY
3. <i>[Signature]</i>			4. <i>[Signature]</i>			Yes	Reportable to PADEP?	USACE	USACE	NJ	NJ
5. <i>[Signature]</i>			6. <i>[Signature]</i>			Yes	Reportable to PADEP?	USACE	USACE	PA	PA
7. <i>[Signature]</i>			8. <i>[Signature]</i>			Yes	Reportable to PADEP?	USACE	USACE	NC	NC
9. <i>[Signature]</i>			10. <i>[Signature]</i>			Yes	Reportable to PADEP?	USACE	USACE	NC	NC

\* G=Grab, C=Composite

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

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Rev 8/04

ALS





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Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

## Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
			W 11-24
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? <sup>1</sup> .....		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): 6 \_\_\_\_\_

Thermometer ID: S74 \_\_\_\_\_

Radiological (µCi): \_\_\_\_\_

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

<sup>1</sup>Final 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



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December 1, 2021

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

## Certificate of Analysis

Project Name:	<b>CONTIGUOUS LANDOWNER- 3076 RIVER RD</b>	Workorder:	<b>3210963</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 2021-3076 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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: 3210963 4TH QTR 2021-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3210963001	3076 River Road, Conestoga, PA	Water	11/5/2021 13:35	11/5/2021 17:10	Mr. Brian G Shade
3210963002	Trip Blank	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3210963 4TH 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).
- 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: 3210963 4TH QTR 2021-3076 RIVER RD

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### Workorder Comments

---

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

### Sample Comments

---

**Lab ID:** 3210963002

**Sample ID:** Trip Blank

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

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## ANALYTICAL RESULTS

Workorder: 3210963 4TH QTR 2021-3076 RIVER RD

Lab ID: **3210963001**

Date Collected: 11/5/2021 13:35

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/11/21 21:15	TMP	J
<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>
4-Bromofluorobenzene (S)	88.1	C	%	70 - 130	EPA 524.2			11/11/21 21:15	TMP	J
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	11	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	11	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/18/21 09:34	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/12/21 09:05	ALK	B
Chloride	58.9	C	mg/L	2.0	EPA 300.0			11/6/21 17:04	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			11/6/21 17:04	GJB	C
Halogen, Total Organic (TOX)	38.7	C	ug/L	20.0	SW846 9020B			11/16/21 13:07	PAG	I
Nitrate-N	8.7	C	mg/L	0.20	EPA 300.0			11/6/21 17:04	GJB	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			11/6/21 17:04	GJB	C
pH	6.52	C,2	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	418	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	12.5	C	mg/L	2.0	EPA 300.0			11/6/21 17:04	GJB	C
Total Dissolved Solids	210	C	mg/L	25	S2540C-11			11/12/21 11:11	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 02:54	PAG	F

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## ANALYTICAL RESULTS

Workorder: 3210963 4TH QTR 2021-3076 RIVER RD

Lab ID: **3210963001**

Date Collected: 11/5/2021 13:35

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.14	C	NTU	0.10	SM2130B-2011			11/6/21 10:51	LXZ	C
<b>METALS</b>										
Calcium, Total	12.5	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:45	SRT	D
Calcium, Dissolved	12.5	C	mg/L	0.10	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:41	SRT	E
Iron, Total	0.057	C	mg/L	0.030	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:45	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:41	SRT	E
Magnesium, Total	7.8	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:45	SRT	D
Magnesium, Dissolved	7.9	C	mg/L	0.10	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:41	SRT	E
Manganese, Total	0.16	C	mg/L	0.0025	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:45	SRT	D
Manganese, Dissolved	0.16	C	mg/L	0.0050	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:41	SRT	E
Potassium, Total	3.4	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:45	SRT	D
Potassium, Dissolved	3.4	C	mg/L	0.50	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:41	SRT	E
Sodium, Total	23.5	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:45	SRT	D
Sodium, Dissolved	23.4	C	mg/L	0.50	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:41	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	6.47	C	pH_Units		Field			11/5/21 13:35	BGS	M
Specific Conductance, Field	337	C	umhos/cm	1	Field			11/5/21 13:35	BGS	M
Temperature	14.00	C	Deg. C		Field			11/5/21 13:35	BGS	M

Ms. Susan J Scherer

Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 3210963 4TH QTR 2021-3076 RIVER RD

Lab ID: **3210963002**  
Sample ID: **Trip Blank**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
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### ADMINISTRATIVE

Sample Cancelled

CANCEL C

11/12/21 09:17 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3210963 4TH QTR 2021-3076 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>3210963001</b>	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 <sub>3</sub> /L.				
<b>3210963001</b>	2	3076 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3210963 4TH QTR 2021-3076 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3210963001	3076 River Road, Conestoga, PA	ASTM D6919-09		
3210963001	3076 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3210963001	3076 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3210963001	3076 River Road, Conestoga, PA	EPA 300.0		
3210963001	3076 River Road, Conestoga, PA	EPA 410.4		
3210963001	3076 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3210963001	3076 River Road, Conestoga, PA	EPA 524.2		
3210963001	3076 River Road, Conestoga, PA	Field		
3210963001	3076 River Road, Conestoga, PA	S2540C-11		
3210963001	3076 River Road, Conestoga, PA	S4500HB-11		
3210963001	3076 River Road, Conestoga, PA	SM2130B-2011		
3210963001	3076 River Road, Conestoga, PA	SM2320B-2011		
3210963001	3076 River Road, Conestoga, PA	SM2510B-2011		
3210963001	3076 River Road, Conestoga, PA	SM5310B-2011		
3210963001	3076 River Road, Conestoga, PA	SW846 9020B		

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301 Fulling Mill Road  
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

## Condition of Sample Receipt Form

Client: \_\_\_\_\_ Work Order #: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: W 11-24

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 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?<sup>1</sup>..... 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): 0 \_\_\_\_\_

Thermometer ID: 574 \_\_\_\_\_

Radiological (µCi): \_\_\_\_\_

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

<sup>1</sup>Final 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



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December 11, 2021

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

## Certificate of Analysis

Project Name:	<b>FREY FARM</b>	Workorder:	<b>3211103</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 2021 3060 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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: 3211103 4TH QTR 2021 3060 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3211103001	3060RIVERRD	Water	11/5/2021 13:30	11/5/2021 17:10	Mr. Brian G Shade
3211103002	TRIP BLANK	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3211103 4TH QTR 2021 3060 RIVER RD

### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- 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: 3211103 4TH QTR 2021 3060 RIVER RD

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### Workorder Comments

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

### Sample Comments

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**Lab ID:** 3211103002

**Sample ID:** TRIP BLANK

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

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## ANALYTICAL RESULTS

Workorder: 3211103 4TH QTR 2021 3060 RIVER RD

Lab ID: **3211103001**  
Sample ID: **3060RIVERRD**

Date Collected: 11/5/2021 13:30 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 06:02	PDK	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	85.3	C	%	70 - 130	EPA 524.2			11/12/21 06:02	PDK	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	32	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	32	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/16/21 14:57	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/12/21 08:45	ALK	B
Chloride	33.4	C	mg/L	2.0	EPA 300.0			12/3/21 19:34	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			12/3/21 19:34	GJB	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			11/16/21 16:57	PAG	I
Nitrate-N	7.4	C,2	mg/L	0.20	EPA 300.0			12/3/21 19:34	GJB	C
Nitrite-N	ND	C,3	mg/L	0.20	EPA 300.0			12/3/21 19:34	GJB	C
pH	7.23	C,4	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	372	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	28.4	C	mg/L	2.0	EPA 300.0			12/3/21 19:34	GJB	C
Total Dissolved Solids	188	C	mg/L	25	S2540C-11			11/12/21 11:34	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 22:12	PAG	F

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## ANALYTICAL RESULTS

Workorder: 3211103 4TH QTR 2021 3060 RIVER RD

Lab ID: **3211103001**  
Sample ID: **3060RIVERRD**

Date Collected: 11/5/2021 13:30 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.11	C,5	NTU	0.10	SM2130B-2011			12/1/21 13:02	BXD	C
<b>METALS</b>										
Calcium, Total	10.2	C	mg/L	0.050	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:30	SRT	D
Calcium, Dissolved	10.2	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:39	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:30	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:39	SRT	E
Magnesium, Total	10.9	C	mg/L	0.050	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:30	SRT	D
Magnesium, Dissolved	11.2	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:39	SRT	E
Manganese, Total	0.11	C	mg/L	0.0025	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:30	SRT	D
Manganese, Dissolved	0.099	C	mg/L	0.0050	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:39	SRT	E
Potassium, Total	2.9	C	mg/L	0.25	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:30	SRT	D
Potassium, Dissolved	2.6	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:39	SRT	E
Sodium, Total	8.6	C	mg/L	0.25	EPA 200.7	11/11/21 16:13	SXC	11/12/21 13:30	SRT	D
Sodium, Dissolved	8.4	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 14:39	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	7.30	C	pH_Units		Field			11/5/21 13:30	BGS	N
Specific Conductance, Field	276	C	umhos/cm	1	Field			11/5/21 13:30	BGS	N
Temperature	14.60	C	Deg. C		Field			11/5/21 13:30	BGS	N

Ms. Susan J Scherer  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 3211103 4TH QTR 2021 3060 RIVER RD

Lab ID: **3211103002**  
Sample ID: **TRIP BLANK**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
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### ADMINISTRATIVE

Sample Cancelled

CANCEL C

11/15/21 09:07 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3211103 4TH QTR 2021 3060 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
3211103001	1	3060RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO <sub>3</sub> /L.				
3211103001	2	3060RIVERRD	EPA 300.0	Nitrate-N
Analyte was analyzed past the 48 hour holding time.				
3211103001	3	3060RIVERRD	EPA 300.0	Nitrite-N
Analyte was analyzed past the 48 hour holding time.				
3211103001	4	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.				
3211103001	5	3060RIVERRD	SM2130B-2011	Turbidity
This sample was analyzed after the 48 hour holding time for Turbidity as required by the method.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3211103 4TH QTR 2021 3060 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3211103001	3060RIVERRD	ASTM D6919-09		
3211103001	3060RIVERRD	EPA 200.7	EPA ACID	
3211103001	3060RIVERRD	EPA 200.7	EPA TRMD	
3211103001	3060RIVERRD	EPA 300.0		
3211103001	3060RIVERRD	EPA 410.4		
3211103001	3060RIVERRD	EPA 420.4	420.4/9066	
3211103001	3060RIVERRD	EPA 524.2		
3211103001	3060RIVERRD	Field		
3211103001	3060RIVERRD	S2540C-11		
3211103001	3060RIVERRD	S4500HB-11		
3211103001	3060RIVERRD	SM2130B-2011		
3211103001	3060RIVERRD	SM2320B-2011		
3211103001	3060RIVERRD	SM2510B-2011		
3211103001	3060RIVERRD	SM5310B-2011		
3211103001	3060RIVERRD	SW846 9020B		

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301 Fulling Mill Road  
Middletown, PA 17057

P: (717) 944

F: (717) 944

3211103

## Condition of Sample Receipt Form

Client: Lancaster County Solid Waste Authority

Initials:

ASC

Date:

11/10/21

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?<sup>1</sup>..... 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..... Same day collection 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): 11 \_\_\_\_\_

Thermometer ID: 574 \_\_\_\_\_

Radiological (µCi): \_\_\_\_\_

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

<sup>1</sup>Final 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



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December 1, 2021

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

## Certificate of Analysis

Project Name:	<b>FREY FARM</b>	Workorder:	<b>3210944</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 20213056 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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 , 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: 3210944 4TH QTR 20213056 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3210944001	3056RIVERRD	Water	11/5/2021 15:37	11/5/2021 17:10	Mr. Brian G Shade
3210944002	TRIP BLANK	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3210944 4TH 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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## PROJECT SUMMARY

Workorder: 3210944 4TH QTR 20213056 RIVER RD

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### Workorder Comments

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

### Sample Comments

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**Lab ID:** 3210944002

**Sample ID:** TRIP BLANK

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

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## ANALYTICAL RESULTS

Workorder: 3210944 4TH QTR 20213056 RIVER RD

Lab ID: **3210944001**  
Sample ID: **3056RIVERRD**

Date Collected: 11/5/2021 15:37 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:22	TMP	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	86.4	C	%	70 - 130	EPA 524.2			11/11/21 20:22	TMP	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	14	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	14	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	0.120	C	mg/L	0.100	ASTM D6919-09			11/18/21 07:00	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/12/21 09:05	ALK	B
Chloride	29.5	C	mg/L	2.0	EPA 300.0			11/6/21 16:37	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			11/6/21 16:37	GJB	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			11/16/21 12:06	PAG	I
Nitrate-N	16.6	C	mg/L	0.20	EPA 300.0			11/6/21 16:37	GJB	C
Nitrite-N	0.32	C	mg/L	0.20	EPA 300.0			11/6/21 16:37	GJB	C
pH	6.70	C,2	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	303	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	ND	C	mg/L	2.0	EPA 300.0			11/6/21 16:37	GJB	C
Total Dissolved Solids	90	C	mg/L	25	S2540C-11			11/12/21 11:11	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 02:54	PAG	F

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## ANALYTICAL RESULTS

Workorder: 3210944 4TH QTR 20213056 RIVER RD

Lab ID: **3210944001**  
Sample ID: **3056RIVERRD**

Date Collected: 11/5/2021 15:37 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.71	C	NTU	0.10	SM2130B-2011			11/6/21 10:51	LXZ	C
<b>METALS</b>										
Calcium, Total	10.4	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 12:03	SRT	D
Calcium, Dissolved	10.9	C	mg/L	0.10	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:34	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	11/10/21 16:35	SXC	11/11/21 12:03	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:34	SRT	E
Magnesium, Total	11.6	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 12:03	SRT	D
Magnesium, Dissolved	11.8	C	mg/L	0.10	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:34	SRT	E
Manganese, Total	0.14	C	mg/L	0.0025	EPA 200.7	11/10/21 16:35	SXC	11/11/21 12:03	SRT	D
Manganese, Dissolved	0.14	C	mg/L	0.0050	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:34	SRT	E
Potassium, Total	2.1	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 12:03	SRT	D
Potassium, Dissolved	2.3	C	mg/L	0.50	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:34	SRT	E
Sodium, Total	8.3	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 12:03	SRT	D
Sodium, Dissolved	8.6	C	mg/L	0.50	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:34	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	6.84	C	pH_Units		Field			11/5/21 15:37	BGS	N
Specific Conductance, Field	316	C	umhos/cm	1	Field			11/5/21 15:37	BGS	N
Temperature	14.20	C	Deg. C		Field			11/5/21 15:37	BGS	N

Ms. Susan J Scherer  
Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 3210944 4TH QTR 20213056 RIVER RD

Lab ID: **3210944002**  
Sample ID: **TRIP BLANK**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
------------	---------	------	-------	-----	--------	----------	----	----------	----	------

### ADMINISTRATIVE

Sample Cancelled

CANCEL C

11/12/21 09:16 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3210944 4TH QTR 20213056 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>3210944001</b>	1	3056RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO <sub>3</sub> /L.				
<b>3210944001</b>	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: 3210944 4TH QTR 20213056 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3210944001	3056RIVERRD	ASTM D6919-09		
3210944001	3056RIVERRD	EPA 200.7	EPA ACID	
3210944001	3056RIVERRD	EPA 200.7	EPA TRMD	
3210944001	3056RIVERRD	EPA 300.0		
3210944001	3056RIVERRD	EPA 410.4		
3210944001	3056RIVERRD	EPA 420.4	420.4/9066	
3210944001	3056RIVERRD	EPA 524.2		
3210944001	3056RIVERRD	Field		
3210944001	3056RIVERRD	S2540C-11		
3210944001	3056RIVERRD	S4500HB-11		
3210944001	3056RIVERRD	SM2130B-2011		
3210944001	3056RIVERRD	SM2320B-2011		
3210944001	3056RIVERRD	SM2510B-2011		
3210944001	3056RIVERRD	SM5310B-2011		
3210944001	3056RIVERRD	SW846 9020B		

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Generated by A/S

CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS

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

COC #:

### AL'S Quot



3210944

<b>Client Name:</b> Lancaster County Solid Waste MA <b>Address:</b> 1299 Harrisburg Pike, P.O. Box 4424 Lancaster, PA 17604				<b>Container Type:</b> AG <b>AN:</b> 125 ml <b>CG:</b> 40 ml <b>Preservative:</b> HCl				<b>PL:</b> 125 ml <b>HNO3:</b> 125 ml <b>H2SO4:</b> 250 ml <b>Ascorbic:</b> 40 ml				<b>PL:</b> 500 ml <b>None:</b> 500 ml				<b>PL:</b> 500 ml <b>None:</b> 500 ml				<b>Rec:</b>			
<b>Contact:</b> Dan Brown <b>Phone#:</b> (717) 735-0193 <b>Project Name#:</b> LCSWMA - Quarterly <b>Bill To:</b> Lancaster County Solid Waste MA																<b>Cooler Temp:</b> 0 Therm ID: 574 <b>No. of Coolers:</b> Y N Initial							
<b>TAT</b> <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <b>Date Required:</b> <input type="checkbox"/> Rush-Subject to ALS approval and surcharges. <b>Email?</b> <input type="checkbox"/> Y <input type="checkbox"/> N <b>Fax?</b> <input type="checkbox"/> Y <input type="checkbox"/> N																<b>Custody Seals Present?</b> (If present) Seals Intact? Received on Ice? COC/Labels Complete/Accurate? Cont. in Good Cond.? Correct Containers? Correct Sample Volumes? Correct Preservation? Headspace/Volatiles?							
<b>Sample Description/Location</b> (as it will appear on the lab report)																<b>Courier/Tracking #:</b>				<b>Sample/COC Comments</b>			
<b>Enter Number of Containers Per Sample or Field Results Below.</b>																<b>ALS Field Services:</b> <input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment <input type="checkbox"/> Other:							
<b>Matrix</b>																<b>Standard</b> <input type="checkbox"/> CLP-like <input type="checkbox"/> USACE				<b>State Samples</b> Collected In <input type="checkbox"/> NY <input type="checkbox"/> NJ <input type="checkbox"/> PA <input type="checkbox"/> NC			
<b>LOGGED BY (signature):</b>																<b>Deliverables</b> <input type="checkbox"/> Standard <input type="checkbox"/> CLP-like <input type="checkbox"/> USACE				<b>Special Processing</b> USACE Navy <input type="checkbox"/>			
<b>REVIEWED BY (signature):</b>																<b>Reportable to PADEP?</b> Yes <input type="checkbox"/> No <input type="checkbox"/>				<b>Sample Disposal</b> Lab <input checked="" type="checkbox"/> X Special <input type="checkbox"/>			
<b>Relinquished By / Company Name</b>																<b>PWSID #</b>				<b>EDDS: Format Type-</b>			
<b>Date</b> 11/5/21																<b>Date</b> 11/5/21				<b>Date</b> 11/5/21			
<b>Time</b> 17:10																<b>Time</b> 17:10				<b>Time</b> 17:10			
<b>Received By / Company Name</b>																<b>Received By / Company Name</b>				<b>Received By / Company Name</b>			
<b>1</b> BO Shovel ALS																<b>4</b>				<b>11/5/21</b>			
<b>3</b>																<b>6</b>				<b>11/5/21</b>			
<b>5</b>																<b>8</b>				<b>11/5/21</b>			
<b>7</b>																<b>10</b>				<b>11/5/21</b>			
<b>9</b>																							

\* 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

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Rev 8/04

## ALS





301 Fulling Mill Road  
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

## Condition of Sample Receipt Form

Client: \_\_\_\_\_ Work Order #: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: 12/1/20

- |  |      |     |    |
|--|------|-----|----|
| 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 collector's 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? <sup>1</sup> .....                                | 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): 6 \_\_\_\_\_

Thermometer ID: 574 \_\_\_\_\_

Radiological (µCi): \_\_\_\_\_

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

<sup>1</sup>Final 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



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December 1, 2021

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

## Certificate of Analysis

Project Name:	<b>CONTIGUOUS LANDOWNER- 3052 RIVER RD</b>	Workorder:	<b>3210966</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 2021-3052 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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: 3210966 4TH QTR 2021-3052 RIVER RD

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Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3210966001	3052 River Road, Conestoga, PA	Water	11/5/2021 10:50	11/5/2021 17:10	Mr. Brian G Shade
3210966002	Trip Blank	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3210966 4TH 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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## PROJECT SUMMARY

Workorder: 3210966 4TH QTR 2021-3052 RIVER RD

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### Workorder Comments

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

### Sample Comments

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**Lab ID:** 3210966002

**Sample ID:** Trip Blank

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

---

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## ANALYTICAL RESULTS

Workorder: 3210966 4TH QTR 2021-3052 RIVER RD

Lab ID: **3210966001**

Date Collected: 11/5/2021 10:50

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 01:09	PDK	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	87.9	C	%	70 - 130	EPA 524.2			11/12/21 01:09	PDK	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	11	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	11	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/18/21 04:52	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/21/21 09:00	ALK	B
Chloride	23.8	C	mg/L	2.0	EPA 300.0			11/6/21 17:18	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			11/6/21 17:18	GJB	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			11/16/21 15:06	PAG	I
Nitrate-N	19.7	C	mg/L	0.20	EPA 300.0			11/6/21 17:18	GJB	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			11/6/21 17:18	GJB	C
pH	6.64	C,2	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	329	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	3.3	C	mg/L	2.0	EPA 300.0			11/6/21 17:18	GJB	C
Total Dissolved Solids	178	C	mg/L	25	S2540C-11			11/12/21 11:11	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 02:54	PAG	F

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## ANALYTICAL RESULTS

Workorder: 3210966 4TH QTR 2021-3052 RIVER RD

Lab ID: **3210966001**

Date Collected: 11/5/2021 10:50

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.30	C	NTU	0.10	SM2130B-2011			11/6/21 10:51	LXZ	C
<b>METALS</b>										
Calcium, Total	15.4	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:48	SRT	D
Calcium, Dissolved	15.6	C	mg/L	0.10	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:44	SRT	E
Iron, Total	0.037	C	mg/L	0.030	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:48	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:44	SRT	E
Magnesium, Total	8.3	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:48	SRT	D
Magnesium, Dissolved	8.3	C	mg/L	0.10	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:44	SRT	E
Manganese, Total	0.027	C	mg/L	0.0025	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:48	SRT	D
Manganese, Dissolved	0.027	C	mg/L	0.0050	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:44	SRT	E
Potassium, Total	2.0	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:48	SRT	D
Potassium, Dissolved	2.0	C	mg/L	0.50	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:44	SRT	E
Sodium, Total	7.5	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:48	SRT	D
Sodium, Dissolved	7.2	C	mg/L	0.50	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:44	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	6.69	C	pH_Units		Field			11/5/21 10:50	BGS	N
Specific Conductance, Field	273	C	umhos/cm	1	Field			11/5/21 10:50	BGS	N
Temperature	14.70	C	Deg. C		Field			11/5/21 10:50	BGS	N

Ms. Susan J Scherer

Project Coordinator

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## ANALYTICAL RESULTS

Workorder: 3210966 4TH QTR 2021-3052 RIVER RD

Lab ID: **3210966002**  
Sample ID: **Trip Blank**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
------------	---------	------	-------	-----	--------	----------	----	----------	----	------

### ADMINISTRATIVE

Sample Cancelled

CANCEL C

11/15/21 09:03 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3210966 4TH QTR 2021-3052 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>3210966001</b>	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 <sub>3</sub> /L.				
<b>3210966001</b>	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

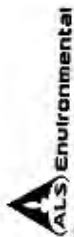
Workorder: 3210966 4TH QTR 2021-3052 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3210966001	3052 River Road, Conestoga, PA	ASTM D6919-09		
3210966001	3052 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3210966001	3052 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3210966001	3052 River Road, Conestoga, PA	EPA 300.0		
3210966001	3052 River Road, Conestoga, PA	EPA 410.4		
3210966001	3052 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3210966001	3052 River Road, Conestoga, PA	EPA 524.2		
3210966001	3052 River Road, Conestoga, PA	Field		
3210966001	3052 River Road, Conestoga, PA	S2540C-11		
3210966001	3052 River Road, Conestoga, PA	S4500HB-11		
3210966001	3052 River Road, Conestoga, PA	SM2130B-2011		
3210966001	3052 River Road, Conestoga, PA	SM2320B-2011		
3210966001	3052 River Road, Conestoga, PA	SM2510B-2011		
3210966001	3052 River Road, Conestoga, PA	SM5310B-2011		
3210966001	3052 River Road, Conestoga, PA	SW846 9020B		

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

Address: 3052 River Road

Conestoga, PA 17516

Contact: Gerald E. Miller, Sr.

Phone#: (717) 872-5117

Project Name#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

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

Date Required: \_\_\_\_\_ Approved By: \_\_\_\_\_

Email? ☐ -Y

Fax? ☐ -Y No: \_\_\_\_\_

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1 3052RIVERRD	11/05/21	1050
2 Trip Blank	11/05/21	1100
3		
4		
5		
6		
7		
8		
9		
10		

Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 <i>Rashad</i> <i>AS</i>	11-5-21	1710	<i>[Signature]</i>	11/5/21	1710
3					
5					
7					
9					

\* 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

# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

COC #:

ALS Quot

3210966

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

Cooler Temp: 0 Therm ID: 574

No. of Coolers: Y N Initial

Custody Seals Present? (if present) Seals Intact?

Received on Ice?

COC Labels Complete/Accurate?

Cont. in Good Cond.?

Correct Containers?

Correct Sample Volumes?

Correct Preservation?

Headspace/Volatiles?

Courier/Tracking #:

Sample/COC Comments

11062021117

ALS Field Services: ☐ Pickup ☐ Labor

☐ Composite Sampling ☐ Rental Equipment

☐ Other:

Standard ☐ CLP-like ☐ USACE ☐ State Samples Collected In ☐ NY ☐ NJ ☐ PA ☐ NC ☐

Special Processing ☐ USACE ☐ Navy ☐ Sample Disposal ☐ Lab ☒ Special ☐

Reportable to PADEP? Yes ☐ No ☒ PWSID # ☐ EDDS: Format Type: ☐





301 Fulling Mill Road  
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

## Condition of Sample Receipt Form

Client: \_\_\_\_\_ Work Order #: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: CW 11-12-21

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 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?<sup>1</sup>..... 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 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 NO
- 13a. Are the samples required for SDWA compliance reporting?..... N/A YES NO
- 13b. Did the client provide a SDWA PWS ID#?..... N/A YES NO
- 13c. Are all aqueous unpreserved SDWA samples pH 5-9?..... N/A YES NO
- 13d. Did the client provide the SDWA sample location ID/Description?..... N/A YES NO
- 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?..... N/A YES NO

Cooler #: \_\_\_\_\_

Temperature (°C): 6 \_\_\_\_\_

Thermometer ID: 574 \_\_\_\_\_

Radiological (µCi): \_\_\_\_\_

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

<sup>1</sup>Final 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



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

December 11, 2021

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

## Certificate of Analysis

Project Name:	<b>CONTIGUOUS LANDOWNER- 3044 RIVER RD</b>	Workorder:	<b>3211116</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 2021-3044 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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 , 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: 3211116 4TH QTR 2021-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3211116001	3044 River Road, Conestoga, PA	Water	11/5/2021 10:25	11/5/2021 17:10	Mr. Brian G Shade
3211116002	TRIP BLANK	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade
3211116003	FIELD BLANK	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3211116 4TH 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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## PROJECT SUMMARY

Workorder: 3211116 4TH QTR 2021-3044 RIVER RD

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### Workorder Comments

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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: 3211116 4TH QTR 2021-3044 RIVER RD

Lab ID: **3211116001**

Date Collected: 11/5/2021 10:25

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:53	TMP	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	84.9	C	%	70 - 130	EPA 524.2			11/12/21 13:53	TMP	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	27	C	mg/L	5	SM2320B-2011			11/18/21 23:57	JXM	C
Alkalinity, Total	27	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/16/21 17:25	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/12/21 08:45	ALK	B
Chloride	21.4	C	mg/L	2.0	EPA 300.0			12/3/21 20:58	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			12/3/21 20:58	GJB	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			11/17/21 12:37	PAG	I
Nitrate-N	17.6	C	mg/L	0.20	EPA 300.0			12/3/21 20:58	GJB	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			12/3/21 20:58	GJB	C
pH	7.35	C,2	pH_Units		S4500HB-11			11/18/21 23:57	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	342	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	2.6	C	mg/L	2.0	EPA 300.0			12/3/21 20:58	GJB	C
Total Dissolved Solids	200	C	mg/L	25	S2540C-11			11/12/21 11:34	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 22:12	PAG	F

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## ANALYTICAL RESULTS

Workorder: 3211116 4TH QTR 2021-3044 RIVER RD

Lab ID: **3211116001**

Date Collected: 11/5/2021 10:25

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.31	C,3	NTU	0.10	SM2130B-2011			12/1/21 13:02	BXD	C
<b>METALS</b>										
Calcium, Total	18.0	C	mg/L	0.050	EPA 200.7	11/11/21 16:13	SXC	11/12/21 14:03	SRT	D
Calcium, Dissolved	18.5	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 15:06	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	11/11/21 16:13	SXC	11/12/21 14:03	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/16/21 12:28	SRT	11/17/21 15:06	SRT	E
Magnesium, Total	10.4	C	mg/L	0.050	EPA 200.7	11/11/21 16:13	SXC	11/12/21 14:03	SRT	D
Magnesium, Dissolved	11.2	C	mg/L	0.10	EPA 200.7	11/16/21 12:28	SRT	11/17/21 15:06	SRT	E
Manganese, Total	0.011	C	mg/L	0.0025	EPA 200.7	11/11/21 16:13	SXC	11/12/21 14:03	SRT	D
Manganese, Dissolved	0.010	C	mg/L	0.0050	EPA 200.7	11/16/21 12:28	SRT	11/17/21 15:06	SRT	E
Potassium, Total	2.4	C	mg/L	0.25	EPA 200.7	11/11/21 16:13	SXC	11/12/21 14:03	SRT	D
Potassium, Dissolved	2.3	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 15:06	SRT	E
Sodium, Total	8.3	C	mg/L	0.25	EPA 200.7	11/11/21 16:13	SXC	11/12/21 14:03	SRT	D
Sodium, Dissolved	8.2	C	mg/L	0.50	EPA 200.7	11/16/21 12:28	SRT	11/17/21 15:06	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	7.29	C	pH_Units		Field			11/5/21 10:25	BGS	N
Specific Conductance, Field	298	C	umhos/cm	1	Field			11/5/21 10:25	BGS	N
Temperature	14.50	C	Deg. C		Field			11/5/21 10:25	BGS	N

Ms. Susan J Scherer

Project Coordinator

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

Workorder: 3211116 4TH QTR 2021-3044 RIVER RD

Lab ID: **3211116002**  
Sample ID: **TRIP BLANK**Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:00	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	87.5	C	%	70 - 130	EPA 524.2			11/12/21 13:00	TMP	A

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Workorder: 3211116 4TH QTR 2021-3044 RIVER RD

Lab ID: **3211116003**  
Sample ID: **FIELD BLANK**Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
Methylene Chloride	2.8	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/12/21 13:26	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	89.3	C	%	70 - 130	EPA 524.2			11/12/21 13:26	TMP	A

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**ANALYTICAL RESULTS**

Workorder: 3211116 4TH QTR 2021-3044 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
3211116001	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 <sub>3</sub> /L.				
3211116001	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.				
3211116001	3	3044 River Road, Conestoga, PA	SM2130B-2011	Turbidity
This sample was analyzed after the 48 hour holding time for Turbidity as required by the method.				

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## ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

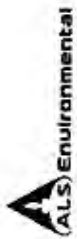
Workorder: 3211116 4TH QTR 2021-3044 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3211116001	3044 River Road, Conestoga, PA	ASTM D6919-09		
3211116001	3044 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3211116001	3044 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3211116001	3044 River Road, Conestoga, PA	EPA 300.0		
3211116001	3044 River Road, Conestoga, PA	EPA 410.4		
3211116001	3044 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3211116001	3044 River Road, Conestoga, PA	EPA 524.2		
3211116001	3044 River Road, Conestoga, PA	Field		
3211116001	3044 River Road, Conestoga, PA	S2540C-11		
3211116001	3044 River Road, Conestoga, PA	S4500HB-11		
3211116001	3044 River Road, Conestoga, PA	SM2130B-2011		
3211116001	3044 River Road, Conestoga, PA	SM2320B-2011		
3211116001	3044 River Road, Conestoga, PA	SM2510B-2011		
3211116001	3044 River Road, Conestoga, PA	SM5310B-2011		
3211116001	3044 River Road, Conestoga, PA	SW846 9020B		
3211116002	TRIP BLANK	EPA 524.2		
3211116003	FIELD BLANK	EPA 524.2		

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# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

CC 3211116  
 1 of 1

Client Name: Lancaster County Solid Waste MA

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

Lancaster, PA 17604

Contact: Dan Brown

Phone#: (717) 735-0193

Project Name#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

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

Date Required: ☐ Rush-Subject to ALS approval and surcharges.

Email? ☐ .Y ☐ .N Approved By: \_\_\_\_\_

Fax? ☐ .Y ☐ .N No: \_\_\_\_\_

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

Sample Date Time

1 3044RIVERRD 11/05/21 1025 G DW

2 Trip Blank 11/05/21 1710 G DW

3 Field Blank 11/5-21 1500

4

5

6

7

8

9

10

Project Comments:

Relinquished By / Company Name

11/5/21 1100 20

4

6

8

10

LOGGED BY (signature):

REVIEWED BY (signature):

Date Time Received By / Company Name

11/5/21 1710

Reportable to PADEP?

Yes ☐ No ☒

PWSID #

EDDS: Formal 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

Container Type Size Preservative

AG AN AN CG PL PL PL PL

40 ml 125 ml 250 ml 40 ml 250 ml 125 ml 500 ml 500 ml

HCl H2SO4 H2SO4 Asc/HCl H2SO4 HNO3 HNO3 HNO3

None Note

ANALYSES/METHOD REQUESTED

TOC OOH TOX 524 VOC 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, T, Alkalinity, HCO3

Enter Number of Containers Per Sample or Field Results Below.

Matrix

G or C

Sample COC Comments

Courier/Tracking #:

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?

Cooler Temp: 11 Therm ID: 574

No. of Coolers: Y N Initial

ALS Field Services: ☐ Pickup ☐ Labor ☐ Composite Sampling ☐ Rental Equipment ☐ Other:

State Samples Collected In

Standard CLP-like USACE

Special Processing USACE Navy

Sample Disposal Lab X Special

Reportable to PADEP?

Yes ☐ No ☒

PWSID #

EDDS: Formal 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  
F: (717) 944

3211116

Lancaster County Solid Waste  
Authority

## Condition of Sample Receipt Form

Client:

Initials:

Date:

ASC

11/10/21

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?<sup>1</sup>..... 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..... same day collection 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): 11 \_\_\_\_\_

Thermometer ID: 574 \_\_\_\_\_

Radiological (µCi): \_\_\_\_\_

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

<sup>1</sup>Final 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



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December 1, 2021

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

## Certificate of Analysis

Project Name:	<b>CONTIGUOUS LANDOWNER- 3125 RIVER RD</b>	Workorder:	<b>3210962</b>
Purchase Order:	<b>PO-1000371</b>	Workorder ID:	<b>4TH QTR 2020-3125 RIVER RD</b>

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, November 5, 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](http://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: 3210962 4TH QTR 2020-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3210962001	3125 River Road, Conestoga, PA	Water	11/5/2021 12:49	11/5/2021 17:10	Mr. Brian G Shade
3210962002	Trip Blank	Water	11/5/2021 17:10	11/5/2021 17:10	Mr. Brian G Shade

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## SAMPLE SUMMARY

Workorder: 3210962 4TH 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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---

## PROJECT SUMMARY

Workorder: 3210962 4TH QTR 2020-3125 RIVER RD

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### Workorder Comments

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

### Sample Comments

---

**Lab ID:** 3210962002

**Sample ID:** Trip Blank

**Sample Type:** FLDQC

This sample was cancelled per project specifications.

---

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## ANALYTICAL RESULTS

Workorder: 3210962 4TH QTR 2020-3125 RIVER RD

Lab ID: **3210962001**

Date Collected: 11/5/2021 12:49

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>										
Benzene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
1,2-Dibromoethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
1,1-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
1,2-Dichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
1,1-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
cis-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
trans-1,2-Dichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
Ethylbenzene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
Methylene Chloride	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
Tetrachloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
Toluene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
Total Xylenes	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
1,1,1-Trichloroethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
Trichloroethene	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
Trichlorofluoromethane	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
Vinyl Chloride	ND	C	ug/L	0.50	EPA 524.2			11/11/21 20:48	TMP	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
4-Bromofluorobenzene (S)	85	C	%	70 - 130	EPA 524.2			11/11/21 20:48	TMP	K
<b>WET CHEMISTRY</b>										
Alkalinity, Bicarbonate	165	C	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	C
Alkalinity, Total	165	C,1	mg/L	5	SM2320B-2011			11/16/21 23:51	JXM	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			11/17/21 23:18	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			11/21/21 09:00	ALK	B
Chloride	108	C	mg/L	2.0	EPA 300.0			11/6/21 16:51	GJB	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			11/6/21 16:51	GJB	C
Halogen, Total Organic (TOX)	23.7	C	ug/L	20.0	SW846 9020B			11/16/21 12:38	PAG	I
Nitrate-N	5.4	C	mg/L	0.20	EPA 300.0			11/6/21 16:51	GJB	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			11/6/21 16:51	GJB	C
pH	8.06	C,2	pH_Units		S4500HB-11			11/16/21 23:51	JXM	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	11/10/21 16:13	MXF	11/12/21 12:41	MXF	H
Specific Conductance	916	C	umhos/cm	1	SM2510B-2011			11/16/21 19:18	MBS	C
Sulfate	15.5	C	mg/L	2.0	EPA 300.0			11/6/21 16:51	GJB	C
Total Dissolved Solids	426	C	mg/L	25	S2540C-11			11/12/21 11:11	AKH	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			11/11/21 02:54	PAG	F

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## ANALYTICAL RESULTS

Workorder: 3210962 4TH QTR 2020-3125 RIVER RD

Lab ID: **3210962001**

Date Collected: 11/5/2021 12:49

Matrix: Water

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

Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Turbidity	0.10	C	NTU	0.10	SM2130B-2011			11/6/21 10:51	LXZ	C
<b>METALS</b>										
Calcium, Total	0.25	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:41	SRT	D
Calcium, Dissolved	0.25	C	mg/L	0.10	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:37	SRT	E
Iron, Total	0.088	C	mg/L	0.030	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:41	SRT	D
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:37	SRT	E
Magnesium, Total	0.058	C	mg/L	0.050	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:41	SRT	D
Magnesium, Dissolved	ND	C	mg/L	0.10	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:37	SRT	E
Manganese, Total	ND	C	mg/L	0.0025	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:41	SRT	D
Manganese, Dissolved	ND	C	mg/L	0.0050	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:37	SRT	E
Potassium, Total	3.4	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:41	SRT	D
Potassium, Dissolved	3.3	C	mg/L	0.50	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:37	SRT	E
Sodium, Total	148	C	mg/L	0.25	EPA 200.7	11/10/21 16:35	SXC	11/11/21 13:41	SRT	D
Sodium, Dissolved	152	C	mg/L	0.50	EPA 200.7	11/9/21 07:08	SRT	11/11/21 09:37	SRT	E
<b>FIELD PARAMETERS</b>										
pH, Field (SM4500B)	7.88	C	pH_Units		Field			11/5/21 12:49	BGS	N
Specific Conductance, Field	502	C	umhos/cm	1	Field			11/5/21 12:49	BGS	N
Temperature	14.30	C	Deg. C		Field			11/5/21 12:49	BGS	N

*Susan J. Scherer*

Ms. Susan J Scherer

Project Coordinator

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**ALS Environmental**

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

## ANALYTICAL RESULTS

Workorder: 3210962 4TH QTR 2020-3125 RIVER RD

Lab ID: **3210962002**  
Sample ID: **Trip Blank**

Date Collected: 11/5/2021 17:10 Matrix: Water  
Date Received: 11/5/2021 17:10

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
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### ADMINISTRATIVE

Sample Cancelled

CANCEL C

11/12/21 09:17 CPK

Ms. Susan J Scherer  
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3210962 4TH QTR 2020-3125 RIVER RD

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>3210962001</b>	1	3125 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO <sub>3</sub> /L.				
<b>3210962001</b>	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: 3210962 4TH QTR 2020-3125 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3210962001	3125 River Road, Conestoga, PA	ASTM D6919-09		
3210962001	3125 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3210962001	3125 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3210962001	3125 River Road, Conestoga, PA	EPA 300.0		
3210962001	3125 River Road, Conestoga, PA	EPA 410.4		
3210962001	3125 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3210962001	3125 River Road, Conestoga, PA	EPA 524.2		
3210962001	3125 River Road, Conestoga, PA	Field		
3210962001	3125 River Road, Conestoga, PA	S2540C-11		
3210962001	3125 River Road, Conestoga, PA	S4500HB-11		
3210962001	3125 River Road, Conestoga, PA	SM2130B-2011		
3210962001	3125 River Road, Conestoga, PA	SM2320B-2011		
3210962001	3125 River Road, Conestoga, PA	SM2510B-2011		
3210962001	3125 River Road, Conestoga, PA	SM5310B-2011		
3210962001	3125 River Road, Conestoga, PA	SW846 9020B		

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301 Fulling Mill Road  
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

## Condition of Sample Receipt Form

Client: \_\_\_\_\_ Work Order #: \_\_\_\_\_ Initials: \_\_\_\_\_ Date: 12/1/21

- |  |             |     |           |
|--|-------------|-----|-----------|
| 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 | NO        |
| 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 | NO        |
| 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? <sup>1</sup> .....                                | <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): 0 \_\_\_\_\_

Thermometer ID: 574 \_\_\_\_\_

Radiological (µCi): \_\_\_\_\_

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

<sup>1</sup>Final 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