



Date Prepared/Revised  
04/13/2022

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) 03/14/2022

Sample Collection Time: 2:00 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

03/28/2022

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

03/14/2022

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               | 13.7   | EPA 200.7              |
| CALCIUM, DISSOLVED           | 13.8   | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 18.4   | 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     | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 10.2   | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 19     | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 19     | EPA 200.7              |
| NITRATE-NITROGEN             | 20     | 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

03/14/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 5.41   | FIELD                  |
| pH-LAB (SU)                   | 6.84   | SM4500B                |
| POTASSIUM, TOTAL              | 2      | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 1.8    | EPA 200.7              |
| SODIUM, TOTAL                 | 9.3    | EPA 200.7              |
| SODIUM, DISSOLVED             | 8      | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 243    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 235    | EPA 120.1              |
| SULFATE                       | 2 ND   | EPA 300                |
| ALKALINITY                    | 11     | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 160    | SM20-2540C             |
| TOC (TOTAL ORGANIC CARBON)    | 0.5 ND | SM20-5310B             |
| TOTAL PHENOLICS (ug/l)        | 8      | EPA 420.4              |
| TURBIDITY (NTU)               | 0.12   | 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

03/14/2022

## 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  
04/13/2022

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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>°</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) 02/11/2022

Sample Collection Time: 12:40 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

02/25/2022

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

02/11/2022

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

| PARAMETER                    | VALUE  | ANALYSIS METHOD NUMBER |
|------------------------------|--------|------------------------|
| AMMONIA-NITROGEN             | 0.716  | SM4500D                |
| BICARBONATE ALKALINITY       | 7      | SM20-2321              |
| CALCIUM, TOTAL               | 12.1   | EPA 200.7              |
| CALCIUM, DISSOLVED           | 14.7   | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 16.8   | EPA 300                |
| FLUORIDE                     | 0.2 ND | EPA 300                |
| IRON, TOTAL (ug/l)           | 30 ND  | EPA 200.7              |
| IRON, DISSOLVED (ug/l)       | 60 ND  | EPA 200.7              |
| MAGNESIUM, TOTAL             | 8.7    | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 10.1   | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 39     | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 44     | EPA 200.7              |
| NITRATE-NITROGEN             | 18.1 E | EPA 300                |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 6.2    | FIELD                  |
| pH-LAB (SU)                   | 6.25   | SM4500B                |
| POTASSIUM, TOTAL              | 2.3    | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 2.2    | EPA 200.7              |
| SODIUM, TOTAL                 | 7.4    | EPA 200.7              |
| SODIUM, DISSOLVED             | 8      | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 227    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 232    | EPA 120.1              |
| SULFATE                       | 2.8    | EPA 300                |
| ALKALINITY                    | 7      | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 204    | SM20-2540C             |
| TOC (TOTAL ORGANIC CARBON)    | 0.5 ND | SM20-5310B             |
| TOTAL PHENOLICS (ug/l)        | 5 ND   | EPA 420.4              |
| TURBIDITY (NTU)               | 0.16   | SM 2130B               |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

MILLER

Sample Date

02/11/2022

## 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  
04/13/2022

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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) 02/11/2022

Sample Collection Time: 1:47 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

02/25/2022

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/11/2022

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

| PARAMETER                    | VALUE  | ANALYSIS METHOD NUMBER |
|------------------------------|--------|------------------------|
| AMMONIA-NITROGEN             | 0.415  | SM4500D                |
| BICARBONATE ALKALINITY       | 7      | SM20-2321              |
| CALCIUM, TOTAL               | 10.1   | EPA 200.7              |
| CALCIUM, DISSOLVED           | 12.1   | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 20     | 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             | 10.7   | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 12.6   | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 86     | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 110    | EPA 200.7              |
| NITRATE-NITROGEN             | 17.5 E | EPA 300                |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 6.65   | FIELD                  |
| pH-LAB (SU)                   | 6.7    | SM4500B                |
| POTASSIUM, TOTAL              | 2      | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 2.4    | EPA 200.7              |
| SODIUM, TOTAL                 | 7.5    | EPA 200.7              |
| SODIUM, DISSOLVED             | 9      | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 216    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 222    | EPA 120.1              |
| SULFATE                       | 2 ND   | EPA 300                |
| ALKALINITY                    | 7      | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 194    | SM20-2540C             |
| TOC (TOTAL ORGANIC CARBON)    | 0.5 ND | SM20-5310B             |
| TOTAL PHENOLICS (ug/l)        | 5 ND   | EPA 420.4              |
| TURBIDITY (NTU)               | 0.13   | SM 2130B               |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/11/2022

## 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  
04/13/2022

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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 (DE° MM' SS.S")

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3060 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/11/2022

Sample Collection Time: 12:56 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

02/24/2022

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/11/2022

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

| PARAMETER                    | VALUE  | ANALYSIS METHOD NUMBER |
|------------------------------|--------|------------------------|
| AMMONIA-NITROGEN             | 0.253  | SM4500D                |
| BICARBONATE ALKALINITY       | 5 ND   | SM20-2321              |
| CALCIUM, TOTAL               | 10     | EPA 200.7              |
| CALCIUM, DISSOLVED           | 10.6   | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 17.4   | EPA 300                |
| FLUORIDE                     | 0.2 ND | EPA 300                |
| IRON, TOTAL (ug/l)           | 55     | EPA 200.7              |
| IRON, DISSOLVED (ug/l)       | 60 ND  | EPA 200.7              |
| MAGNESIUM, TOTAL             | 10.4   | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 11.1   | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 110    | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 120    | 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

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 6.16   | FIELD                  |
| pH-LAB (SU)                   | 6.11   | SM4500B                |
| POTASSIUM, TOTAL              | 2.4    | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 2.3    | EPA 200.7              |
| SODIUM, TOTAL                 | 7.7    | EPA 200.7              |
| SODIUM, DISSOLVED             | 8.1    | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 237    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 231    | EPA 120.1              |
| SULFATE                       | 9.3    | EPA 300                |
| ALKALINITY                    | 5 ND   | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 198    | 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 LCSWMA

Sample Date

02/11/2022

## 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  
04/13/2022

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: SENSENICH

Address: 3076 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/11/2022

Sample Collection Time: 1:03 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

02/24/2022

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/11/2022

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

| PARAMETER                    | VALUE  | ANALYSIS METHOD NUMBER |
|------------------------------|--------|------------------------|
| AMMONIA-NITROGEN             | 0.236  | SM4500D                |
| BICARBONATE ALKALINITY       | 6      | SM20-2321              |
| CALCIUM, TOTAL               | 12.4   | EPA 200.7              |
| CALCIUM, DISSOLVED           | 13.9   | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 48.8   | EPA 300                |
| FLUORIDE                     | 0.2 ND | EPA 300                |
| IRON, TOTAL (ug/l)           | 30 ND  | EPA 200.7              |
| IRON, DISSOLVED (ug/l)       | 60 ND  | EPA 200.7              |
| MAGNESIUM, TOTAL             | 7.9    | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 8.7    | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 150    | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 180    | EPA 200.7              |
| NITRATE-NITROGEN             | 9.3    | EPA 300                |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 6.7    | FIELD                  |
| pH-LAB (SU)                   | 6.62   | SM4500B                |
| POTASSIUM, TOTAL              | 3.2    | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 3.5    | EPA 200.7              |
| SODIUM, TOTAL                 | 22.5   | EPA 200.7              |
| SODIUM, DISSOLVED             | 25.6   | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 229    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 303    | EPA 120.1              |
| SULFATE                       | 11.3   | EPA 300                |
| ALKALINITY                    | 6      | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 218    | SM20-2540C             |
| TOC (TOTAL ORGANIC CARBON)    | 0.5 ND | SM20-5310B             |
| TOTAL PHENOLICS (ug/l)        | 5 ND   | EPA 420.4              |
| TURBIDITY (NTU)               | 0.12   | SM 2130B               |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/11/2022

## 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  
04/13/2022

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) 02/11/2022

Sample Collection Time: 2:15 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

02/24/2022

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/11/2022

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

| PARAMETER                    | VALUE  | ANALYSIS METHOD NUMBER |
|------------------------------|--------|------------------------|
| AMMONIA-NITROGEN             | 0.175  | SM4500D                |
| BICARBONATE ALKALINITY       | 35     | SM20-2321              |
| CALCIUM, TOTAL               | 8.5    | EPA 200.7              |
| CALCIUM, DISSOLVED           | 10     | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 26.4   | 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             | 5.3    | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 6.2    | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 31     | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 40     | EPA 200.7              |
| NITRATE-NITROGEN             | 1 ND   | EPA 300                |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 6.81   | FIELD                  |
| pH-LAB (SU)                   | 6.66   | SM4500B                |
| POTASSIUM, TOTAL              | 1.7    | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 1.9    | EPA 200.7              |
| SODIUM, TOTAL                 | 11.8   | EPA 200.7              |
| SODIUM, DISSOLVED             | 13.9   | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 192    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 198    | EPA 120.1              |
| SULFATE                       | 8.3    | EPA 300                |
| ALKALINITY                    | 34     | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 144    | SM20-2540C             |
| TOC (TOTAL ORGANIC CARBON)    | 0.5 ND | SM20-5310B             |
| TOTAL PHENOLICS (ug/l)        | 5 ND   | EPA 420.4              |
| TURBIDITY (NTU)               | 0.15   | SM 2130B               |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/11/2022

## 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  
04/13/2022

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: WEBER

Address: 3088 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/11/2022

Sample Collection Time: 1:16 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

02/25/2022

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

02/11/2022

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

| PARAMETER                    | VALUE   | ANALYSIS METHOD NUMBER |
|------------------------------|---------|------------------------|
| AMMONIA-NITROGEN             | 0.423   | SM4500D                |
| BICARBONATE ALKALINITY       | 148     | SM20-2321              |
| CALCIUM, TOTAL               | 0.16    | EPA 200.7              |
| CALCIUM, DISSOLVED           | 0.18    | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND   | EPA 410.2              |
| CHLORIDE                     | 211     | 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             | 0.05 ND | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 0.1 ND  | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 3.3     | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 5 ND    | EPA 200.7              |
| NITRATE-NITROGEN             | 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 WEBER

Sample Date

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 8.03   | FIELD                  |
| pH-LAB (SU)                   | 8.09   | SM4500B                |
| POTASSIUM, TOTAL              | 0.86   | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 0.77   | EPA 200.7              |
| SODIUM, TOTAL                 | 206    | EPA 200.7              |
| SODIUM, DISSOLVED             | 234    | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 664    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 1140   | EPA 120.1              |
| SULFATE                       | 2 ND   | EPA 300                |
| ALKALINITY                    | 148    | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 644    | SM20-2540C             |
| TOC (TOTAL ORGANIC CARBON)    | 0.5 ND | SM20-5310B             |
| TOTAL PHENOLICS (ug/l)        | 5 ND   | EPA 420.4              |
| TURBIDITY (NTU)               | 0.16   | SM 2130B               |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

02/11/2022

## 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  
04/13/2022

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) 02/11/2022

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

02/24/2022

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

02/11/2022

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

| PARAMETER                    | VALUE  | ANALYSIS METHOD NUMBER |
|------------------------------|--------|------------------------|
| AMMONIA-NITROGEN             | 0.318  | SM4500D                |
| BICARBONATE ALKALINITY       | 23     | SM20-2321              |
| CALCIUM, TOTAL               | 11.6   | EPA 200.7              |
| CALCIUM, DISSOLVED           | 13.7   | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 39     | 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             | 5.2    | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 6.2    | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 7.2    | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 9.4    | EPA 200.7              |
| NITRATE-NITROGEN             | 3      | EPA 300                |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 6.89   | FIELD                  |
| pH-LAB (SU)                   | 6.98   | SM4500B                |
| POTASSIUM, TOTAL              | 1.4    | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 1.5    | EPA 200.7              |
| SODIUM, TOTAL                 | 14.2   | EPA 200.7              |
| SODIUM, DISSOLVED             | 17     | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 239    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 235    | EPA 120.1              |
| SULFATE                       | 6.7    | EPA 300                |
| ALKALINITY                    | 23     | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 184    | SM20-2540C             |
| TOC (TOTAL ORGANIC CARBON)    | 0.5 ND | SM20-5310B             |
| TOTAL PHENOLICS (ug/l)        | 5 ND   | EPA 420.4              |
| TURBIDITY (NTU)               | 0.18   | SM 2130B               |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

02/11/2022

## 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  
04/13/2022

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: FRY

Address: 3106 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/11/2022

Sample Collection Time: 1:37 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

02/25/2022

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS FRY

Sample Date

02/11/2022

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

| PARAMETER                    | VALUE  | ANALYSIS METHOD NUMBER |
|------------------------------|--------|------------------------|
| AMMONIA-NITROGEN             | 0.414  | SM4500D                |
| BICARBONATE ALKALINITY       | 77     | SM20-2321              |
| CALCIUM, TOTAL               | 32     | EPA 200.7              |
| CALCIUM, DISSOLVED           | 39.9   | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 97.4   | EPA 300                |
| FLUORIDE                     | 0.2 ND | EPA 300                |
| IRON, TOTAL (ug/l)           | 30 ND  | EPA 200.7              |
| IRON, DISSOLVED (ug/l)       | 60 ND  | EPA 200.7              |
| MAGNESIUM, TOTAL             | 11.3   | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 13.8   | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 47     | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 58     | EPA 200.7              |
| NITRATE-NITROGEN             | 10.5 E | EPA 300                |

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

FRY

Sample Date

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 7.89   | FIELD                  |
| pH-LAB (SU)                   | 7.94   | SM4500B                |
| POTASSIUM, TOTAL              | 1.9    | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 2.3    | EPA 200.7              |
| SODIUM, TOTAL                 | 33.4   | EPA 200.7              |
| SODIUM, DISSOLVED             | 41.1   | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 432    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 593    | EPA 120.1              |
| SULFATE                       | 5.1    | EPA 300                |
| ALKALINITY                    | 77     | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 422    | 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

FRY

Sample Date

02/11/2022

## 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  
04/13/2022

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: BECK

Address: 3125 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 02/11/2022

Sample Collection Time: 2:05 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

02/24/2022

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

02/11/2022

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

| PARAMETER                    | VALUE  | ANALYSIS METHOD NUMBER |
|------------------------------|--------|------------------------|
| AMMONIA-NITROGEN             | 0.215  | SM4500D                |
| BICARBONATE ALKALINITY       | 167    | SM20-2321              |
| CALCIUM, TOTAL               | 6.2    | EPA 200.7              |
| CALCIUM, DISSOLVED           | 6.7    | EPA 200.7              |
| COD (CHEMICAL OXYGEN DEMAND) | 15 ND  | EPA 410.2              |
| CHLORIDE                     | 75.7   | 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             | 0.79   | EPA 200.7              |
| MAGNESIUM, DISSOLVED         | 0.89   | EPA 200.7              |
| MANGANESE, TOTAL (ug/l)      | 2.7    | EPA 200.7              |
| MANGANESE, DISSOLVED (ug/l)  | 5 ND   | EPA 200.7              |
| NITRATE-NITROGEN             | 4.6    | 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

BECK

Sample Date

02/11/2022

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

| PARAMETER                     | VALUE  | ANALYSIS METHOD NUMBER |
|-------------------------------|--------|------------------------|
| NITRITE - NITROGEN            | 1 ND   | EPA 300                |
| pH-FIELD (SU)                 | 7.93   | FIELD                  |
| pH-LAB (SU)                   | 8.03   | SM4500B                |
| POTASSIUM, TOTAL              | 2.6    | EPA 200.7              |
| POTASSIUM, DISSOLVED          | 2.8    | EPA 200.7              |
| SODIUM, TOTAL                 | 127    | EPA 200.7              |
| SODIUM, DISSOLVED             | 137    | EPA 200.7              |
| SPEC. COND., FIELD (umhos/cm) | 673    | FIELD                  |
| SPEC. COND., LAB (umhos/cm)   | 680    | EPA 120.1              |
| SULFATE                       | 10.2   | EPA 300                |
| ALKALINITY                    | 167    | SM20-2320B             |
| TDS (TOT. DISSOLVED SOLIDS)   | 464    | 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

BECK

Sample Date

02/11/2022

## 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.





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 Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022-3044 RIVER RD  
Workorder 3232064  
Report ID 158880 on 3/31/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Mar 14, 2022.

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 Susan 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 Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID                      | Matrix | Date Collected     | Date Received      | Collector | Collection Company            |
|------------|--------------------------------|--------|--------------------|--------------------|-----------|-------------------------------|
| 3232064001 | 3044 River Road, Conestoga, PA | Water  | 03/14/2022 2:00 PM | 03/14/2022 4:09 PM | BGS       | Analytical Laboratory Service |
| 3232064002 | Trip Blank                     | Water  | 03/14/2022 4:09 PM | 03/14/2022 4:09 PM | BGS       | Analytical Laboratory Service |

## Reference

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

### Standard Acronyms/Flags

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



Project Notations

Sample Notations

Lab ID

Sample ID

| Result Notations |                                                                                                                                                                                                                                                       |
|------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notation Ref.    |                                                                                                                                                                                                                                                       |
| 1                | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2                | 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. |

## Detected Results Summary



Project 1ST QTR 2022-3044 RIVER RD  
Workorder 3232064

Client Sample ID 3044 River Road, Conestoga, PA  
Lab Sample ID 3232064001

Collected 03/14/2022 2:00 PM  
Lab Receipt 03/14/2022 4:09 PM

| Compound                    | Result | Units    | RDL    | Method       | Flag |
|-----------------------------|--------|----------|--------|--------------|------|
| <b>FIELD PARAMETERS</b>     |        |          |        |              |      |
| pH, Field (SM4500B)         | 5.41   | pH_Units |        | Field        | #    |
| Specific Conductance, Field | 243    | umhos/cm | 1      | Field        | #    |
| Temperature                 | 14.10  | Deg. C   |        | Field        | #    |
| <b>METALS</b>               |        |          |        |              |      |
| Calcium, Dissolved          | 13.8   | mg/L     | 0.10   | EPA 200.7    | #    |
| Calcium, Total              | 13.7   | mg/L     | 0.050  | EPA 200.7    | #    |
| Magnesium, Dissolved        | 10.2   | mg/L     | 0.10   | EPA 200.7    | #    |
| Magnesium, Total            | 10.0   | mg/L     | 0.050  | EPA 200.7    | #    |
| Manganese, Dissolved        | 0.019  | mg/L     | 0.0050 | EPA 200.7    | #    |
| Manganese, Total            | 0.019  | mg/L     | 0.0025 | EPA 200.7    | #    |
| Potassium, Dissolved        | 1.8    | mg/L     | 0.50   | EPA 200.7    | #    |
| Potassium, Total            | 2.0    | mg/L     | 0.25   | EPA 200.7    | #    |
| Sodium, Dissolved           | 8.0    | mg/L     | 0.50   | EPA 200.7    | #    |
| Sodium, Total               | 9.3    | mg/L     | 0.25   | EPA 200.7    | #    |
| <b>WET CHEMISTRY</b>        |        |          |        |              |      |
| Alkalinity, Bicarbonate     | 11     | mg/L     | 5      | SM2320B-2011 | #    |
| Alkalinity, Total           | 11     | mg/L     | 5      | SM2320B-2011 | #    |
| Chloride                    | 18.4   | mg/L     | 2.0    | EPA 300.0    | #    |
| Nitrate-N                   | 20.0   | mg/L     | 1.0    | EPA 300.0    | #    |
| pH                          | 6.84   | pH_Units |        | S4500HB-11   | #    |
| Phenolics                   | 0.008  | mg/L     | 0.005  | EPA 420.4    | #    |
| Specific Conductance        | 235    | umhos/cm | 1      | SM2510B-2011 | #    |
| Total Dissolved Solids      | 160    | mg/L     | 25     | S2540C-11    | #    |
| Turbidity                   | 0.12   | NTU      | 0.10   | SM2130B-2011 | #    |

## Results



Project 1ST QTR 2022-3044 RIVER RD  
Workorder 3232064

|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3044 River Road, Conestoga, PA | Collected   | 03/14/2022 2:00 PM |
| Lab Sample ID    | 3232064001                     | Lab Receipt | 03/14/2022 4:09 PM |

### FIELD PARAMETERS

| Compound                    | Result | Flag | Units    | RDL | Method | Prepared | By  | Analyzed   | By  | Cntr |
|-----------------------------|--------|------|----------|-----|--------|----------|-----|------------|-----|------|
| pH, Field (SM4500B)         | 5.41   |      | pH_Units |     | Field  |          | N/A | 03/14/2022 | BGS | N    |
| Specific Conductance, Field | 243    |      | umhos/cm | 1   | Field  |          | N/A | 03/14/2022 | BGS | N    |
| Temperature                 | 14.10  |      | Deg. C   |     | Field  |          | N/A | 03/14/2022 | BGS | N    |

### METALS

| Compound             | Result | Flag | Units | RDL    | Method    | Prepared   | By  | Analyzed   | By  | Cntr |
|----------------------|--------|------|-------|--------|-----------|------------|-----|------------|-----|------|
| Calcium, Dissolved   | 13.8   |      | mg/L  | 0.10   | EPA 200.7 | 03/17/2022 | SRT | 03/17/2022 | SRT | E    |
| Iron, Dissolved      | ND     | ND   | mg/L  | 0.060  | EPA 200.7 | 03/17/2022 | SRT | 03/17/2022 | SRT | E    |
| Magnesium, Dissolved | 10.2   |      | mg/L  | 0.10   | EPA 200.7 | 03/17/2022 | SRT | 03/17/2022 | SRT | E    |
| Manganese, Dissolved | 0.019  |      | mg/L  | 0.0050 | EPA 200.7 | 03/17/2022 | SRT | 03/17/2022 | SRT | E    |
| Potassium, Dissolved | 1.8    |      | mg/L  | 0.50   | EPA 200.7 | 03/17/2022 | SRT | 03/17/2022 | SRT | E    |
| Sodium, Dissolved    | 8.0    |      | mg/L  | 0.50   | EPA 200.7 | 03/17/2022 | SRT | 03/17/2022 | SRT | E    |
| Calcium, Total       | 13.7   |      | mg/L  | 0.050  | EPA 200.7 | 03/18/2022 | JSE | 03/21/2022 | SRT | D1   |
| Iron, Total          | ND     | ND   | mg/L  | 0.030  | EPA 200.7 | 03/18/2022 | JSE | 03/21/2022 | SRT | D1   |
| Magnesium, Total     | 10.0   |      | mg/L  | 0.050  | EPA 200.7 | 03/18/2022 | JSE | 03/21/2022 | SRT | D1   |
| Manganese, Total     | 0.019  |      | mg/L  | 0.0025 | EPA 200.7 | 03/18/2022 | JSE | 03/21/2022 | SRT | D1   |
| Potassium, Total     | 2.0    |      | mg/L  | 0.25   | EPA 200.7 | 03/18/2022 | JSE | 03/21/2022 | SRT | D1   |
| Sodium, Total        | 9.3    |      | mg/L  | 0.25   | EPA 200.7 | 03/18/2022 | JSE | 03/21/2022 | SRT | D1   |

### VOLATILE ORGANICS

| Compound                 | Result | Flag | Units | RDL  | Method    | Prepared | By  | Analyzed   | By  | Cntr |
|--------------------------|--------|------|-------|------|-----------|----------|-----|------------|-----|------|
| 1,1,1-Trichloroethane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| 1,1-Dichloroethane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| 1,1-Dichloroethene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| 1,2-Dibromoethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| 1,2-Dichloroethane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Benzene                  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| cis-1,2-Dichloroethene   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Ethylbenzene             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Methylene Chloride       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Tetrachloroethene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Toluene                  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Total Xylenes            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| trans-1,2-Dichloroethene | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Trichloroethene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Trichlorofluoromethane   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |
| Vinyl Chloride           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/16/2022 | PDK | K    |

### SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 99.50%   | 70 - 130  |            |

### WET CHEMISTRY



Project 1ST QTR 2022-3044 RIVER RD  
 Workorder 3232064

| Client Sample ID             |        | 3044 River Road, Conestoga, PA |          |       |                  | Collected   |     | 03/14/2022 2:00 PM |     |      |
|------------------------------|--------|--------------------------------|----------|-------|------------------|-------------|-----|--------------------|-----|------|
| Lab Sample ID                |        | 3232064001                     |          |       |                  | Lab Receipt |     | 03/14/2022 4:09 PM |     |      |
| Compound                     | Result | Flag                           | Units    | RDL   | Method           | Prepared    | By  | Analyzed           | By  | Cntr |
| Phenolics                    | 0.008  |                                | mg/L     | 0.005 | EPA 420.4        | 03/22/2022  | AKH | 03/22/2022         | AKH | H    |
| Total Organic Carbon (TOC)   | ND     | ND                             | mg/L     | 0.50  | SM5310B-2011     |             | N/A | 03/15/2022         | PAG | F    |
| Chemical Oxygen Demand (COD) | ND     | ND                             | mg/L     | 15    | EPA 410.4        |             | N/A | 03/23/2022         | ALK | C    |
| Ammonia-N                    | ND     | ND                             | mg/L     | 0.100 | ASTM<br>D6919-09 |             | N/A | 03/24/2022         | ALK | C    |
| pH                           | 6.84   | 2                              | pH_Units |       | S4500HB-11       |             | N/A | 03/18/2022         | BXD | A    |
| Alkalinity, Bicarbonate      | 11     |                                | mg/L     | 5     | SM2320B-2011     |             | N/A | 03/18/2022         | BXD | A    |
| Alkalinity, Total            | 11     | 1                              | mg/L     | 5     | SM2320B-2011     |             | N/A | 03/18/2022         | BXD | A    |
| Chloride                     | 18.4   |                                | mg/L     | 2.0   | EPA 300.0        |             | N/A | 03/16/2022         | M1D | A    |
| Fluoride                     | ND     | ND                             | mg/L     | 0.20  | EPA 300.0        |             | N/A | 03/16/2022         | M1D | A    |
| Nitrate-N                    | 20.0   |                                | mg/L     | 1.0   | EPA 300.0        |             | N/A | 03/16/2022         | M1D | A    |
| Nitrite-N                    | ND     | ND                             | mg/L     | 1.0   | EPA 300.0        |             | N/A | 03/16/2022         | M1D | A    |
| Specific Conductance         | 235    |                                | umhos/cm | 1     | SM2510B-2011     |             | N/A | 03/25/2022         | BXD | A    |
| Total Dissolved Solids       | 160    |                                | mg/L     | 25    | S2540C-11        |             | N/A | 03/17/2022         | SMS | A    |
| Turbidity                    | 0.12   |                                | NTU      | 0.10  | SM2130B-2011     |             | N/A | 03/15/2022         | LXZ | A    |
| Sulfate                      | ND     | ND                             | mg/L     | 2.0   | EPA 300.0        |             | N/A | 03/26/2022         | MSA | A    |
| Halogen, Total Organic (TOX) | ND     | ND                             | ug/L     | 20.0  | SW846 9020B      |             | N/A | 03/28/2022         | PAG | I    |



|                  |            |             |                    |
|------------------|------------|-------------|--------------------|
| Client Sample ID | Trip Blank | Collected   | 03/14/2022 4:09 PM |
| Lab Sample ID    | 3232064002 | Lab Receipt | 03/14/2022 4:09 PM |

VOLATILE ORGANICS

| Compound                 | Result | Flag | Units | RDL  | Method    | Prepared | By  | Analyzed   | By  | Cntr |
|--------------------------|--------|------|-------|------|-----------|----------|-----|------------|-----|------|
| 1,1,1-Trichloroethane    | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| 1,1-Dichloroethane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| 1,1-Dichloroethene       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| 1,2-Dibromoethane        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| 1,2-Dichloroethane       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Benzene                  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| cis-1,2-Dichloroethene   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Ethylbenzene             | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Methylene Chloride       | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Tetrachloroethene        | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Toluene                  | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Total Xylenes            | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| trans-1,2-Dichloroethene | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Trichloroethene          | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Trichlorofluoromethane   | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |
| Vinyl Chloride           | ND     | ND   | ug/L  | 0.50 | EPA 524.2 |          | N/A | 03/24/2022 | TMP | A    |

SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 98.30%   | 70 - 130  |            |





Sample - Method Cross Reference Table

| Lab ID     | Sample ID                      | Analysis Method | Preparation Method | Leachate Method |
|------------|--------------------------------|-----------------|--------------------|-----------------|
| 3232064001 | 3044 River Road, Conestoga, PA | Field           | N/A                |                 |
|            |                                | EPA 200.7       | EPA ACID           |                 |
|            |                                | EPA 200.7       | EPA TRMD           |                 |
|            |                                | EPA 524.2       | N/A                |                 |
|            |                                | ASTM D6919-09   | N/A                |                 |
|            |                                | EPA 300.0       | N/A                |                 |
|            |                                | EPA 300.0       | N/A                |                 |
|            |                                | EPA 410.4       | N/A                |                 |
|            |                                | EPA 420.4       | 420.4/9066         |                 |
|            |                                | S2540C-11       | N/A                |                 |
|            |                                | S4500HB-11      | N/A                |                 |
|            |                                | SM2130B-2011    | N/A                |                 |
|            |                                | SM2320B-2011    | N/A                |                 |
|            |                                | SM2510B-2011    | N/A                |                 |
|            |                                | SM5310B-2011    | N/A                |                 |
|            |                                | SW846 9020B     | N/A                |                 |
| 3232064002 | Trip Blank                     | EPA 524.2       | N/A                |                 |



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

COC #  
ALS C

Generated by ALS

3232064



Logged By: KSB  
PH: SUB

1 of 1

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

Client Name: Lancaster County Solid Waste MA  
Address: 1299 Harrisburg Pike, P.O. Box 4424  
Lancaster, PA 17604  
Contact: 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.  
☐ Rush-Subject to ALS approval and surcharges.  
Date Required: \_\_\_\_\_ Approved By: \_\_\_\_\_  
Email? ☐ -Y ☐ -N No.: \_\_\_\_\_  
Fax? ☐ -Y ☐ -N No.: \_\_\_\_\_

| Sample Description/Location<br>(as it will appear on the lab report) | Sample Date | Time |
|----------------------------------------------------------------------|-------------|------|
| 1 3044RIVERRD                                                        | 03/14/22    | 1400 |
| 2. Trip Blank                                                        | 03/14/22    | 1600 |
| 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 <del>XXXX</del> <del>XXXX</del> <del>XXXX</del> BY ALS | 03/14/22 | 1600 | 2 [Signature]              | 03/14/22 | 1600 |
| 3                                                        |          |      | 4                          |          |      |
| 5                                                        |          |      | 6                          |          |      |
| 7                                                        |          |      | 8                          |          |      |
| 9                                                        |          |      | 10                         |          |      |

\* 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

Temp Taken By: \_\_\_\_\_  
WO Temp (°C) \_\_\_\_\_  
Therm ID: 570  
Cooler Custody Seal Intact: Y N  
Sample Custody Seal Intact: Y N  
Received on Ice: Y N  
Cooler & Samples Intact: Y N  
Correct Containers Provided: Y N  
Sample Label/COC Agree: Y N  
Adequate Sample Volumes: Y N  
VOA Headspace Present: Y N  
Voa Trip Blank: Y N  
NLS 4 Days: Y N  
Rad Screen (uCi): \_\_\_\_\_  
Courier/Tracking #: \_\_\_\_\_  
SDWA Compliance: Y N  
PWSID: \_\_\_\_\_

COC/La \_\_\_\_\_  
COC # \_\_\_\_\_  
Therm ID: 570  
Cooler Custody Seal Intact: Y N  
Sample Custody Seal Intact: Y N  
Received on Ice: Y N  
Cooler & Samples Intact: Y N  
Correct Containers Provided: Y N  
Sample Label/COC Agree: Y N  
Adequate Sample Volumes: Y N  
VOA Headspace Present: Y N  
Voa Trip Blank: Y N  
NLS 4 Days: Y N  
Rad Screen (uCi): \_\_\_\_\_  
Courier/Tracking #: \_\_\_\_\_  
SDWA Compliance: Y N  
PWSID: \_\_\_\_\_

ALS Field Services: ☐ Pickup ☐ Labor  
☐ Composite\_Sampling ☐ Rental\_Equipment  
☐ Other:

State Samples Collected In: NY, NJ, PA, NC  
Special Processing: USACE, Navy  
Sample Disposal: Lab, Special  
Reportable to PADEP? Yes, PWSID #, EDDS: Format Type-



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 Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022 3052 RIVER RD  
Workorder 3227035  
Report ID 152371 on 2/28/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID                      | Matrix | Date Collected      | Date Received      | Collector | Collection Company            |
|------------|--------------------------------|--------|---------------------|--------------------|-----------|-------------------------------|
| 3227035001 | 3052 River Road, Conestoga, PA | Water  | 02/11/2022 12:40 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |

## Reference

### 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).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- 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.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID                      |                                                               |
|------------|--------------------------------|---------------------------------------------------------------|
| 3227035001 | 3052 River Road, Conestoga, PA | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227035002 | Trip Blank                     | This sample was cancelled per project specifications.         |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0          | Result reported exceeds instrument calibration                                                                                                                                                                                                        |
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | The QC sample type MB for method EPA 300.0 was outside the control limits for the analyte Chloride. The concentration was reported at 0.83mg/L and the control limit is less than 0.44mg/L.                                                           |
| 3          | 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. |



|                  |                                |             |                     |
|------------------|--------------------------------|-------------|---------------------|
| Client Sample ID | 3052 River Road, Conestoga, PA | Collected   | 02/11/2022 12:40 PM |
| Lab Sample ID    | 3227035001                     | Lab Receipt | 02/11/2022 4:38 PM  |

## Volatiles - GC/MS EPA 524.2

### Prep

|               |     |                  |                              |
|---------------|-----|------------------|------------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227035001-K(Ascorbic + HCl) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                         |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                          |

### Analysis

|               |                    |                 |           |
|---------------|--------------------|-----------------|-----------|
| <u>Method</u> | EPA 524.2          | <u>Fraction</u> | VOA_Trace |
| <u>Batch</u>  | 820860             | <u>Dilution</u> | 1         |
| <u>Date</u>   | 02/19/2022 5:41 AM | <u>Analyst</u>  | PKD       |

## RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

## SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 94.70 %  | 70 - 130  |            |

## Metals Analytical EPA 200.7

### Prep

|               |                    |                  |                           |
|---------------|--------------------|------------------|---------------------------|
| <u>Method</u> | EPA ACID           | <u>Container</u> | 3227035001-E(Nitric Acid) |
| <u>Batch</u>  | 820075             | <u>Aliquot</u>   | 100 mL                    |
| <u>Date</u>   | 02/15/2022 1:00 PM | <u>Tech.</u>     | SRT                       |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 200.7           | <u>Fraction</u> |     |
| <u>Batch</u>  | 820077              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/17/2022 11:18 AM | <u>Analyst</u>  | SRT |

## RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 14.7   | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | 10.1   | mg/L  | 0.10   | C          |
| Manganese, Dissolved | 7439-96-5_D | 0.044  | mg/L  | 0.0050 | C          |
| Potassium, Dissolved | 7440-09-7_D | 2.2    | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 8.0    | mg/L  | 0.50   | C          |



|                  |                                |             |                     |
|------------------|--------------------------------|-------------|---------------------|
| Client Sample ID | 3052 River Road, Conestoga, PA | Collected   | 02/11/2022 12:40 PM |
| Lab Sample ID    | 3227035001                     | Lab Receipt | 02/11/2022 4:38 PM  |

## Metals Analytical EPA 200.7

### Prep

|               |                     |                  |                            |
|---------------|---------------------|------------------|----------------------------|
| <u>Method</u> | EPA TRMD            | <u>Container</u> | 3227035001-D1(Nitric Acid) |
| <u>Batch</u>  | 819233              | <u>Aliquot</u>   | 50 mL                      |
| <u>Date</u>   | 02/12/2022 11:08 AM | <u>Tech.</u>     | AHI                        |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 200.7           | <u>Fraction</u> |     |
| <u>Batch</u>  | 819300              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/15/2022 12:08 PM | <u>Analyst</u>  | SRT |

## RESULTS

| Compound         | CAS No    | Result | Units | RD     | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 12.1   | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | ND     | mg/L  | 0.030  | C,ND       |
| Magnesium, Total | 7439-95-4 | 8.7    | mg/L  | 0.050  | C          |
| Manganese, Total | 7439-96-5 | 0.039  | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 2.3    | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 7.4    | mg/L  | 0.25   | C          |

## Wet Chemistry (General) EPA 300.0

### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227035001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                      |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

### Analysis

|               |                    |                 |     |
|---------------|--------------------|-----------------|-----|
| <u>Method</u> | EPA 300.0          | <u>Fraction</u> |     |
| <u>Batch</u>  | 819377             | <u>Dilution</u> | 2   |
| <u>Date</u>   | 02/12/2022 4:18 PM | <u>Analyst</u>  | MID |

## RESULTS

| Compound  | CAS No | Result | Units | RD   | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Chloride  | Cl     | 16.8   | mg/L  | 2.0  | C,2        |
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | 18.1   | mg/L  | 1.0  | C,0        |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND       |
| Sulfate   | SO4    | 2.8    | mg/L  | 2.0  | C          |

## Wet Chemistry (General) EPA 410.4

### Prep

|               |     |                  |                             |
|---------------|-----|------------------|-----------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227035001-C(Sulfuric Acid) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 2 mL                        |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 410.4           | <u>Fraction</u> |     |
| <u>Batch</u>  | 820242              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/17/2022 11:10 AM | <u>Analyst</u>  | ALK |

## RESULTS

| Compound                     | CAS No | Result | Units | RD | Qualifiers |
|------------------------------|--------|--------|-------|----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15 | C,ND       |





|                  |                                |             |                     |
|------------------|--------------------------------|-------------|---------------------|
| Client Sample ID | 3052 River Road, Conestoga, PA | Collected   | 02/11/2022 12:40 PM |
| Lab Sample ID    | 3227035001                     | Lab Receipt | 02/11/2022 4:38 PM  |

### Wet Chemistry (General) EPA 420.4

| Prep          |                    |                  |                             | Analysis      |                    |                 |     |
|---------------|--------------------|------------------|-----------------------------|---------------|--------------------|-----------------|-----|
| <u>Method</u> | 420.4/9066         | <u>Container</u> | 3227035001-H(Sulfuric Acid) | <u>Method</u> | EPA 420.4          | <u>Fraction</u> |     |
| <u>Batch</u>  | 820317             | <u>Aliquot</u>   | 100 mL                      | <u>Batch</u>  | 820736             | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/18/2022 8:46 AM | <u>Tech.</u>     | AKH                         | <u>Date</u>   | 02/18/2022 1:04 PM | <u>Analyst</u>  | AKH |

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Phenolics | PHENOL | ND     | mg/L  | 0.005 | C,ND       |

### Wet Chemistry (General) SW846 9020B

| Prep          |     |                  |                             | Analysis      |                     |                 |     |
|---------------|-----|------------------|-----------------------------|---------------|---------------------|-----------------|-----|
| <u>Method</u> | N/A | <u>Container</u> | 3227035001-I(Sulfuric Acid) | <u>Method</u> | SW846 9020B         | <u>Fraction</u> |     |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 50 mL                       | <u>Batch</u>  | 821197              | <u>Dilution</u> | 1   |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         | <u>Date</u>   | 02/21/2022 12:19 PM | <u>Analyst</u>  | PAG |

### RESULTS

| Compound                     | CAS No | Result | Units | RDL  | Qualifiers |
|------------------------------|--------|--------|-------|------|------------|
| Halogen, Total Organic (TOX) | TOX    | ND     | ug/L  | 20.0 | C,ND       |

### Wet Chemistry (General) ASTM D6919-09

| Prep          |     |                  |                             | Analysis      |                    |                 |     |
|---------------|-----|------------------|-----------------------------|---------------|--------------------|-----------------|-----|
| <u>Method</u> | N/A | <u>Container</u> | 3227035001-C(Sulfuric Acid) | <u>Method</u> | ASTM D6919-09      | <u>Fraction</u> |     |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                        | <u>Batch</u>  | 820648             | <u>Dilution</u> | 10  |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         | <u>Date</u>   | 02/25/2022 5:54 AM | <u>Analyst</u>  | ALK |

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Ammonia-N | NH3N   | 0.716  | mg/L  | 0.100 | C          |

### Wet Chemistry (General) SM2130B-2011

| Prep          |     |                  |                           | Analysis      |                    |                 |     |
|---------------|-----|------------------|---------------------------|---------------|--------------------|-----------------|-----|
| <u>Method</u> | N/A | <u>Container</u> | 3227035001-A(Unpreserved) | <u>Method</u> | SM2130B-2011       | <u>Fraction</u> |     |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 25 mL                     | <u>Batch</u>  | 819225             | <u>Dilution</u> | 1   |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       | <u>Date</u>   | 02/12/2022 8:06 AM | <u>Analyst</u>  | LXZ |



|                  |                                |             |                     |
|------------------|--------------------------------|-------------|---------------------|
| Client Sample ID | 3052 River Road, Conestoga, PA | Collected   | 02/11/2022 12:40 PM |
| Lab Sample ID    | 3227035001                     | Lab Receipt | 02/11/2022 4:38 PM  |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Turbidity | Turb   | 0.16   | NTU   | 0.10 | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227035001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819998              | Dilution | 1   |
| Date   | 02/15/2022 11:49 AM | Analyst  | MLW |

RESULTS

| Compound                | CAS No | Result | Units | RDL | Qualifiers |
|-------------------------|--------|--------|-------|-----|------------|
| Alkalinity, Bicarbonate | HCO3   | 7      | mg/L  | 5   | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227035001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819998              | Dilution | 1   |
| Date   | 02/15/2022 11:49 AM | Analyst  | MLW |

RESULTS

| Compound          | CAS No | Result | Units | RDL | Qualifiers |
|-------------------|--------|--------|-------|-----|------------|
| Alkalinity, Total | ALKT   | 7      | mg/L  | 5   | C,1        |

Wet Chemistry (General)  
SM2510B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227035001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2510B-2011       | Fraction |     |
| Batch  | 820538             | Dilution | 1   |
| Date   | 02/18/2022 3:49 PM | Analyst  | BXD |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 232    | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11



|                  |                                |             |                     |
|------------------|--------------------------------|-------------|---------------------|
| Client Sample ID | 3052 River Road, Conestoga, PA | Collected   | 02/11/2022 12:40 PM |
| Lab Sample ID    | 3227035001                     | Lab Receipt | 02/11/2022 4:38 PM  |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227035001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 820021             | Dilution | 1   |
| Date   | 02/16/2022 9:30 AM | Analyst  | SMS |

RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 204    | mg/L  | 25  | C          |

Wet Chemistry (General)  
S4500HB-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227035001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:22 PM | Analyst  | MLW |

RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 6.25   | pH_Units |     | C,3        |

Wet Chemistry (General)  
SM5310B-2011

Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227035001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 820047             | Dilution | 1   |
| Date   | 02/15/2022 3:57 PM | Analyst  | PAG |

RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

FLD  
Field

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227035001-N(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | Field               | Fraction |     |
| Batch  | 820603              | Dilution | 1   |
| Date   | 02/11/2022 12:40 PM | Analyst  | BGS |

RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 6.20   | pH_Units |     | C          |
| Specific Conductance, Field | COND F | 227    | umhos/cm | 1   | C          |



|                  |                                |             |                     |
|------------------|--------------------------------|-------------|---------------------|
| Client Sample ID | 3052 River Road, Conestoga, PA | Collected   | 02/11/2022 12:40 PM |
| Lab Sample ID    | 3227035001                     | Lab Receipt | 02/11/2022 4:38 PM  |

RESULTS

| Compound    | CAS No | Result | Units  | RDL | Qualifiers |
|-------------|--------|--------|--------|-----|------------|
| Temperature | Temp   | 14.00  | Deg. C |     | C          |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID                      | Analysis Method | Preparation Method | Leachate Method |
|------------|--------------------------------|-----------------|--------------------|-----------------|
| 3227035001 | 3052 River Road, Conestoga, PA | Field           | N/A                |                 |
|            |                                | EPA 200.7       | EPA TRMD           |                 |
|            |                                | EPA 200.7       | EPA ACID           |                 |
|            |                                | EPA 524.2       | N/A                |                 |
|            |                                | ASTM D6919-09   | N/A                |                 |
|            |                                | EPA 300.0       | N/A                |                 |
|            |                                | EPA 410.4       | N/A                |                 |
|            |                                | EPA 420.4       | 420.4/9066         |                 |
|            |                                | S2540C-11       | N/A                |                 |
|            |                                | S4500HB-11      | N/A                |                 |
|            |                                | SM2130B-2011    | N/A                |                 |
|            |                                | SM2320B-2011    | N/A                |                 |
|            |                                | SM2510B-2011    | N/A                |                 |
|            |                                | SM5310B-2011    | N/A                |                 |
|            |                                | SW846 9020B     | N/A                |                 |





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

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

Analytical Results Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022 3056 RIVER RD  
Workorder 3227038  
Report ID 152372 on 2/28/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID   | Matrix | Date Collected     | Date Received      | Collector | Collection Company            |
|------------|-------------|--------|--------------------|--------------------|-----------|-------------------------------|
| 3227038001 | 3056RIVERRD | Water  | 02/11/2022 1:47 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |



## Reference

### 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).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- 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.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID   |                                                               |
|------------|-------------|---------------------------------------------------------------|
| 3227038001 | 3056RIVERRD | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227038002 | TRIP BLANK  | This sample was cancelled per project specifications.         |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0          | Result reported exceeds instrument calibration                                                                                                                                                                                                        |
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | The QC sample type MB for method EPA 300.0 was outside the control limits for the analyte Chloride. The concentration was reported at 0.83mg/L and the control limit is less than 0.44mg/L.                                                           |
| 3          | 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. |



Client Sample ID **3056RIVERRD**  
Lab Sample ID **3227038001**

Collected **02/11/2022 1:47 PM**  
Lab Receipt **02/11/2022 4:38 PM**

## Volatiles - GC/MS EPA 524.2

### Prep

Method N/A Container 3227038001-K(Ascorbic + HCl)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

### Analysis

Method EPA 524.2 Fraction VOA\_Trace  
Batch 820860 Dilution 1  
Date 02/19/2022 6:34 AM Analyst PDK

## RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

## SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 89.20 %  | 70 - 130  |            |

## Metals Analytical EPA 200.7

### Prep

Method EPA ACID Container 3227038001-E(Nitric Acid)  
Batch 820075 Aliquot 100 mL  
Date 02/15/2022 1:00 PM Tech. SRT

### Analysis

Method EPA 200.7 Fraction  
Batch 820077 Dilution 1  
Date 02/17/2022 11:31 AM Analyst SRT

## RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 12.1   | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | 12.6   | mg/L  | 0.10   | C          |
| Manganese, Dissolved | 7439-96-5_D | 0.11   | mg/L  | 0.0050 | C          |
| Potassium, Dissolved | 7440-09-7_D | 2.4    | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 9.0    | mg/L  | 0.50   | C          |



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3056RIVERRD | Collected   | 02/11/2022 1:47 PM |
| Lab Sample ID    | 3227038001  | Lab Receipt | 02/11/2022 4:38 PM |

## Metals Analytical EPA 200.7

### Prep

|               |                     |                  |                            |
|---------------|---------------------|------------------|----------------------------|
| <u>Method</u> | EPA TRMD            | <u>Container</u> | 3227038001-D1(Nitric Acid) |
| <u>Batch</u>  | 819233              | <u>Aliquot</u>   | 50 mL                      |
| <u>Date</u>   | 02/12/2022 11:08 AM | <u>Tech.</u>     | AHI                        |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 200.7           | <u>Fraction</u> |     |
| <u>Batch</u>  | 819300              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/15/2022 12:30 PM | <u>Analyst</u>  | SRT |

## RESULTS

| Compound         | CAS No    | Result | Units | RD     | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 10.1   | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | ND     | mg/L  | 0.030  | C,ND       |
| Magnesium, Total | 7439-95-4 | 10.7   | mg/L  | 0.050  | C          |
| Manganese, Total | 7439-96-5 | 0.086  | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 2.0    | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 7.5    | mg/L  | 0.25   | C          |

## Wet Chemistry (General) EPA 300.0

### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227038001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                      |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

### Analysis

|               |                    |                 |     |
|---------------|--------------------|-----------------|-----|
| <u>Method</u> | EPA 300.0          | <u>Fraction</u> |     |
| <u>Batch</u>  | 819377             | <u>Dilution</u> | 2   |
| <u>Date</u>   | 02/12/2022 4:50 PM | <u>Analyst</u>  | MID |

## RESULTS

| Compound  | CAS No | Result | Units | RD   | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Chloride  | Cl     | 20.0   | mg/L  | 2.0  | C,2        |
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | 17.5   | mg/L  | 1.0  | C,0        |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND       |
| Sulfate   | SO4    | ND     | mg/L  | 2.0  | C,ND       |

## Wet Chemistry (General) EPA 410.4

### Prep

|               |     |                  |                             |
|---------------|-----|------------------|-----------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227038001-C(Sulfuric Acid) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 2 mL                        |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 410.4           | <u>Fraction</u> |     |
| <u>Batch</u>  | 820240              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/17/2022 11:00 AM | <u>Analyst</u>  | ALK |

## RESULTS

| Compound                     | CAS No | Result | Units | RD | Qualifiers |
|------------------------------|--------|--------|-------|----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15 | C,ND       |



Project 1ST QTR 2022 3056 RIVER RD  
Workorder 3227038

Client Sample ID **3056RIVERRD**  
Lab Sample ID **3227038001**

Collected **02/11/2022 1:47 PM**  
Lab Receipt **02/11/2022 4:38 PM**

### Wet Chemistry (General) EPA 420.4

#### Prep

Method 420.4/9066 Container 3227038001-H(Sulfuric Acid)  
Batch 820317 Aliquot 100 mL  
Date 02/18/2022 8:46 AM Tech. AKH

#### Analysis

Method EPA 420.4 Fraction  
Batch 820736 Dilution 1  
Date 02/18/2022 1:09 PM Analyst AKH

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Phenolics | PHENOL | ND     | mg/L  | 0.005 | C,ND       |

### Wet Chemistry (General) SW846 9020B

#### Prep

Method N/A Container 3227038001-I(Sulfuric Acid)  
Batch N/A Aliquot 50 mL  
Date N/A Tech. N/A

#### Analysis

Method SW846 9020B Fraction  
Batch 821197 Dilution 1  
Date 02/21/2022 1:21 PM Analyst PAG

### RESULTS

| Compound                     | CAS No | Result | Units | RDL  | Qualifiers |
|------------------------------|--------|--------|-------|------|------------|
| Halogen, Total Organic (TOX) | TOX    | ND     | ug/L  | 20.0 | C,ND       |

### Wet Chemistry (General) ASTM D6919-09

#### Prep

Method N/A Container 3227038001-C(Sulfuric Acid)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

#### Analysis

Method ASTM D6919-09 Fraction  
Batch 820648 Dilution 10  
Date 02/25/2022 6:08 AM Analyst ALK

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Ammonia-N | NH3N   | 0.415  | mg/L  | 0.100 | C          |

### Wet Chemistry (General) SM2130B-2011

#### Prep

Method N/A Container 3227038001-A(Unpreserved)  
Batch N/A Aliquot 25 mL  
Date N/A Tech. N/A

#### Analysis

Method SM2130B-2011 Fraction  
Batch 819225 Dilution 1  
Date 02/12/2022 8:06 AM Analyst LXZ



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3056RIVERRD | Collected   | 02/11/2022 1:47 PM |
| Lab Sample ID    | 3227038001  | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Turbidity | Turb   | 0.13   | NTU   | 0.10 | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227038001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:41 PM | Analyst  | MLW |

RESULTS

| Compound                | CAS No | Result | Units | RDL | Qualifiers |
|-------------------------|--------|--------|-------|-----|------------|
| Alkalinity, Bicarbonate | HCO3   | 7      | mg/L  | 5   | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227038001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:41 PM | Analyst  | MLW |

RESULTS

| Compound          | CAS No | Result | Units | RDL | Qualifiers |
|-------------------|--------|--------|-------|-----|------------|
| Alkalinity, Total | ALKT   | 7      | mg/L  | 5   | C,1        |

Wet Chemistry (General)  
SM2510B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227038001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2510B-2011       | Fraction |     |
| Batch  | 820538             | Dilution | 1   |
| Date   | 02/18/2022 3:49 PM | Analyst  | BXD |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 222    | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3056RIVERRD | Collected   | 02/11/2022 1:47 PM |
| Lab Sample ID    | 3227038001  | Lab Receipt | 02/11/2022 4:38 PM |

#### Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227038001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

#### Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 820021             | Dilution | 1   |
| Date   | 02/16/2022 9:30 AM | Analyst  | SMS |

#### RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 194    | mg/L  | 25  | C          |

#### Wet Chemistry (General) S4500HB-11

#### Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227038001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

#### Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:41 PM | Analyst  | MLW |

#### RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 6.70   | pH_Units |     | C,3        |

#### Wet Chemistry (General) SM5310B-2011

#### Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227038001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

#### Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 820047             | Dilution | 1   |
| Date   | 02/15/2022 3:57 PM | Analyst  | PAG |

#### RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

#### FLD Field

#### Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227038001-N(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

#### Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | Field               | Fraction |     |
| Batch  | 820603              | Dilution | 1   |
| Date   | 02/11/2022 12:47 PM | Analyst  | BGS |

#### RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 6.65   | pH_Units |     | C          |
| Specific Conductance, Field | COND F | 216    | umhos/cm | 1   | C          |



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3056RIVERRD | Collected   | 02/11/2022 1:47 PM |
| Lab Sample ID    | 3227038001  | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound    | CAS No | Result | Units  | RDL | Qualifiers |
|-------------|--------|--------|--------|-----|------------|
| Temperature | Temp   | 14.30  | Deg. C |     | C          |





Sample - Method Cross Reference Table

| Lab ID     | Sample ID   | Analysis Method | Preparation Method | Leachate Method |
|------------|-------------|-----------------|--------------------|-----------------|
| 3227038001 | 3056RIVERRD | Field           | N/A                |                 |
|            |             | EPA 200.7       | EPA TRMD           |                 |
|            |             | EPA 200.7       | EPA ACID           |                 |
|            |             | EPA 524.2       | N/A                |                 |
|            |             | ASTM D6919-09   | N/A                |                 |
|            |             | EPA 300.0       | N/A                |                 |
|            |             | EPA 410.4       | N/A                |                 |
|            |             | EPA 420.4       | 420.4/9066         |                 |
|            |             | S2540C-11       | N/A                |                 |
|            |             | S4500HB-11      | N/A                |                 |
|            |             | SM2130B-2011    | N/A                |                 |
|            |             | SM2320B-2011    | N/A                |                 |
|            |             | SM2510B-2011    | N/A                |                 |
|            |             | SM5310B-2011    | N/A                |                 |
|            |             | SW846 9020B     | N/A                |                 |



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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 ☐ N

Fax? ☐ Y ☐ N

Sample Description/Location  
3056 (as it will appear on the lab report)

1. 3056 RIVER RD 02/11/22 1:45 PM

2. Trip Blank 02/11/22 1:45 PM

3

4

5

6

7

8

9

10

Project Comments:

Relinquished By / Company Name

1 R. G. Shode ALS

3

5

7

9

LOGGED BY (signature):

REVIEWED BY (signature):

Date Time

2-11-22 16:38

4

6

8

10

Received By / Company Name

2 AMRF / ALS

Date Time

2-11-22 16:38

Deliverables

Standard ☐ CLP-like ☐ USACE ☐

Reportable to PADEP? Yes ☐ No ☐

PWSID #

EDDS: Format Type

State Samples Collected In

USACE ☐ Navy ☐ PA ☒ NC ☐

Sample Disposal Lab ☒ Special ☐

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 C

3227038

Logged By: KSB

PM: SJB

1

of

1

|                |       |        |        |               |        |        |        |        |        |        |
|----------------|-------|--------|--------|---------------|--------|--------|--------|--------|--------|--------|
| Container Type | AG    | AN     | AN     | CG            | PL     | PL     | PL     | PL     | PL     | PL     |
| Container Size | 40 ml | 125 ml | 250 ml | 40 ml         | 250 ml | 125 ml | 125 ml | 500 ml | 500 ml | 500 ml |
| Preservative   | HCl   | H2SO4  | H2SO4  | Ascorbic Acid | H2SO4  | HNO3   | HNO3   | None   | None   | None   |

| ANALYSES/METHOD REQUESTED                                     |   |   |   |   |   |   |   |   |   |   |
|---------------------------------------------------------------|---|---|---|---|---|---|---|---|---|---|
| Enter Number of Containers Per Sample or Field Results Below. |   |   |   |   |   |   |   |   |   |   |
| Cou                                                           |   |   |   |   |   |   |   |   |   |   |
| TOC                                                           | 1 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |
| O-H                                                           | 1 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |
| FM                                                            | 1 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |
| NH3-N, COD                                                    | 1 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |
| Dissolved Metals: Ca, Fe, Mg, Mn, K, Na                       | 1 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |
| Metals: Ca, Fe, Mg, Mn, K, Na                                 | 1 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |
| PH, TDS, NO2, NO3, Cl, SO4, F, Pb, SpC                        | 1 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |
| Alkalinity, HCO3                                              | 1 | 2 | 1 | 2 | 3 | 1 | 1 | 1 | 1 | 1 |

|                                  |                                                                  |
|----------------------------------|------------------------------------------------------------------|
| Temp Taken By: _____             | Temp (°C) _____                                                  |
| Therm ID: _____                  | Therm ID: _____                                                  |
| Receipt Info Completed By: _____ | Receipt Info Completed By: _____                                 |
| Cooler Custody Seal Intact       | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| Sample Custody Seal Intact       | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| Received on Ice                  | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| Cooler & Samples Intact          | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| Correct Containers Provided      | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| Sample Label/COC Agree           | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| Adequate Sample Volumes          | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| VOA Headspace Present            | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| Voa Trip Blank                   | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| NLS 4 Days?                      | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| Rad Screen (uCi)                 | _____                                                            |
| Courier/Tracking #:              | _____                                                            |
| SDWA Compliance                  | Y <input checked="" type="checkbox"/> N <input type="checkbox"/> |
| PWSID                            | _____                                                            |

|                     |                                             |                                           |
|---------------------|---------------------------------------------|-------------------------------------------|
| ALS Field Services: | <input type="checkbox"/> Pickup             | <input type="checkbox"/> Labor            |
|                     | <input type="checkbox"/> Composite Sampling | <input type="checkbox"/> Rental Equipment |
|                     | <input type="checkbox"/> Other:             |                                           |

|                            |                                                                                                                                 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| State Samples Collected In | USACE <input type="checkbox"/> Navy <input type="checkbox"/> PA <input checked="" type="checkbox"/> NC <input type="checkbox"/> |
| Sample Disposal            | Lab <input checked="" type="checkbox"/> Special <input type="checkbox"/>                                                        |
| Reportable to PADEP?       | Yes <input type="checkbox"/> No <input type="checkbox"/>                                                                        |
| PWSID #                    | _____                                                                                                                           |
| EDDS: Format Type          | _____                                                                                                                           |

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

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

Rev 8/04



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

Analytical Results Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022 3060 RIVER RD  
Workorder 3227039  
Report ID 152378 on 2/28/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID   | Matrix | Date Collected      | Date Received      | Collector | Collection Company            |
|------------|-------------|--------|---------------------|--------------------|-----------|-------------------------------|
| 3227039001 | 3060RIVERRD | Water  | 02/11/2022 12:56 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |

## Reference

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

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID   |                                                               |
|------------|-------------|---------------------------------------------------------------|
| 3227039001 | 3060RIVERRD | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227039002 | TRIP BLANK  | This sample was cancelled per project specifications.         |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | The QC sample type MB for method EPA 300.0 was outside the control limits for the analyte Chloride. The concentration was reported at 0.82mg/L and the control limit is less than 0.44mg/L.                                                           |
| 3          | 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. |



|                  |             |             |                     |
|------------------|-------------|-------------|---------------------|
| Client Sample ID | 3060RIVERRD | Collected   | 02/11/2022 12:56 PM |
| Lab Sample ID    | 3227039001  | Lab Receipt | 02/11/2022 4:38 PM  |

## Volatiles - GC/MS EPA 524.2

### Prep

|        |     |           |                              |
|--------|-----|-----------|------------------------------|
| Method | N/A | Container | 3227039001-K(Ascorbic + HCl) |
| Batch  | N/A | Aliquot   | 5 mL                         |
| Date   | N/A | Tech.     | N/A                          |

### Analysis

|        |                    |          |           |
|--------|--------------------|----------|-----------|
| Method | EPA 524.2          | Fraction | VOA_Trace |
| Batch  | 820860             | Dilution | 1         |
| Date   | 02/19/2022 7:00 AM | Analyst  | PKD       |

## RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

## SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 90.90 %  | 70 - 130  |            |

## Metals Analytical EPA 200.7

### Prep

|        |                     |           |                           |
|--------|---------------------|-----------|---------------------------|
| Method | EPA ACID            | Container | 3227039001-E(Nitric Acid) |
| Batch  | 821208              | Aliquot   | 100 mL                    |
| Date   | 02/21/2022 12:16 PM | Tech.     | SRT                       |

### Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | EPA 200.7           | Fraction |     |
| Batch  | 821209              | Dilution | 1   |
| Date   | 02/22/2022 10:56 AM | Analyst  | SRT |

## RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 10.6   | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | 11.1   | mg/L  | 0.10   | C          |
| Manganese, Dissolved | 7439-96-5_D | 0.12   | mg/L  | 0.0050 | C          |
| Potassium, Dissolved | 7440-09-7_D | 2.3    | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 8.1    | mg/L  | 0.50   | C          |



|                  |             |             |                     |
|------------------|-------------|-------------|---------------------|
| Client Sample ID | 3060RIVERRD | Collected   | 02/11/2022 12:56 PM |
| Lab Sample ID    | 3227039001  | Lab Receipt | 02/11/2022 4:38 PM  |

## Metals Analytical EPA 200.7

### Prep

|               |                     |                  |                            |
|---------------|---------------------|------------------|----------------------------|
| <u>Method</u> | EPA TRMD            | <u>Container</u> | 3227039001-D1(Nitric Acid) |
| <u>Batch</u>  | 819233              | <u>Aliquot</u>   | 50 mL                      |
| <u>Date</u>   | 02/12/2022 11:08 AM | <u>Tech.</u>     | AHI                        |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 200.7           | <u>Fraction</u> |     |
| <u>Batch</u>  | 819300              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/15/2022 12:34 PM | <u>Analyst</u>  | SRT |

## RESULTS

| Compound         | CAS No    | Result | Units | RD     | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 10     | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | 0.055  | mg/L  | 0.030  | C          |
| Magnesium, Total | 7439-95-4 | 10.4   | mg/L  | 0.050  | C          |
| Manganese, Total | 7439-96-5 | 0.11   | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 2.4    | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 7.7    | mg/L  | 0.25   | C          |

## Wet Chemistry (General) EPA 300.0

### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227039001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                      |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

### Analysis

|               |                    |                 |     |
|---------------|--------------------|-----------------|-----|
| <u>Method</u> | EPA 300.0          | <u>Fraction</u> |     |
| <u>Batch</u>  | 819377             | <u>Dilution</u> | 2   |
| <u>Date</u>   | 02/12/2022 6:12 PM | <u>Analyst</u>  | MID |

## RESULTS

| Compound  | CAS No | Result | Units | RD   | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Chloride  | Cl     | 17.4   | mg/L  | 2.0  | C,2        |
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | 16.6   | mg/L  | 1.0  | C          |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND       |
| Sulfate   | SO4    | 9.3    | mg/L  | 2.0  | C          |

## Wet Chemistry (General) EPA 410.4

### Prep

|               |     |                  |                             |
|---------------|-----|------------------|-----------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227039001-C(Sulfuric Acid) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 2 mL                        |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 410.4           | <u>Fraction</u> |     |
| <u>Batch</u>  | 820240              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/17/2022 11:00 AM | <u>Analyst</u>  | ALK |

## RESULTS

| Compound                     | CAS No | Result | Units | RD | Qualifiers |
|------------------------------|--------|--------|-------|----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15 | C,ND       |



Client Sample ID **3060RIVERRD**  
Lab Sample ID **3227039001**

Collected **02/11/2022 12:56 PM**  
Lab Receipt **02/11/2022 4:38 PM**

### Wet Chemistry (General) EPA 420.4

#### Prep

Method 420.4/9066 Container 3227039001-H(Sulfuric Acid)  
Batch 820325 Aliquot 100 mL  
Date 02/18/2022 8:47 AM Tech. AKH

#### Analysis

Method EPA 420.4 Fraction  
Batch 820736 Dilution 1  
Date 02/18/2022 1:13 PM Analyst AKH

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Phenolics | PHENOL | ND     | mg/L  | 0.005 | C,ND       |

### Wet Chemistry (General) SW846 9020B

#### Prep

Method N/A Container 3227039001-I(Sulfuric Acid)  
Batch N/A Aliquot 50 mL  
Date N/A Tech. N/A

#### Analysis

Method SW846 9020B Fraction  
Batch 821197 Dilution 1  
Date 02/21/2022 3:23 PM Analyst PAG

### RESULTS

| Compound                     | CAS No | Result | Units | RDL  | Qualifiers |
|------------------------------|--------|--------|-------|------|------------|
| Halogen, Total Organic (TOX) | TOX    | ND     | ug/L  | 20.0 | C,ND       |

### Wet Chemistry (General) ASTM D6919-09

#### Prep

Method N/A Container 3227039001-C(Sulfuric Acid)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

#### Analysis

Method ASTM D6919-09 Fraction  
Batch 820645 Dilution 10  
Date 02/24/2022 3:46 AM Analyst ALK

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Ammonia-N | NH3N   | 0.253  | mg/L  | 0.100 | C          |

### Wet Chemistry (General) SM2130B-2011

#### Prep

Method N/A Container 3227039001-A(Unpreserved)  
Batch N/A Aliquot 25 mL  
Date N/A Tech. N/A

#### Analysis

Method SM2130B-2011 Fraction  
Batch 819225 Dilution 1  
Date 02/12/2022 8:06 AM Analyst LXZ



|                  |             |             |                     |
|------------------|-------------|-------------|---------------------|
| Client Sample ID | 3060RIVERRD | Collected   | 02/11/2022 12:56 PM |
| Lab Sample ID    | 3227039001  | Lab Receipt | 02/11/2022 4:38 PM  |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Turbidity | Turb   | 0.17   | NTU   | 0.10 | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227039001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:52 PM | Analyst  | MLW |

RESULTS

| Compound                | CAS No | Result | Units | RDL | Qualifiers |
|-------------------------|--------|--------|-------|-----|------------|
| Alkalinity, Bicarbonate | HCO3   | ND     | mg/L  | 5   | C,ND       |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227039001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:52 PM | Analyst  | MLW |

RESULTS

| Compound          | CAS No | Result | Units | RDL | Qualifiers |
|-------------------|--------|--------|-------|-----|------------|
| Alkalinity, Total | ALKT   | ND     | mg/L  | 5   | C,ND,1     |

Wet Chemistry (General)  
SM2510B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227039001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2510B-2011       | Fraction |     |
| Batch  | 820538             | Dilution | 1   |
| Date   | 02/18/2022 3:49 PM | Analyst  | BXD |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 231    | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11



|                  |             |             |                     |
|------------------|-------------|-------------|---------------------|
| Client Sample ID | 3060RIVERRD | Collected   | 02/11/2022 12:56 PM |
| Lab Sample ID    | 3227039001  | Lab Receipt | 02/11/2022 4:38 PM  |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227039001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 820021             | Dilution | 1   |
| Date   | 02/16/2022 9:30 AM | Analyst  | SMS |

RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 198    | mg/L  | 25  | C          |

Wet Chemistry (General)  
S4500HB-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227039001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:52 PM | Analyst  | MLW |

RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 6.11   | pH_Units |     | C,3        |

Wet Chemistry (General)  
SM5310B-2011

Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227039001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 820047             | Dilution | 1   |
| Date   | 02/15/2022 3:57 PM | Analyst  | PAG |

RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

FLD  
Field

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227039001-N(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | Field               | Fraction |     |
| Batch  | 820603              | Dilution | 1   |
| Date   | 02/11/2022 12:56 PM | Analyst  | BGS |

RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 6.16   | pH_Units |     | C          |
| Specific Conductance, Field | CONDf  | 237    | umhos/cm | 1   | C          |



|                  |             |             |                     |
|------------------|-------------|-------------|---------------------|
| Client Sample ID | 3060RIVERRD | Collected   | 02/11/2022 12:56 PM |
| Lab Sample ID    | 3227039001  | Lab Receipt | 02/11/2022 4:38 PM  |

RESULTS

| Compound    | CAS No | Result | Units  | RDL | Qualifiers |
|-------------|--------|--------|--------|-----|------------|
| Temperature | Temp   | 14.20  | Deg. C |     | C          |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID   | Analysis Method | Preparation Method | Leachate Method |
|------------|-------------|-----------------|--------------------|-----------------|
| 3227039001 | 3060RIVERRD | Field           | N/A                |                 |
|            |             | EPA 200.7       | EPA TRMD           |                 |
|            |             | EPA 200.7       | EPA ACID           |                 |
|            |             | EPA 524.2       | N/A                |                 |
|            |             | ASTM D6919-09   | N/A                |                 |
|            |             | EPA 300.0       | N/A                |                 |
|            |             | EPA 410.4       | N/A                |                 |
|            |             | EPA 420.4       | 420.4/9066         |                 |
|            |             | S2540C-11       | N/A                |                 |
|            |             | S4500HB-11      | N/A                |                 |
|            |             | SM2130B-2011    | N/A                |                 |
|            |             | SM2320B-2011    | N/A                |                 |
|            |             | SM2510B-2011    | N/A                |                 |
|            |             | SM5310B-2011    | N/A                |                 |
|            |             | SW846 9020B     | N/A                |                 |



34 Logwood Lane • Middletown, PA 17057 • Phone: 717.944.5541 • Fax: 717.944.1430 • www.alsglobal.com



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.

☐ Rush-Subject to ALS approval and surcharges.

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

Email? ☐ -Y ☐ -N

Fax? ☐ -Y ☐ -N

Sample Description/Location

(as it will appear on the lab report)

Sample Date

Time

1 3060RIVERRD

02/11/22

12:56

2. Trip Blank

02/11/22

1:00

3

4

5

6

7

8

9

10

Project Comments:

Relinquished By / Company Name

2-11-22 16:38

2 AMRF / ALS

3

4

5

6

7

8

9

10

\*\*Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OL=Oil; SL=Sludge; SO=Soil; WP=Wiper; WW=Wastewater

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

Rev 8/04

## CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

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

COC

3227039

1 of 1

Logged By: KSB

PH: SJB



ALS

Therm ID: 534

No. of Coolers: Y N Initial

Temp Taken By: AMRF

WO Temp (°C): 534

Receipt Info Completed By: AMRF

Cooler Custody Seal Intact

Sample Custody Seal Intact

Received on Ice

Cooler & Samples Intact

Correct Containers Provided

Sample Label/COC Agree

Adequate Sample Volumes

VOA Headspace Present

Voa Trip Blank

NJS 4 Days?

Rad Screen (uCi)

Courier/Tracking #:

SDWA Compliance

PWSID

ALS Field Services: ☐ Pickup ☐ Labor

☐ Composite Sampling ☐ Rental Equipment

☐ Other:

Standard

CLP-like

USACE

USACE

Reportable to PADEP?

Yes ☐

PWSID #

EDDS: Format Type-

Deliverables

Special Processing

USACE

Navy

State Samples Collected In

NY

NU

PA

NC

Sample Disposal

Lab ☒

Special ☐



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

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

Analytical Results Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022-3076 RIVER RD  
Workorder 3227034  
Report ID 152373 on 2/28/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID                      | Matrix | Date Collected     | Date Received      | Collector | Collection Company            |
|------------|--------------------------------|--------|--------------------|--------------------|-----------|-------------------------------|
| 3227034001 | 3076 River Road, Conestoga, PA | Water  | 02/11/2022 1:03 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |



## Reference

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

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID                      |                                                               |
|------------|--------------------------------|---------------------------------------------------------------|
| 3227034001 | 3076 River Road, Conestoga, PA | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227034002 | Trip Blank                     | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | The QC sample type MB for method EPA 300.0 was outside the control limits for the analyte Chloride. The concentration was reported at 0.83mg/L and the control limit is less than 0.44mg/L.                                                           |
| 3          | 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. |



Project 1ST QTR 2022-3076 RIVER RD  
Workorder 3227034

Client Sample ID 3076 River Road, Conestoga, PA  
Lab Sample ID 3227034001

Collected 02/11/2022 1:03 PM  
Lab Receipt 02/11/2022 4:38 PM

## Volatiles - GC/MS EPA 524.2

### Prep

Method N/A Container 3227034001-K(Ascorbic + HCl)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

### Analysis

Method EPA 524.2 Fraction VOA\_Trace  
Batch 820860 Dilution 1  
Date 02/19/2022 5:15 AM Analyst PDK

## RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

## SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 95.50 %  | 70 - 130  |            |

## Metals Analytical EPA 200.7

### Prep

Method EPA ACID Container 3227034001-E(Nitric Acid)  
Batch 820075 Aliquot 100 mL  
Date 02/15/2022 1:00 PM Tech. SRT

### Analysis

Method EPA 200.7 Fraction  
Batch 820077 Dilution 1  
Date 02/17/2022 11:14 AM Analyst SRT

## RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 13.9   | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | 8.7    | mg/L  | 0.10   | C          |
| Manganese, Dissolved | 7439-96-5_D | 0.18   | mg/L  | 0.0050 | C          |
| Potassium, Dissolved | 7440-09-7_D | 3.5    | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 25.6   | mg/L  | 0.50   | C          |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3076 River Road, Conestoga, PA | Collected   | 02/11/2022 1:03 PM |
| Lab Sample ID    | 3227034001                     | Lab Receipt | 02/11/2022 4:38 PM |

Metals Analytical  
EPA 200.7

Prep

|        |                     |           |                            |
|--------|---------------------|-----------|----------------------------|
| Method | EPA TRMD            | Container | 3227034001-D1(Nitric Acid) |
| Batch  | 819233              | Aliquot   | 50 mL                      |
| Date   | 02/12/2022 11:08 AM | Tech.     | AHI                        |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | EPA 200.7           | Fraction |     |
| Batch  | 819300              | Dilution | 1   |
| Date   | 02/15/2022 12:19 PM | Analyst  | SRT |

RESULTS

| Compound         | CAS No    | Result | Units | RDL    | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 12.4   | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | ND     | mg/L  | 0.030  | C,ND       |
| Magnesium, Total | 7439-95-4 | 7.9    | mg/L  | 0.050  | C          |
| Manganese, Total | 7439-96-5 | 0.15   | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 3.2    | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 22.5   | mg/L  | 0.25   | C          |

Wet Chemistry (General)  
EPA 300.0

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227034001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 5 mL                      |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 300.0          | Fraction |     |
| Batch  | 819377             | Dilution | 2   |
| Date   | 02/12/2022 4:02 PM | Analyst  | MID |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Chloride  | Cl     | 48.8   | mg/L  | 2.0  | C,2        |
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | 9.3    | mg/L  | 1.0  | C          |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND       |
| Sulfate   | SO4    | 11.3   | mg/L  | 2.0  | C          |

Wet Chemistry (General)  
EPA 410.4

Prep

|        |     |           |                             |
|--------|-----|-----------|-----------------------------|
| Method | N/A | Container | 3227034001-C(Sulfuric Acid) |
| Batch  | N/A | Aliquot   | 2 mL                        |
| Date   | N/A | Tech.     | N/A                         |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 410.4          | Fraction |     |
| Batch  | 820330             | Dilution | 1   |
| Date   | 02/17/2022 1:45 PM | Analyst  | ALK |

RESULTS

| Compound                     | CAS No | Result | Units | RDL | Qualifiers |
|------------------------------|--------|--------|-------|-----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15  | C,ND       |



Project 1ST QTR 2022-3076 RIVER RD  
Workorder 3227034

Client Sample ID 3076 River Road, Conestoga, PA  
Lab Sample ID 3227034001

Collected 02/11/2022 1:03 PM  
Lab Receipt 02/11/2022 4:38 PM

### Wet Chemistry (General) EPA 420.4

#### Prep

Method 420.4/9066 Container 3227034001-H(Sulfuric Acid)  
Batch 820317 Aliquot 100 mL  
Date 02/18/2022 8:46 AM Tech. AKH

#### Analysis

Method EPA 420.4 Fraction  
Batch 820736 Dilution 1  
Date 02/18/2022 12:46 PM Analyst AKH

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Phenolics | PHENOL | ND     | mg/L  | 0.005 | C,ND       |

### Wet Chemistry (General) SW846 9020B

#### Prep

Method N/A Container 3227034001-I(Sulfuric Acid)  
Batch N/A Aliquot 50 mL  
Date N/A Tech. N/A

#### Analysis

Method SW846 9020B Fraction  
Batch 820253 Dilution 1  
Date 02/16/2022 11:45 AM Analyst PAG

### RESULTS

| Compound                     | CAS No | Result | Units | RDL  | Qualifiers |
|------------------------------|--------|--------|-------|------|------------|
| Halogen, Total Organic (TOX) | TOX    | ND     | ug/L  | 20.0 | C,ND       |

### Wet Chemistry (General) ASTM D6919-09

#### Prep

Method N/A Container 3227034001-C(Sulfuric Acid)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

#### Analysis

Method ASTM D6919-09 Fraction  
Batch 820647 Dilution 10  
Date 02/24/2022 11:42 AM Analyst ALK

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Ammonia-N | NH3N   | 0.236  | mg/L  | 0.100 | C          |

### Wet Chemistry (General) SM2130B-2011

#### Prep

Method N/A Container 3227034001-A(Unpreserved)  
Batch N/A Aliquot 25 mL  
Date N/A Tech. N/A

#### Analysis

Method SM2130B-2011 Fraction  
Batch 819225 Dilution 1  
Date 02/12/2022 8:06 AM Analyst LXZ



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3076 River Road, Conestoga, PA | Collected   | 02/11/2022 1:03 PM |
| Lab Sample ID    | 3227034001                     | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Turbidity | Turb   | 0.12   | NTU   | 0.10 | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227034001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:17 PM | Analyst  | MLW |

RESULTS

| Compound                | CAS No | Result | Units | RDL | Qualifiers |
|-------------------------|--------|--------|-------|-----|------------|
| Alkalinity, Bicarbonate | HCO3   | 6      | mg/L  | 5   | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227034001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:17 PM | Analyst  | MLW |

RESULTS

| Compound          | CAS No | Result | Units | RDL | Qualifiers |
|-------------------|--------|--------|-------|-----|------------|
| Alkalinity, Total | ALKT   | 6      | mg/L  | 5   | C,1        |

Wet Chemistry (General)  
SM2510B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227034001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2510B-2011       | Fraction |     |
| Batch  | 820538             | Dilution | 1   |
| Date   | 02/18/2022 3:49 PM | Analyst  | BXD |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 303    | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3076 River Road, Conestoga, PA | Collected   | 02/11/2022 1:03 PM |
| Lab Sample ID    | 3227034001                     | Lab Receipt | 02/11/2022 4:38 PM |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227034001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 820021             | Dilution | 1   |
| Date   | 02/16/2022 9:30 AM | Analyst  | SMS |

RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 218    | mg/L  | 25  | C          |

Wet Chemistry (General)  
S4500HB-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227034001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:17 PM | Analyst  | MLW |

RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 6.62   | pH_Units |     | C,3        |

Wet Chemistry (General)  
SM5310B-2011

Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227034001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 820047             | Dilution | 1   |
| Date   | 02/15/2022 3:57 PM | Analyst  | PAG |

RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

FLD  
Field

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227034001-N(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | Field              | Fraction |     |
| Batch  | 820603             | Dilution | 1   |
| Date   | 02/11/2022 1:03 PM | Analyst  | BGS |

RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 6.70   | pH_Units |     | C          |
| Specific Conductance, Field | COND F | 229    | umhos/cm | 1   | C          |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3076 River Road, Conestoga, PA | Collected   | 02/11/2022 1:03 PM |
| Lab Sample ID    | 3227034001                     | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound    | CAS No | Result | Units  | RDL | Qualifiers |
|-------------|--------|--------|--------|-----|------------|
| Temperature | Temp   | 14.20  | Deg. C |     | C          |





Sample - Method Cross Reference Table

| Lab ID     | Sample ID                      | Analysis Method | Preparation Method | Leachate Method |
|------------|--------------------------------|-----------------|--------------------|-----------------|
| 3227034001 | 3076 River Road, Conestoga, PA | Field           | N/A                |                 |
|            |                                | EPA 200.7       | EPA TRMD           |                 |
|            |                                | EPA 200.7       | EPA ACID           |                 |
|            |                                | EPA 524.2       | N/A                |                 |
|            |                                | ASTM D6919-09   | N/A                |                 |
|            |                                | EPA 300.0       | N/A                |                 |
|            |                                | EPA 410.4       | N/A                |                 |
|            |                                | EPA 420.4       | 420.4/9066         |                 |
|            |                                | S2540C-11       | N/A                |                 |
|            |                                | S4500HB-11      | N/A                |                 |
|            |                                | SM2130B-2011    | N/A                |                 |
|            |                                | SM2320B-2011    | N/A                |                 |
|            |                                | SM2510B-2011    | N/A                |                 |
|            |                                | SM5310B-2011    | N/A                |                 |
|            |                                | SW846 9020B     | N/A                |                 |



ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5541 • Fax: 717-944-1430 • www.alsglobal.com

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

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

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<br>(as it will appear on the lab report) | Sample Date | Time |
|----------------------------------------------------------------------|-------------|------|
| 1 3076RIVERRD                                                        | 02/11/22    | 1303 |
| 2. Trip Blank                                                        | 02/11/22    | 1638 |
| 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>R. Sensesich</i>          | 2-11-22 | 1638 | 2 <i>AMRF / ALS</i>        | 2-11-22 | 16:38 |
| 3                              |         |      | 4                          |         |       |
| 5                              |         |      | 6                          |         |       |
| 7                              |         |      | 8                          |         |       |
| 9                              |         |      | 10                         |         |       |

\* G=Grab; C=Composite

\*\*Matrix

- A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; WP=Sludge; WW=Wastewater

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

## CHAIN OF CUSTODY/

### REQUEST FOR ANALYSIS

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

Generated by ALS

COC #

3227034

Logged By: KSB  
PM: SJB



1

of

1

| Container Type | AG    | AN     | AN     | CG      | PL     | PL     | PL     | PL     | PL     |
|----------------|-------|--------|--------|---------|--------|--------|--------|--------|--------|
| Container Size | 40 ml | 125 ml | 250 ml | 40 ml   | 250 ml | 125 ml | 125 ml | 500 ml | 500 ml |
| Preservative   | HCl   | H2SO4  | H2SO4  | Asc&HCl | H2SO4  | HNO3   | HNO3   | None   | None   |

#### ANALYSES/METHOD REQUESTED

| * G or C | * Matrix | TOC | O-OH | TOX | 524 VOCs | FM | NH3-N, COD | Dissolved Metals: Ca, Fe, Mg, Mn, K, Na | Metals: Ca, Fe, Mg, Mn, K, Na | PH, TDS, NO2, NO3, Cl, SO4, F, Pb, SPC | Alkalinity, HCO3 |
|----------|----------|-----|------|-----|----------|----|------------|-----------------------------------------|-------------------------------|----------------------------------------|------------------|
| 1        | G DW     | 2   | 1    | 2   | 3        | X  | 1          | 1                                       | 1                             | 1                                      | 1                |
| 2        | G DW     |     |      |     | 2        |    |            |                                         |                               |                                        |                  |
| 3        |          |     |      |     |          |    |            |                                         |                               |                                        |                  |
| 4        |          |     |      |     |          |    |            |                                         |                               |                                        |                  |
| 5        |          |     |      |     |          |    |            |                                         |                               |                                        |                  |
| 6        |          |     |      |     |          |    |            |                                         |                               |                                        |                  |
| 7        |          |     |      |     |          |    |            |                                         |                               |                                        |                  |
| 8        |          |     |      |     |          |    |            |                                         |                               |                                        |                  |
| 9        |          |     |      |     |          |    |            |                                         |                               |                                        |                  |
| 10       |          |     |      |     |          |    |            |                                         |                               |                                        |                  |

Enter Number of Containers Per Sample or Field Results Below.

|   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |     |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 | 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 | 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|-----|

|                                                                                    |                                                                                       |                                 |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|
| ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor | <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment | <input type="checkbox"/> Other: |
|------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------|

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

Cooler Temp: 11° Therm ID: 574

No. of Containers: Y N Initial

Temp Taken By: AMRF

WO Temp (°C): 11°

Therm ID: 574

Receipt Info Completed By: AMRF

Cooler Custody Seal Intact: Y N

Sample Custody Seal Intact: Y N

Received on Ice: Y N

Cooler & Samples Intact: Y N

Correct Containers Provided: Y N

Sample Label/COC Agree: Y N

Adequate Sample Volumes: Y N

VOA Headspace Present: Y N

Voa Trip Blank: Y N

NIS 4 Days? Y N

Rad Screen (uCi): Y N

Courier/Tracking #: Y

SDWA Compliance: Y

PWSID: Y



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 Report For **Lancaster County Solid Waste Authority**  
Project 1st QTR 2022 3079 RIVER RD  
Workorder 3227036  
Report ID 152374 on 2/28/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID   | Matrix | Date Collected     | Date Received      | Collector | Collection Company            |
|------------|-------------|--------|--------------------|--------------------|-----------|-------------------------------|
| 3227036001 | 3079RIVERRD | Water  | 02/11/2022 2:15 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |

## Reference

### 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).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- 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.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID   |                                                               |
|------------|-------------|---------------------------------------------------------------|
| 3227036001 | 3079RIVERRD | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227036002 | TRIP BLANK  | This sample was cancelled per project specifications.         |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |             | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | The QC sample type MSLO for method EPA 410.4 was outside the control limits for the analyte Chemical Oxygen Demand (COD). The % Recovery was reported as 88.3 and the control limits were 90 to 110.                                                  |
| 3          | The QC sample type MB for method EPA 300.0 was outside the control limits for the analyte Chloride. The concentration was reported at 0.83mg/L and the control limit is less than 0.44mg/L.                                                           |
| 4          | 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. |



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3079RIVERRD | Collected   | 02/11/2022 2:15 PM |
| Lab Sample ID    | 3227036001  | Lab Receipt | 02/11/2022 4:38 PM |

Volatiles - GC/MS  
EPA 524.2

Prep

|        |     |           |                              |
|--------|-----|-----------|------------------------------|
| Method | N/A | Container | 3227036001-K(Ascorbic + HCl) |
| Batch  | N/A | Aliquot   | 5 mL                         |
| Date   | N/A | Tech.     | N/A                          |

Analysis

|        |                    |          |           |
|--------|--------------------|----------|-----------|
| Method | EPA 524.2          | Fraction | VOA_Trace |
| Batch  | 820860             | Dilution | 1         |
| Date   | 02/19/2022 6:07 AM | Analyst  | PKD       |

RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 90.50 %  | 70 - 130  |            |

Metals Analytical  
EPA 200.7

Prep

|        |                    |           |                           |
|--------|--------------------|-----------|---------------------------|
| Method | EPA ACID           | Container | 3227036001-E(Nitric Acid) |
| Batch  | 820075             | Aliquot   | 100 mL                    |
| Date   | 02/15/2022 1:00 PM | Tech.     | SRT                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | EPA 200.7           | Fraction |     |
| Batch  | 820077              | Dilution | 1   |
| Date   | 02/17/2022 11:28 AM | Analyst  | SRT |

RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 10     | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | 6.2    | mg/L  | 0.10   | C          |
| Manganese, Dissolved | 7439-96-5_D | 0.040  | mg/L  | 0.0050 | C          |
| Potassium, Dissolved | 7440-09-7_D | 1.9    | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 13.9   | mg/L  | 0.50   | C          |



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3079RIVERRD | Collected   | 02/11/2022 2:15 PM |
| Lab Sample ID    | 3227036001  | Lab Receipt | 02/11/2022 4:38 PM |

Metals Analytical  
EPA 200.7

Prep

|        |                     |           |                            |
|--------|---------------------|-----------|----------------------------|
| Method | EPA TRMD            | Container | 3227036001-D1(Nitric Acid) |
| Batch  | 819233              | Aliquot   | 50 mL                      |
| Date   | 02/12/2022 11:08 AM | Tech.     | AHI                        |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | EPA 200.7           | Fraction |     |
| Batch  | 819300              | Dilution | 1   |
| Date   | 02/15/2022 12:27 PM | Analyst  | SRT |

RESULTS

| Compound         | CAS No    | Result | Units | RDL    | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 8.5    | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | ND     | mg/L  | 0.030  | C,ND       |
| Magnesium, Total | 7439-95-4 | 5.3    | mg/L  | 0.050  | C          |
| Manganese, Total | 7439-96-5 | 0.031  | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 1.7    | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 11.8   | mg/L  | 0.25   | C          |

Wet Chemistry (General)  
EPA 300.0

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227036001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 5 mL                      |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 300.0          | Fraction |     |
| Batch  | 819377             | Dilution | 2   |
| Date   | 02/12/2022 4:34 PM | Analyst  | MID |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Chloride  | Cl     | 26.4   | mg/L  | 2.0  | C,3        |
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | ND     | mg/L  | 1.0  | C,ND       |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND       |
| Sulfate   | SO4    | 8.3    | mg/L  | 2.0  | C          |

Wet Chemistry (General)  
EPA 410.4

Prep

|        |     |           |                             |
|--------|-----|-----------|-----------------------------|
| Method | N/A | Container | 3227036001-C(Sulfuric Acid) |
| Batch  | N/A | Aliquot   | 2 mL                        |
| Date   | N/A | Tech.     | N/A                         |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 410.4          | Fraction |     |
| Batch  | 820330             | Dilution | 1   |
| Date   | 02/17/2022 1:45 PM | Analyst  | ALK |

RESULTS

| Compound                     | CAS No | Result | Units | RDL | Qualifiers |
|------------------------------|--------|--------|-------|-----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15  | C,ND,2     |



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3079RIVERRD | Collected   | 02/11/2022 2:15 PM |
| Lab Sample ID    | 3227036001  | Lab Receipt | 02/11/2022 4:38 PM |

### Wet Chemistry (General) EPA 420.4

#### Prep

|        |                    |           |                             |
|--------|--------------------|-----------|-----------------------------|
| Method | 420.4/9066         | Container | 3227036001-H(Sulfuric Acid) |
| Batch  | 820317             | Aliquot   | 100 mL                      |
| Date   | 02/18/2022 8:46 AM | Tech.     | AKH                         |

#### Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 420.4          | Fraction |     |
| Batch  | 820736             | Dilution | 1   |
| Date   | 02/18/2022 1:06 PM | Analyst  | AKH |

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Phenolics | PHENOL | ND     | mg/L  | 0.005 | C,ND       |

### Wet Chemistry (General) SW846 9020B

#### Prep

|        |     |           |                             |
|--------|-----|-----------|-----------------------------|
| Method | N/A | Container | 3227036001-I(Sulfuric Acid) |
| Batch  | N/A | Aliquot   | 50 mL                       |
| Date   | N/A | Tech.     | N/A                         |

#### Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SW846 9020B         | Fraction |     |
| Batch  | 821197              | Dilution | 1   |
| Date   | 02/21/2022 12:50 PM | Analyst  | PAG |

### RESULTS

| Compound                     | CAS No | Result | Units | RDL  | Qualifiers |
|------------------------------|--------|--------|-------|------|------------|
| Halogen, Total Organic (TOX) | TOX    | ND     | ug/L  | 20.0 | C,ND       |

### Wet Chemistry (General) ASTM D6919-09

#### Prep

|        |     |           |                             |
|--------|-----|-----------|-----------------------------|
| Method | N/A | Container | 3227036001-C(Sulfuric Acid) |
| Batch  | N/A | Aliquot   | 5 mL                        |
| Date   | N/A | Tech.     | N/A                         |

#### Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | ASTM D6919-09       | Fraction |     |
| Batch  | 820647              | Dilution | 10  |
| Date   | 02/24/2022 11:56 AM | Analyst  | ALK |

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Ammonia-N | NH3N   | 0.175  | mg/L  | 0.100 | C          |

### Wet Chemistry (General) SM2130B-2011

#### Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227036001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 25 mL                     |
| Date   | N/A | Tech.     | N/A                       |

#### Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2130B-2011       | Fraction |     |
| Batch  | 819225             | Dilution | 1   |
| Date   | 02/12/2022 8:06 AM | Analyst  | LXZ |



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3079RIVERRD | Collected   | 02/11/2022 2:15 PM |
| Lab Sample ID    | 3227036001  | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Turbidity | Turb   | 0.15   | NTU   | 0.10 | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227036001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819998              | Dilution | 1   |
| Date   | 02/15/2022 12:00 PM | Analyst  | MLW |

RESULTS

| Compound                | CAS No | Result | Units | RDL | Qualifiers |
|-------------------------|--------|--------|-------|-----|------------|
| Alkalinity, Bicarbonate | HCO3   | 35     | mg/L  | 5   | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227036001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:30 PM | Analyst  | MLW |

RESULTS

| Compound          | CAS No | Result | Units | RDL | Qualifiers |
|-------------------|--------|--------|-------|-----|------------|
| Alkalinity, Total | ALKT   | 34     | mg/L  | 5   | C,1        |

Wet Chemistry (General)  
SM2510B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227036001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2510B-2011       | Fraction |     |
| Batch  | 820538             | Dilution | 1   |
| Date   | 02/18/2022 3:49 PM | Analyst  | BXD |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 198    | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3079RIVERRD | Collected   | 02/11/2022 2:15 PM |
| Lab Sample ID    | 3227036001  | Lab Receipt | 02/11/2022 4:38 PM |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227036001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 820021             | Dilution | 1   |
| Date   | 02/16/2022 9:30 AM | Analyst  | SMS |

RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 144    | mg/L  | 25  | C          |

Wet Chemistry (General)  
S4500HB-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227036001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819998              | Dilution | 1   |
| Date   | 02/15/2022 12:00 PM | Analyst  | MLW |

RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 6.66   | pH_Units |     | C,4        |

Wet Chemistry (General)  
SM5310B-2011

Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227036001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 820047             | Dilution | 1   |
| Date   | 02/15/2022 3:57 PM | Analyst  | PAG |

RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

FLD  
Field

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227036001-N(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | Field              | Fraction |     |
| Batch  | 820603             | Dilution | 1   |
| Date   | 02/11/2022 2:15 PM | Analyst  | BGS |

RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 6.81   | pH_Units |     | C          |
| Specific Conductance, Field | COND F | 192    | umhos/cm | 1   | C          |



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | 3079RIVERRD | Collected   | 02/11/2022 2:15 PM |
| Lab Sample ID    | 3227036001  | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound    | CAS No | Result | Units  | RDL | Qualifiers |
|-------------|--------|--------|--------|-----|------------|
| Temperature | Temp   | 14.10  | Deg. C |     | C          |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID   | Analysis Method | Preparation Method | Leachate Method |
|------------|-------------|-----------------|--------------------|-----------------|
| 3227036001 | 3079RIVERRD | Field           | N/A                |                 |
|            |             | EPA 200.7       | EPA TRMD           |                 |
|            |             | EPA 200.7       | EPA ACID           |                 |
|            |             | EPA 524.2       | N/A                |                 |
|            |             | ASTM D6919-09   | N/A                |                 |
|            |             | EPA 300.0       | N/A                |                 |
|            |             | EPA 410.4       | N/A                |                 |
|            |             | EPA 420.4       | 420.4/9066         |                 |
|            |             | S2540C-11       | N/A                |                 |
|            |             | S4500HB-11      | N/A                |                 |
|            |             | SM2130B-2011    | N/A                |                 |
|            |             | SM2320B-2011    | N/A                |                 |
|            |             | SM2510B-2011    | N/A                |                 |
|            |             | SM5310B-2011    | N/A                |                 |
|            |             | SW846 9020B     | N/A                |                 |



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# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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CO  
ALS

3227036



Logged By: KSB  
PM: SJB

1 of 1

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

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

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

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

Email? ☐ -Y ☐ -N

Fax? ☐ -Y ☐ -N

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

1 3079RIVERRD 02/11/22 1415

2. Trip Blank 02/11/22 1638

3

4

5

6

7

8

9

10

Project Comments:

Relinquished By / Company Name

Date

Time

Received By / Company Name

Date

Time

3

5

7

9

10

11

12

| Container<br>Type | AG    | AN     | AN     | CG      | PL     | PL     | PL     | PL     | PL     |
|-------------------|-------|--------|--------|---------|--------|--------|--------|--------|--------|
| Container<br>Size | 40 ml | 125 ml | 250 ml | 40 ml   | 250 ml | 125 ml | 125 ml | 500 ml | 500 ml |
| Preservative      | HCl   | H2SO4  | H2SO4  | Asc/HCl | H2SO4  | HNO3   | HNO3   | None   | None   |

## ANALYSES/METHOD REQUESTED

| *G or C | *Matrix | TOC | O-H | TOX | 524 VOC | TM | NH3-N, COD | Dissolved Metals: Ca, Fe, Mg, Mn, K, Na | Metals: Ca, Fe, Mg, Mn, K, Na | PH, TDS, NO2, NO3, Cl, SO4, F, Pb, Spc | Alkalinity, HCO3 |
|---------|---------|-----|-----|-----|---------|----|------------|-----------------------------------------|-------------------------------|----------------------------------------|------------------|
| G       | DW      | 2   | 1   | 2   | 3       | X  | 1          | 1                                       | 1                             | 1                                      | 1                |
| G       | DW      |     |     |     | 2       |    |            |                                         |                               |                                        |                  |

Enter Number of Containers Per Sample or Field Results Below.

Receipt Information (completed by receiving Lab)  
Cooler Temp: 11 Therm ID: 574  
No. of C v n Initial

Temp Taken By: AMRF  
WO Temp (°C): 11  
Therm ID: 574  
Receipt Info Completed By: AMRF  
Cooler Custody Seal Intact: Y N  
Sample Custody Seal Intact: Y N  
Received on Ice: Y N  
Cooler & Samples Intact: Y N  
Correct Containers Provided: Y N  
Sample Label/COC Agree: Y N  
Adequate Sample Volumes: Y N  
VOA Headspace Present: Y N  
VOA Trip Blank: Y N  
NLS 4 Days?: Y N  
Rad Screen (uCi): Y N  
Courier/Tracking #: Y N  
SDWA Compliance: Y N  
PWSID: Y N

ALS Field Services: ☐ Pickup ☐ Labor  
☐ Composite\_Sampling ☐ Rental\_Equipment  
☐ Other:

| Standard                          | Special Processing                      | State Samples<br>Collected In |
|-----------------------------------|-----------------------------------------|-------------------------------|
| <input type="checkbox"/> Standard | USACE                                   | USACE                         |
| <input type="checkbox"/> CLP-like | Navy                                    | Navy                          |
| <input type="checkbox"/> USACE    |                                         |                               |
| Reportable to PADEP?              | Sample Disposal                         | Sample Disposal               |
| Yes <input type="checkbox"/>      | Lab <input checked="" type="checkbox"/> | NC <input type="checkbox"/>   |
| PWSID #                           | Special <input type="checkbox"/>        |                               |
| EDDS: Format Type:                |                                         |                               |

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

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

Rev 8/04



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

Analytical Results Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022-3088 RIVER RD  
Workorder 3227033  
Report ID 152085 on 2/25/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID                     | Matrix | Date Collected     | Date Received      | Collector | Collection Company            |
|------------|-------------------------------|--------|--------------------|--------------------|-----------|-------------------------------|
| 3227033001 | 3088 River Road, Conestoga PA | Water  | 02/11/2022 1:16 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |



## Reference

### 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).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- 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.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID                     |                                                               |
|------------|-------------------------------|---------------------------------------------------------------|
| 3227033001 | 3088 River Road, Conestoga PA | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                               | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227033002 | Trip Blank                    | This sample was cancelled per project specifications.         |
|            |                               | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                               | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | The QC sample type MB for method EPA 300.0 was outside the control limits for the analyte Chloride. The concentration was reported at 0.85mg/L and the control limit is less than 0.44mg/L.                                                           |
| 3          | Analyte was analyzed past the 48 hour holding time.                                                                                                                                                                                                   |
| 4          | 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. |



Project 1ST QTR 2022-3088 RIVER RD  
Workorder 3227033

Client Sample ID 3088 River Road, Conestoga PA  
Lab Sample ID 3227033001

Collected 02/11/2022 1:16 PM  
Lab Receipt 02/11/2022 4:38 PM

## Volatiles - GC/MS EPA 524.2

### Prep

Method N/A Container 3227033001-K(Ascorbic + HCl)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

### Analysis

Method EPA 524.2 Fraction VOA\_Trace  
Batch 820860 Dilution 1  
Date 02/19/2022 4:48 AM Analyst PDK

## RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

## SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 94.60 %  | 70 - 130  |            |

## Metals Analytical EPA 200.7

### Prep

Method EPA ACID Container 3227033001-E(Nitric Acid)  
Batch 820075 Aliquot 100 mL  
Date 02/15/2022 1:00 PM Tech. SRT

### Analysis

Method EPA 200.7 Fraction  
Batch 820077 Dilution 1  
Date 02/17/2022 11:11 AM Analyst SRT

## RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 0.18   | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | ND     | mg/L  | 0.10   | C,ND       |
| Manganese, Dissolved | 7439-96-5_D | ND     | mg/L  | 0.0050 | C,ND       |
| Potassium, Dissolved | 7440-09-7_D | 0.77   | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 234    | mg/L  | 0.50   | C          |



|                  |                               |             |                    |
|------------------|-------------------------------|-------------|--------------------|
| Client Sample ID | 3088 River Road, Conestoga PA | Collected   | 02/11/2022 1:16 PM |
| Lab Sample ID    | 3227033001                    | Lab Receipt | 02/11/2022 4:38 PM |

Metals Analytical  
EPA 200.7

Prep

|        |                     |           |                            |
|--------|---------------------|-----------|----------------------------|
| Method | EPA TRMD            | Container | 3227033001-D1(Nitric Acid) |
| Batch  | 819233              | Aliquot   | 50 mL                      |
| Date   | 02/12/2022 11:08 AM | Tech.     | AHI                        |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | EPA 200.7           | Fraction |     |
| Batch  | 819300              | Dilution | 1   |
| Date   | 02/15/2022 12:04 PM | Analyst  | SRT |

RESULTS

| Compound         | CAS No    | Result | Units | RD     | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 0.16   | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | ND     | mg/L  | 0.030  | C,ND       |
| Magnesium, Total | 7439-95-4 | ND     | mg/L  | 0.050  | C,ND       |
| Manganese, Total | 7439-96-5 | 0.0033 | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 0.86   | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 206    | mg/L  | 0.25   | C          |

Wet Chemistry (General)  
EPA 300.0

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227033001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 5 mL                      |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | EPA 300.0           | Fraction |     |
| Batch  | 819999              | Dilution | 2   |
| Date   | 02/16/2022 12:07 AM | Analyst  | MID |

RESULTS

| Compound  | CAS No | Result | Units | RD   | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | 6.0    | mg/L  | 1.0  | C,3        |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND,3     |
| Sulfate   | SO4    | ND     | mg/L  | 2.0  | C,ND       |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227033001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 5 mL                      |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 300.0          | Fraction |     |
| Batch  | 820856             | Dilution | 10  |
| Date   | 02/18/2022 8:07 PM | Analyst  | MID |

RESULTS

| Compound | CAS No | Result | Units | RD   | Qualifiers |
|----------|--------|--------|-------|------|------------|
| Chloride | Cl     | 211    | mg/L  | 10.0 | C,2        |

Wet Chemistry (General)  
EPA 410.4



Project 1ST QTR 2022-3088 RIVER RD  
Workorder 3227033

Client Sample ID 3088 River Road, Conestoga PA  
Lab Sample ID 3227033001

Collected 02/11/2022 1:16 PM  
Lab Receipt 02/11/2022 4:38 PM

#### Prep

Method N/A Container 3227033001-C(Sulfuric Acid)  
Batch N/A Aliquot 2 mL  
Date N/A Tech. N/A

#### Analysis

Method EPA 410.4 Fraction  
Batch 820242 Dilution 1  
Date 02/17/2022 11:10 AM Analyst ALK

#### RESULTS

| Compound                     | CAS No | Result | Units | RDL | Qualifiers |
|------------------------------|--------|--------|-------|-----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15  | C,ND       |

#### Wet Chemistry (General) EPA 420.4

#### Prep

Method 420.4/9066 Container 3227033001-H(Sulfuric Acid)  
Batch 820317 Aliquot 100 mL  
Date 02/18/2022 8:46 AM Tech. AKH

#### Analysis

Method EPA 420.4 Fraction  
Batch 820736 Dilution 1  
Date 02/18/2022 12:43 PM Analyst AKH

#### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Phenolics | PHENOL | ND     | mg/L  | 0.005 | C,ND       |

#### Wet Chemistry (General) SW846 9020B

#### Prep

Method N/A Container 3227033001-I(Sulfuric Acid)  
Batch N/A Aliquot 50 mL  
Date N/A Tech. N/A

#### Analysis

Method SW846 9020B Fraction  
Batch 820253 Dilution 1  
Date 02/16/2022 3:48 PM Analyst PAG

#### RESULTS

| Compound                     | CAS No | Result | Units | RDL  | Qualifiers |
|------------------------------|--------|--------|-------|------|------------|
| Halogen, Total Organic (TOX) | TOX    | ND     | ug/L  | 20.0 | C,ND       |

#### Wet Chemistry (General) ASTM D6919-09

#### Prep

Method N/A Container 3227033001-C(Sulfuric Acid)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

#### Analysis

Method ASTM D6919-09 Fraction  
Batch 820648 Dilution 10  
Date 02/25/2022 7:04 AM Analyst ALK

#### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Ammonia-N | NH3N   | 0.423  | mg/L  | 0.100 | C          |



Project 1ST QTR 2022-3088 RIVER RD  
 Workorder 3227033

|                  |                               |             |                    |
|------------------|-------------------------------|-------------|--------------------|
| Client Sample ID | 3088 River Road, Conestoga PA | Collected   | 02/11/2022 1:16 PM |
| Lab Sample ID    | 3227033001                    | Lab Receipt | 02/11/2022 4:38 PM |

### Wet Chemistry (General) SM2130B-2011

#### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227033001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 25 mL                     |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

#### Analysis

|               |                    |                 |     |
|---------------|--------------------|-----------------|-----|
| <u>Method</u> | SM2130B-2011       | <u>Fraction</u> |     |
| <u>Batch</u>  | 819225             | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/12/2022 8:06 AM | <u>Analyst</u>  | LXZ |

#### RESULTS

| <u>Compound</u> | <u>CAS No</u> | <u>Result</u> | <u>Units</u> | <u>RDL</u> | <u>Qualifiers</u> |
|-----------------|---------------|---------------|--------------|------------|-------------------|
| Turbidity       | Turb          | 0.16          | NTU          | 0.10       | c                 |

### Wet Chemistry (General) SM2320B-2011

#### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227033001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 50 mL                     |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

#### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | SM2320B-2011        | <u>Fraction</u> |     |
| <u>Batch</u>  | 819333              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/14/2022 11:04 PM | <u>Analyst</u>  | MLW |

#### RESULTS

| <u>Compound</u>         | <u>CAS No</u> | <u>Result</u> | <u>Units</u> | <u>RDL</u> | <u>Qualifiers</u> |
|-------------------------|---------------|---------------|--------------|------------|-------------------|
| Alkalinity, Bicarbonate | HCO3          | 148           | mg/L         | 5          | c                 |

### Wet Chemistry (General) SM2320B-2011

#### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227033001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 50 mL                     |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

#### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | SM2320B-2011        | <u>Fraction</u> |     |
| <u>Batch</u>  | 819333              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/14/2022 11:04 PM | <u>Analyst</u>  | MLW |

#### RESULTS

| <u>Compound</u>   | <u>CAS No</u> | <u>Result</u> | <u>Units</u> | <u>RDL</u> | <u>Qualifiers</u> |
|-------------------|---------------|---------------|--------------|------------|-------------------|
| Alkalinity, Total | ALKT          | 148           | mg/L         | 5          | c,1               |

### Wet Chemistry (General) SM2510B-2011

#### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227033001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 50 mL                     |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

#### Analysis

|               |                    |                 |     |
|---------------|--------------------|-----------------|-----|
| <u>Method</u> | SM2510B-2011       | <u>Fraction</u> |     |
| <u>Batch</u>  | 820538             | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/18/2022 3:49 PM | <u>Analyst</u>  | BXD |



|                  |                               |             |                    |
|------------------|-------------------------------|-------------|--------------------|
| Client Sample ID | 3088 River Road, Conestoga PA | Collected   | 02/11/2022 1:16 PM |
| Lab Sample ID    | 3227033001                    | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 1140   | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227033001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 820021             | Dilution | 1   |
| Date   | 02/16/2022 9:30 AM | Analyst  | SMS |

RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 644    | mg/L  | 25  | C          |

Wet Chemistry (General)  
S4500HB-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227033001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 11:04 PM | Analyst  | MLW |

RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 8.09   | pH_Units |     | C,4        |

Wet Chemistry (General)  
SM5310B-2011

Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227033001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 819398             | Dilution | 1   |
| Date   | 02/15/2022 3:07 AM | Analyst  | PAG |

RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

FLD  
Field



|                  |                               |             |                    |
|------------------|-------------------------------|-------------|--------------------|
| Client Sample ID | 3088 River Road, Conestoga PA | Collected   | 02/11/2022 1:16 PM |
| Lab Sample ID    | 3227033001                    | Lab Receipt | 02/11/2022 4:38 PM |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227033001-N(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | Field              | Fraction |     |
| Batch  | 820603             | Dilution | 1   |
| Date   | 02/11/2022 1:16 PM | Analyst  | BGS |

RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 8.03   | pH_Units |     | C          |
| Specific Conductance, Field | CONDf  | 664    | umhos/cm | 1   | C          |
| Temperature                 | Temp   | 15.20  | Deg. C   |     | C          |





Sample - Method Cross Reference Table

| Lab ID     | Sample ID                     | Analysis Method | Preparation Method | Leachate Method |
|------------|-------------------------------|-----------------|--------------------|-----------------|
| 3227033001 | 3088 River Road, Conestoga PA | Field           | N/A                |                 |
|            |                               | EPA 200.7       | EPA TRMD           |                 |
|            |                               | EPA 200.7       | EPA ACID           |                 |
|            |                               | EPA 524.2       | N/A                |                 |
|            |                               | ASTM D6919-09   | N/A                |                 |
|            |                               | EPA 300.0       | N/A                |                 |
|            |                               | EPA 410.4       | N/A                |                 |
|            |                               | EPA 420.4       | 420.4/9066         |                 |
|            |                               | S2540C-11       | N/A                |                 |
|            |                               | S4500HB-11      | N/A                |                 |
|            |                               | SM2130B-2011    | N/A                |                 |
|            |                               | SM2320B-2011    | N/A                |                 |
|            |                               | SM2510B-2011    | N/A                |                 |
|            |                               | SM5310B-2011    | N/A                |                 |
|            |                               | SW846 9020B     | N/A                |                 |





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 Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022-3100 RIVER RD  
Workorder 3227032  
Report ID 151785 on 2/24/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID                      | Matrix | Date Collected     | Date Received      | Collector | Collection Company            |
|------------|--------------------------------|--------|--------------------|--------------------|-----------|-------------------------------|
| 3227032001 | 3100 River Road, Conestoga, PA | Water  | 02/11/2022 1:30 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |

## Reference

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

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID                      |                                                               |
|------------|--------------------------------|---------------------------------------------------------------|
| 3227032001 | 3100 River Road, Conestoga, PA | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227032002 | Trip Blank                     | This sample was cancelled per project specifications.         |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | Analyte was analyzed past the 48 hour holding time.                                                                                                                                                                                                   |
| 3          | 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. |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3100 River Road, Conestoga, PA | Collected   | 02/11/2022 1:30 PM |
| Lab Sample ID    | 3227032001                     | Lab Receipt | 02/11/2022 4:38 PM |

Volatiles - GC/MS  
EPA 524.2

Prep

|        |     |           |                              |
|--------|-----|-----------|------------------------------|
| Method | N/A | Container | 3227032001-K(Ascorbic + HCl) |
| Batch  | N/A | Aliquot   | 5 mL                         |
| Date   | N/A | Tech.     | N/A                          |

Analysis

|        |                    |          |           |
|--------|--------------------|----------|-----------|
| Method | EPA 524.2          | Fraction | VOA_Trace |
| Batch  | 820860             | Dilution | 1         |
| Date   | 02/19/2022 4:22 AM | Analyst  | PKD       |

RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 92.90 %  | 70 - 130  |            |

Metals Analytical  
EPA 200.7

Prep

|        |                    |           |                           |
|--------|--------------------|-----------|---------------------------|
| Method | EPA ACID           | Container | 3227032001-E(Nitric Acid) |
| Batch  | 820075             | Aliquot   | 100 mL                    |
| Date   | 02/15/2022 1:00 PM | Tech.     | SRT                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | EPA 200.7           | Fraction |     |
| Batch  | 820077              | Dilution | 1   |
| Date   | 02/17/2022 11:08 AM | Analyst  | SRT |

RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 13.7   | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | 6.2    | mg/L  | 0.10   | C          |
| Manganese, Dissolved | 7439-96-5_D | 0.0094 | mg/L  | 0.0050 | C          |
| Potassium, Dissolved | 7440-09-7_D | 1.5    | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 17.0   | mg/L  | 0.50   | C          |

|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3100 River Road, Conestoga, PA | Collected   | 02/11/2022 1:30 PM |
| Lab Sample ID    | 3227032001                     | Lab Receipt | 02/11/2022 4:38 PM |

## Metals Analytical EPA 200.7

### Prep

|               |                     |                  |                            |
|---------------|---------------------|------------------|----------------------------|
| <u>Method</u> | EPA TRMD            | <u>Container</u> | 3227032001-D1(Nitric Acid) |
| <u>Batch</u>  | 819233              | <u>Aliquot</u>   | 50 mL                      |
| <u>Date</u>   | 02/12/2022 11:08 AM | <u>Tech.</u>     | AHI                        |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 200.7           | <u>Fraction</u> |     |
| <u>Batch</u>  | 819300              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/15/2022 11:54 AM | <u>Analyst</u>  | SRT |

## RESULTS

| Compound         | CAS No    | Result | Units | RDL    | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 11.6   | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | ND     | mg/L  | 0.030  | C,ND       |
| Magnesium, Total | 7439-95-4 | 5.2    | mg/L  | 0.050  | C          |
| Manganese, Total | 7439-96-5 | 0.0072 | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 1.4    | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 14.2   | mg/L  | 0.25   | C          |

## Wet Chemistry (General) EPA 300.0

### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227032001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                      |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 300.0           | <u>Fraction</u> |     |
| <u>Batch</u>  | 819999              | <u>Dilution</u> | 2   |
| <u>Date</u>   | 02/15/2022 11:45 PM | <u>Analyst</u>  | MID |

## RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Chloride  | Cl     | 39.0   | mg/L  | 2.0  | C          |
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | 3.0    | mg/L  | 1.0  | C,2        |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND,2     |
| Sulfate   | SO4    | 6.7    | mg/L  | 2.0  | C          |

## Wet Chemistry (General) EPA 410.4

### Prep

|               |     |                  |                             |
|---------------|-----|------------------|-----------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227032001-C(Sulfuric Acid) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 2 mL                        |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 410.4           | <u>Fraction</u> |     |
| <u>Batch</u>  | 820242              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/17/2022 11:10 AM | <u>Analyst</u>  | ALK |

## RESULTS

| Compound                     | CAS No | Result | Units | RDL | Qualifiers |
|------------------------------|--------|--------|-------|-----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15  | C,ND       |





Project 1ST QTR 2022-3100 RIVER RD  
Workorder 3227032

Client Sample ID 3100 River Road, Conestoga, PA  
Lab Sample ID 3227032001

Collected 02/11/2022 1:30 PM  
Lab Receipt 02/11/2022 4:38 PM

### Wet Chemistry (General) EPA 420.4

#### Prep

Method 420.4/9066 Container 3227032001-H(Sulfuric Acid)  
Batch 820317 Aliquot 100 mL  
Date 02/18/2022 8:46 AM Tech. AKH

#### Analysis

Method EPA 420.4 Fraction  
Batch 820736 Dilution 1  
Date 02/18/2022 12:40 PM Analyst AKH

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Phenolics | PHENOL | ND     | mg/L  | 0.005 | C,ND       |

### Wet Chemistry (General) SW846 9020B

#### Prep

Method N/A Container 3227032001-I(Sulfuric Acid)  
Batch N/A Aliquot 50 mL  
Date N/A Tech. N/A

#### Analysis

Method SW846 9020B Fraction  
Batch 820253 Dilution 1  
Date 02/16/2022 3:21 PM Analyst PAG

### RESULTS

| Compound                     | CAS No | Result | Units | RDL  | Qualifiers |
|------------------------------|--------|--------|-------|------|------------|
| Halogen, Total Organic (TOX) | TOX    | ND     | ug/L  | 20.0 | C,ND       |

### Wet Chemistry (General) ASTM D6919-09

#### Prep

Method N/A Container 3227032001-C(Sulfuric Acid)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

#### Analysis

Method ASTM D6919-09 Fraction  
Batch 820647 Dilution 10  
Date 02/24/2022 8:26 AM Analyst ALK

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Ammonia-N | NH3N   | 0.318  | mg/L  | 0.100 | C          |

### Wet Chemistry (General) SM2130B-2011

#### Prep

Method N/A Container 3227032001-A(Unpreserved)  
Batch N/A Aliquot 25 mL  
Date N/A Tech. N/A

#### Analysis

Method SM2130B-2011 Fraction  
Batch 819225 Dilution 1  
Date 02/12/2022 8:06 AM Analyst LXZ



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3100 River Road, Conestoga, PA | Collected   | 02/11/2022 1:30 PM |
| Lab Sample ID    | 3227032001                     | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Turbidity | Turb   | 0.18   | NTU   | 0.10 | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227032001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:54 PM | Analyst  | MLW |

RESULTS

| Compound                | CAS No | Result | Units | RDL | Qualifiers |
|-------------------------|--------|--------|-------|-----|------------|
| Alkalinity, Bicarbonate | HCO3   | 23     | mg/L  | 5   | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227032001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:54 PM | Analyst  | MLW |

RESULTS

| Compound          | CAS No | Result | Units | RDL | Qualifiers |
|-------------------|--------|--------|-------|-----|------------|
| Alkalinity, Total | ALKT   | 23     | mg/L  | 5   | C,1        |

Wet Chemistry (General)  
SM2510B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227032001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2510B-2011       | Fraction |     |
| Batch  | 820538             | Dilution | 1   |
| Date   | 02/18/2022 3:49 PM | Analyst  | BXD |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 235    | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3100 River Road, Conestoga, PA | Collected   | 02/11/2022 1:30 PM |
| Lab Sample ID    | 3227032001                     | Lab Receipt | 02/11/2022 4:38 PM |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227032001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 819356             | Dilution | 1   |
| Date   | 02/15/2022 9:54 AM | Analyst  | SMS |

RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 184    | mg/L  | 25  | C          |

Wet Chemistry (General)  
S4500HB-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227032001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:54 PM | Analyst  | MLW |

RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 6.98   | pH_Units |     | C,3        |

Wet Chemistry (General)  
SM5310B-2011

Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227032001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 819398             | Dilution | 1   |
| Date   | 02/15/2022 3:07 AM | Analyst  | PAG |

RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

FLD  
Field

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227032001-N(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | Field              | Fraction |     |
| Batch  | 820603             | Dilution | 1   |
| Date   | 02/11/2022 1:30 PM | Analyst  | BGS |

RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 6.89   | pH_Units |     | C          |
| Specific Conductance, Field | COND F | 239    | umhos/cm | 1   | C          |

Project 1ST QTR 2022-3100 RIVER RD  
Workorder 3227032



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3100 River Road, Conestoga, PA | Collected   | 02/11/2022 1:30 PM |
| Lab Sample ID    | 3227032001                     | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound    | CAS No | Result | Units  | RDL | Qualifiers |
|-------------|--------|--------|--------|-----|------------|
| Temperature | Temp   | 14.10  | Deg. C |     | C          |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID                      | Analysis Method | Preparation Method | Leachate Method |
|------------|--------------------------------|-----------------|--------------------|-----------------|
| 3227032001 | 3100 River Road, Conestoga, PA | Field           | N/A                |                 |
|            |                                | EPA 200.7       | EPA TRMD           |                 |
|            |                                | EPA 200.7       | EPA ACID           |                 |
|            |                                | EPA 524.2       | N/A                |                 |
|            |                                | ASTM D6919-09   | N/A                |                 |
|            |                                | EPA 300.0       | N/A                |                 |
|            |                                | EPA 410.4       | N/A                |                 |
|            |                                | EPA 420.4       | 420.4/9066         |                 |
|            |                                | S2540C-11       | N/A                |                 |
|            |                                | S4500HB-11      | N/A                |                 |
|            |                                | SM2130B-2011    | N/A                |                 |
|            |                                | SM2320B-2011    | N/A                |                 |
|            |                                | SM2510B-2011    | N/A                |                 |
|            |                                | SM5310B-2011    | N/A                |                 |
|            |                                | SW846 9020B     | N/A                |                 |



ALS Environmental

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# CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

COC  
ALS

3227032  
1 of 1  
Logged By: KSB  
PH: SJB

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

Client Name: LCSWMA - Larry Kirchner

Address: 3100 River Road  
Conestoga, PA 17516

Contact: Larry Kirchner  
Phone#: (717) 584-0030

Project Name#: LCSWMA - Quarterly  
Bill To: Lancaster County Solid Waste MA

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

Date Required: \_\_\_\_\_ Approved By: \_\_\_\_\_  
Email? ☐ -Y ☐ -N  
Fax? ☐ -Y ☐ -N

| Sample Description/Location<br>(as it will appear on the lab report) | Sample<br>Date | Time |
|----------------------------------------------------------------------|----------------|------|
| 1 3100RIVERRD                                                        | 02/11/22       | 1330 |
| 2. Trip Blank                                                        | 02/11/22       | 1638 |
| 3                                                                    |                |      |
| 4                                                                    |                |      |
| 5                                                                    |                |      |
| 6                                                                    |                |      |
| 7                                                                    |                |      |
| 8                                                                    |                |      |
| 9                                                                    |                |      |
| 10                                                                   |                |      |

Project Comments:

| Requested By / Company Name | Date    | Time | Received By / Company Name | Date    | Time  |
|-----------------------------|---------|------|----------------------------|---------|-------|
| 1. Dogwood                  | 2/11/22 | 1638 | 2. AMRF / ALS              | 2-11-22 | 16:38 |
| 3                           |         |      | 4                          |         |       |
| 5                           |         |      | 6                          |         |       |
| 7                           |         |      | 8                          |         |       |
| 9                           |         |      | 10                         |         |       |

| Container<br>Type | AG    | AN     | AN     | CG      | PL     | PL     | PL     | PL     | PL     |
|-------------------|-------|--------|--------|---------|--------|--------|--------|--------|--------|
| Container<br>Size | 40 ml | 125 ml | 250 ml | 40 ml   | 250 ml | 125 ml | 125 ml | 500 ml | 500 ml |
| Preservative      | HCl   | H2SO4  | H2SO4  | Asc&HCl | H2SO4  | HNO3   | HNO3   | None   | None   |

## ANALYSES/METHOD REQUESTED

| *G or C | **Matrix | 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, Pb, SpC | Alkalinity, HCO3 |
|---------|----------|-----|------|-----|---------|----|------------|-----------------------------------------|-------------------------------|----------------------------------------|------------------|
|         |          |     |      |     |         |    |            |                                         |                               |                                        |                  |

Enter Number of Containers Per Sample or Field Results Below.

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

| Standard                          | Special Processing                        | State Samples<br>Collected in |
|-----------------------------------|-------------------------------------------|-------------------------------|
| <input type="checkbox"/> Standard | USACE                                     | <input type="checkbox"/> NY   |
| <input type="checkbox"/> CLP-like | Navy                                      | <input type="checkbox"/> NJ   |
| <input type="checkbox"/> USACE    |                                           | <input type="checkbox"/> PA   |
|                                   |                                           | <input type="checkbox"/> NC   |
| Reportable to PADEP?              | Sample Disposal                           |                               |
| Yes <input type="checkbox"/>      | Lab <input checked="" type="checkbox"/> X |                               |
| PWSID #                           | Special                                   |                               |
| EDDS: Format Type                 |                                           |                               |

Temp Taken By: \_\_\_\_\_  
WO Temp (°C) \_\_\_\_\_  
Therm ID: \_\_\_\_\_  
Receipt Info Completed By: \_\_\_\_\_  
Cooler Custody Seal Intact \_\_\_\_\_  
Sample Custody Seal Intact \_\_\_\_\_  
Received on Ice \_\_\_\_\_  
Cooler & Samples Intact \_\_\_\_\_  
Correct Containers Provided \_\_\_\_\_  
Sample Label/COC Agree \_\_\_\_\_  
Adequate Sample Volumes \_\_\_\_\_  
VOA Headspace Present \_\_\_\_\_  
Voa Trip Blank \_\_\_\_\_  
NUS 4 Days? \_\_\_\_\_  
Rad Screen (uCi) \_\_\_\_\_  
Courier/Tracking #: \_\_\_\_\_  
SDWA Compliance \_\_\_\_\_  
PWSID \_\_\_\_\_



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

Analytical Results Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022-3106 RIVER RD  
Workorder 3227031  
Report ID 152089 on 2/25/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID                      | Matrix | Date Collected     | Date Received      | Collector | Collection Company            |
|------------|--------------------------------|--------|--------------------|--------------------|-----------|-------------------------------|
| 3227031001 | 3106 River Road, Conestoga, PA | Water  | 02/11/2022 1:37 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |



## Reference

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

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID                      |                                                               |
|------------|--------------------------------|---------------------------------------------------------------|
| 3227031001 | 3106 River Road, Conestoga, PA | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227031002 | Trip Blank                     | This sample was cancelled per project specifications.         |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0          | Result reported exceeds instrument calibration                                                                                                                                                                                                        |
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | Analyte was analyzed past the 48 hour holding time.                                                                                                                                                                                                   |
| 3          | 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. |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3106 River Road, Conestoga, PA | Collected   | 02/11/2022 1:37 PM |
| Lab Sample ID    | 3227031001                     | Lab Receipt | 02/11/2022 4:38 PM |

## Volatiles - GC/MS EPA 524.2

### Prep

|               |     |                  |                              |
|---------------|-----|------------------|------------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227031001-J(Ascorbic + HCl) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                         |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                          |

### Analysis

|               |                    |                 |           |
|---------------|--------------------|-----------------|-----------|
| <u>Method</u> | EPA 524.2          | <u>Fraction</u> | VOA_Trace |
| <u>Batch</u>  | 820860             | <u>Dilution</u> | 1         |
| <u>Date</u>   | 02/19/2022 2:10 AM | <u>Analyst</u>  | PKD       |

## RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

## SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 93.70 %  | 70 - 130  |            |

## Metals Analytical EPA 200.7

### Prep

|               |                    |                  |                           |
|---------------|--------------------|------------------|---------------------------|
| <u>Method</u> | EPA ACID           | <u>Container</u> | 3227031001-E(Nitric Acid) |
| <u>Batch</u>  | 820075             | <u>Aliquot</u>   | 100 mL                    |
| <u>Date</u>   | 02/15/2022 1:00 PM | <u>Tech.</u>     | SRT                       |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 200.7           | <u>Fraction</u> |     |
| <u>Batch</u>  | 820077              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/17/2022 11:05 AM | <u>Analyst</u>  | SRT |

## RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 39.9   | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | 13.8   | mg/L  | 0.10   | C          |
| Manganese, Dissolved | 7439-96-5_D | 0.058  | mg/L  | 0.0050 | C          |
| Potassium, Dissolved | 7440-09-7_D | 2.3    | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 41.1   | mg/L  | 0.50   | C          |

|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3106 River Road, Conestoga, PA | Collected   | 02/11/2022 1:37 PM |
| Lab Sample ID    | 3227031001                     | Lab Receipt | 02/11/2022 4:38 PM |

## Metals Analytical EPA 200.7

### Prep

|               |                     |                  |                            |
|---------------|---------------------|------------------|----------------------------|
| <u>Method</u> | EPA TRMD            | <u>Container</u> | 3227031001-D1(Nitric Acid) |
| <u>Batch</u>  | 819233              | <u>Aliquot</u>   | 50 mL                      |
| <u>Date</u>   | 02/12/2022 11:08 AM | <u>Tech.</u>     | AHI                        |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 200.7           | <u>Fraction</u> |     |
| <u>Batch</u>  | 819300              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/15/2022 11:43 AM | <u>Analyst</u>  | SRT |

## RESULTS

| Compound         | CAS No    | Result | Units | RDL    | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 32.0   | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | ND     | mg/L  | 0.030  | C,ND       |
| Magnesium, Total | 7439-95-4 | 11.3   | mg/L  | 0.050  | C          |
| Manganese, Total | 7439-96-5 | 0.047  | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 1.9    | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 33.4   | mg/L  | 0.25   | C          |

## Wet Chemistry (General) EPA 300.0

### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227031001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                      |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 300.0           | <u>Fraction</u> |     |
| <u>Batch</u>  | 819999              | <u>Dilution</u> | 2   |
| <u>Date</u>   | 02/15/2022 11:24 PM | <u>Analyst</u>  | MID |

## RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Chloride  | Cl     | 97.4   | mg/L  | 2.0  | C          |
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | 10.5   | mg/L  | 1.0  | C,0.2      |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND,2     |
| Sulfate   | SO4    | 5.1    | mg/L  | 2.0  | C          |

## Wet Chemistry (General) EPA 410.4

### Prep

|               |     |                  |                             |
|---------------|-----|------------------|-----------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227031001-C(Sulfuric Acid) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 2 mL                        |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         |

### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 410.4           | <u>Fraction</u> |     |
| <u>Batch</u>  | 820242              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/17/2022 11:10 AM | <u>Analyst</u>  | ALK |

## RESULTS

| Compound                     | CAS No | Result | Units | RDL | Qualifiers |
|------------------------------|--------|--------|-------|-----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15  | C,ND       |



Project 1ST QTR 2022-3106 RIVER RD  
Workorder 3227031

|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3106 River Road, Conestoga, PA | Collected   | 02/11/2022 1:37 PM |
| Lab Sample ID    | 3227031001                     | Lab Receipt | 02/11/2022 4:38 PM |

### Wet Chemistry (General) EPA 420.4

#### Prep

|               |                    |                  |                             |
|---------------|--------------------|------------------|-----------------------------|
| <u>Method</u> | 420.4/9066         | <u>Container</u> | 3227031001-H(Sulfuric Acid) |
| <u>Batch</u>  | 820317             | <u>Aliquot</u>   | 100 mL                      |
| <u>Date</u>   | 02/18/2022 8:46 AM | <u>Tech.</u>     | AKH                         |

#### Analysis

|               |                     |                 |     |
|---------------|---------------------|-----------------|-----|
| <u>Method</u> | EPA 420.4           | <u>Fraction</u> |     |
| <u>Batch</u>  | 820736              | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/18/2022 12:36 PM | <u>Analyst</u>  | AKH |

#### RESULTS

| <u>Compound</u> | <u>CAS No</u> | <u>Result</u> | <u>Units</u> | <u>RDL</u> | <u>Qualifiers</u> |
|-----------------|---------------|---------------|--------------|------------|-------------------|
| Phenolics       | PHENOL        | ND            | mg/L         | 0.005      | C,ND              |

### Wet Chemistry (General) SW846 9020B

#### Prep

|               |     |                  |                             |
|---------------|-----|------------------|-----------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227031001-I(Sulfuric Acid) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 50 mL                       |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         |

#### Analysis

|               |                    |                 |     |
|---------------|--------------------|-----------------|-----|
| <u>Method</u> | SW846 9020B        | <u>Fraction</u> |     |
| <u>Batch</u>  | 820253             | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/16/2022 2:46 PM | <u>Analyst</u>  | PAG |

#### RESULTS

| <u>Compound</u>              | <u>CAS No</u> | <u>Result</u> | <u>Units</u> | <u>RDL</u> | <u>Qualifiers</u> |
|------------------------------|---------------|---------------|--------------|------------|-------------------|
| Halogen, Total Organic (TOX) | TOX           | ND            | ug/L         | 20.0       | C,ND              |

### Wet Chemistry (General) ASTM D6919-09

#### Prep

|               |     |                  |                             |
|---------------|-----|------------------|-----------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227031001-C(Sulfuric Acid) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 5 mL                        |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                         |

#### Analysis

|               |                    |                 |     |
|---------------|--------------------|-----------------|-----|
| <u>Method</u> | ASTM D6919-09      | <u>Fraction</u> |     |
| <u>Batch</u>  | 820648             | <u>Dilution</u> | 10  |
| <u>Date</u>   | 02/25/2022 6:50 AM | <u>Analyst</u>  | ALK |

#### RESULTS

| <u>Compound</u> | <u>CAS No</u> | <u>Result</u> | <u>Units</u> | <u>RDL</u> | <u>Qualifiers</u> |
|-----------------|---------------|---------------|--------------|------------|-------------------|
| Ammonia-N       | NH3N          | 0.414         | mg/L         | 0.100      | C                 |

### Wet Chemistry (General) SM2130B-2011

#### Prep

|               |     |                  |                           |
|---------------|-----|------------------|---------------------------|
| <u>Method</u> | N/A | <u>Container</u> | 3227031001-A(Unpreserved) |
| <u>Batch</u>  | N/A | <u>Aliquot</u>   | 25 mL                     |
| <u>Date</u>   | N/A | <u>Tech.</u>     | N/A                       |

#### Analysis

|               |                    |                 |     |
|---------------|--------------------|-----------------|-----|
| <u>Method</u> | SM2130B-2011       | <u>Fraction</u> |     |
| <u>Batch</u>  | 819225             | <u>Dilution</u> | 1   |
| <u>Date</u>   | 02/12/2022 8:06 AM | <u>Analyst</u>  | LXZ |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3106 River Road, Conestoga, PA | Collected   | 02/11/2022 1:37 PM |
| Lab Sample ID    | 3227031001                     | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Turbidity | Turb   | 0.30   | NTU   | 0.10 | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227031001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:43 PM | Analyst  | MLW |

RESULTS

| Compound                | CAS No | Result | Units | RDL | Qualifiers |
|-------------------------|--------|--------|-------|-----|------------|
| Alkalinity, Bicarbonate | HCO3   | 77     | mg/L  | 5   | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227031001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:43 PM | Analyst  | MLW |

RESULTS

| Compound          | CAS No | Result | Units | RDL | Qualifiers |
|-------------------|--------|--------|-------|-----|------------|
| Alkalinity, Total | ALKT   | 77     | mg/L  | 5   | C,1        |

Wet Chemistry (General)  
SM2510B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227031001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2510B-2011       | Fraction |     |
| Batch  | 820538             | Dilution | 1   |
| Date   | 02/18/2022 3:49 PM | Analyst  | BXD |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 593    | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3106 River Road, Conestoga, PA | Collected   | 02/11/2022 1:37 PM |
| Lab Sample ID    | 3227031001                     | Lab Receipt | 02/11/2022 4:38 PM |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227031001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 819356             | Dilution | 1   |
| Date   | 02/15/2022 9:54 AM | Analyst  | SMS |

RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 422    | mg/L  | 25  | C          |

Wet Chemistry (General)  
S4500HB-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227031001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:43 PM | Analyst  | MLW |

RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 7.94   | pH_Units |     | C,3        |

Wet Chemistry (General)  
SM5310B-2011

Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227031001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 819398             | Dilution | 1   |
| Date   | 02/15/2022 3:07 AM | Analyst  | PAG |

RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

FLD  
Field

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227031001-M(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | Field              | Fraction |     |
| Batch  | 820603             | Dilution | 1   |
| Date   | 02/11/2022 1:37 PM | Analyst  | BGS |

RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 7.89   | pH_Units |     | C          |
| Specific Conductance, Field | COND F | 432    | umhos/cm | 1   | C          |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3106 River Road, Conestoga, PA | Collected   | 02/11/2022 1:37 PM |
| Lab Sample ID    | 3227031001                     | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound    | CAS No | Result | Units  | RDL | Qualifiers |
|-------------|--------|--------|--------|-----|------------|
| Temperature | Temp   | 13.90  | Deg. C |     | C          |





Sample - Method Cross Reference Table

| Lab ID     | Sample ID                      | Analysis Method | Preparation Method | Leachate Method |
|------------|--------------------------------|-----------------|--------------------|-----------------|
| 3227031001 | 3106 River Road, Conestoga, PA | Field           | N/A                |                 |
|            |                                | EPA 200.7       | EPA TRMD           |                 |
|            |                                | EPA 200.7       | EPA ACID           |                 |
|            |                                | EPA 524.2       | N/A                |                 |
|            |                                | ASTM D6919-09   | N/A                |                 |
|            |                                | EPA 300.0       | N/A                |                 |
|            |                                | EPA 410.4       | N/A                |                 |
|            |                                | EPA 420.4       | 420.4/9066         |                 |
|            |                                | S2540C-11       | N/A                |                 |
|            |                                | S4500HB-11      | N/A                |                 |
|            |                                | SM2130B-2011    | N/A                |                 |
|            |                                | SM2320B-2011    | N/A                |                 |
|            |                                | SM2510B-2011    | N/A                |                 |
|            |                                | SM5310B-2011    | N/A                |                 |
|            |                                | SW846 9020B     | N/A                |                 |





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

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

Analytical Results Report For **Lancaster County Solid Waste Authority**  
Project 1ST QTR 2022-3125 RIVER RD  
Workorder 3227030  
Report ID 151791 on 2/24/2022

## Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 11, 2022.

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 Susan 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 Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

### Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority  
Daniel Brown - Lancaster County Solid Waste Authority  
Jordan Gallagher - Lancaster County Solid Waste Authority  
Jeff Musser - Lancaster County Solid Waste

*Susan Scherer*

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

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



Sample Summary

| Lab ID     | Sample ID                      | Matrix | Date Collected     | Date Received      | Collector | Collection Company            |
|------------|--------------------------------|--------|--------------------|--------------------|-----------|-------------------------------|
| 3227030001 | 3125 River Road, Conestoga, PA | Water  | 02/11/2022 2:05 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |
| 3227030002 | Field Blank                    | Water  | 02/11/2022 3:00 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |
| 3227030003 | Trip Blank                     | Water  | 02/11/2022 4:38 PM | 02/11/2022 4:38 PM | BGS       | Analytical Laboratory Service |

## Reference

### 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).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- 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.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

### 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                                                                                                          |



Project Notations

Sample Notations

| Lab ID     | Sample ID                      |                                                               |
|------------|--------------------------------|---------------------------------------------------------------|
| 3227030001 | 3125 River Road, Conestoga, PA | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227030002 | Field Blank                    | This sample was cancelled per project specifications.         |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |
| 3227030003 | Trip Blank                     | Sample temperature upon receipt at lab was greater than 6 °C. |
|            |                                | Sample temperature upon receipt at lab was greater than 6 °C. |

Result Notations

| Notation # |                                                                                                                                                                                                                                                       |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1          | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.                                                                                                                                                                           |
| 2          | The QC sample type MB for method EPA 300.0 was outside the control limits for the analyte Chloride. The concentration was reported at 0.83mg/L and the control limit is less than 0.44mg/L.                                                           |
| 3          | 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. |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3125 River Road, Conestoga, PA | Collected   | 02/11/2022 2:05 PM |
| Lab Sample ID    | 3227030001                     | Lab Receipt | 02/11/2022 4:38 PM |

Volatiles - GC/MS  
EPA 524.2

Prep

|        |     |           |                              |
|--------|-----|-----------|------------------------------|
| Method | N/A | Container | 3227030001-K(Ascorbic + HCl) |
| Batch  | N/A | Aliquot   | 5 mL                         |
| Date   | N/A | Tech.     | N/A                          |

Analysis

|        |                    |          |           |
|--------|--------------------|----------|-----------|
| Method | EPA 524.2          | Fraction | VOA_Trace |
| Batch  | 820860             | Dilution | 1         |
| Date   | 02/19/2022 2:37 AM | Analyst  | PDK       |

RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 90.40 %  | 70 - 130  |            |

Metals Analytical  
EPA 200.7

Prep

|        |                    |           |                           |
|--------|--------------------|-----------|---------------------------|
| Method | EPA ACID           | Container | 3227030001-E(Unpreserved) |
| Batch  | 820075             | Aliquot   | 100 mL                    |
| Date   | 02/15/2022 1:00 PM | Tech.     | SRT                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | EPA 200.7           | Fraction |     |
| Batch  | 820077              | Dilution | 1   |
| Date   | 02/17/2022 11:02 AM | Analyst  | SRT |

RESULTS

| Compound             | CAS No      | Result | Units | RDL    | Qualifiers |
|----------------------|-------------|--------|-------|--------|------------|
| Calcium, Dissolved   | 7440-70-2_D | 6.7    | mg/L  | 0.10   | C          |
| Iron, Dissolved      | 7439-89-6_D | ND     | mg/L  | 0.060  | C,ND       |
| Magnesium, Dissolved | 7439-95-4_D | 0.89   | mg/L  | 0.10   | C          |
| Manganese, Dissolved | 7439-96-5_D | ND     | mg/L  | 0.0050 | C,ND       |
| Potassium, Dissolved | 7440-09-7_D | 2.8    | mg/L  | 0.50   | C          |
| Sodium, Dissolved    | 7440-23-5_D | 137    | mg/L  | 0.50   | C          |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3125 River Road, Conestoga, PA | Collected   | 02/11/2022 2:05 PM |
| Lab Sample ID    | 3227030001                     | Lab Receipt | 02/11/2022 4:38 PM |

Metals Analytical  
EPA 200.7

Prep

|        |                     |           |                            |
|--------|---------------------|-----------|----------------------------|
| Method | EPA TRMD            | Container | 3227030001-D1(Nitric Acid) |
| Batch  | 819232              | Aliquot   | 50 mL                      |
| Date   | 02/12/2022 11:08 AM | Tech.     | AHI                        |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 200.7          | Fraction |     |
| Batch  | 819299             | Dilution | 1   |
| Date   | 02/14/2022 4:19 PM | Analyst  | SRT |

RESULTS

| Compound         | CAS No    | Result | Units | RD     | Qualifiers |
|------------------|-----------|--------|-------|--------|------------|
| Calcium, Total   | 7440-70-2 | 6.2    | mg/L  | 0.050  | C          |
| Iron, Total      | 7439-89-6 | ND     | mg/L  | 0.030  | C,ND       |
| Magnesium, Total | 7439-95-4 | 0.79   | mg/L  | 0.050  | C          |
| Manganese, Total | 7439-96-5 | 0.0027 | mg/L  | 0.0025 | C          |
| Potassium, Total | 7440-09-7 | 2.6    | mg/L  | 0.25   | C          |
| Sodium, Total    | 7440-23-5 | 127    | mg/L  | 0.25   | C          |

Wet Chemistry (General)  
EPA 300.0

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227030001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 5 mL                      |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 300.0          | Fraction |     |
| Batch  | 819377             | Dilution | 2   |
| Date   | 02/12/2022 3:46 PM | Analyst  | MID |

RESULTS

| Compound  | CAS No | Result | Units | RD   | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Chloride  | Cl     | 75.7   | mg/L  | 2.0  | C,2        |
| Fluoride  | F      | ND     | mg/L  | 0.20 | C,ND       |
| Nitrate-N | NO3    | 4.6    | mg/L  | 1.0  | C          |
| Nitrite-N | NO2    | ND     | mg/L  | 1.0  | C,ND       |
| Sulfate   | SO4    | 10.2   | mg/L  | 2.0  | C          |

Wet Chemistry (General)  
EPA 410.4

Prep

|        |     |           |                             |
|--------|-----|-----------|-----------------------------|
| Method | N/A | Container | 3227030001-C(Sulfuric Acid) |
| Batch  | N/A | Aliquot   | 2 mL                        |
| Date   | N/A | Tech.     | N/A                         |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | EPA 410.4          | Fraction |     |
| Batch  | 820330             | Dilution | 1   |
| Date   | 02/17/2022 1:45 PM | Analyst  | ALK |

RESULTS

| Compound                     | CAS No | Result | Units | RD | Qualifiers |
|------------------------------|--------|--------|-------|----|------------|
| Chemical Oxygen Demand (COD) | COD    | ND     | mg/L  | 15 | C,ND       |





Project 1ST QTR 2022-3125 RIVER RD  
Workorder 3227030

Client Sample ID 3125 River Road, Conestoga, PA  
Lab Sample ID 3227030001

Collected 02/11/2022 2:05 PM  
Lab Receipt 02/11/2022 4:38 PM

### Wet Chemistry (General) EPA 420.4

#### Prep

Method 420.4/9066 Container 3227030001-H(Sulfuric Acid)  
Batch 820317 Aliquot 100 mL  
Date 02/18/2022 8:46 AM Tech. AKH

#### Analysis

Method EPA 420.4 Fraction  
Batch 820736 Dilution 1  
Date 02/18/2022 12:33 PM Analyst AKH

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Phenolics | PHENOL | ND     | mg/L  | 0.005 | C,ND       |

### Wet Chemistry (General) SW846 9020B

#### Prep

Method N/A Container 3227030001-I(Sulfuric Acid)  
Batch N/A Aliquot 50 mL  
Date N/A Tech. N/A

#### Analysis

Method SW846 9020B Fraction  
Batch 820253 Dilution 1  
Date 02/16/2022 1:09 PM Analyst PAG

### RESULTS

| Compound                     | CAS No | Result | Units | RDL  | Qualifiers |
|------------------------------|--------|--------|-------|------|------------|
| Halogen, Total Organic (TOX) | TOX    | ND     | ug/L  | 20.0 | C,ND       |

### Wet Chemistry (General) ASTM D6919-09

#### Prep

Method N/A Container 3227030001-C(Sulfuric Acid)  
Batch N/A Aliquot 5 mL  
Date N/A Tech. N/A

#### Analysis

Method ASTM D6919-09 Fraction  
Batch 820647 Dilution 10  
Date 02/24/2022 11:28 AM Analyst ALK

### RESULTS

| Compound  | CAS No | Result | Units | RDL   | Qualifiers |
|-----------|--------|--------|-------|-------|------------|
| Ammonia-N | NH3N   | 0.215  | mg/L  | 0.100 | C          |

### Wet Chemistry (General) SM2130B-2011

#### Prep

Method N/A Container 3227030001-A(Unpreserved)  
Batch N/A Aliquot 25 mL  
Date N/A Tech. N/A

#### Analysis

Method SM2130B-2011 Fraction  
Batch 819225 Dilution 1  
Date 02/12/2022 8:06 AM Analyst LXZ



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3125 River Road, Conestoga, PA | Collected   | 02/11/2022 2:05 PM |
| Lab Sample ID    | 3227030001                     | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound  | CAS No | Result | Units | RDL  | Qualifiers |
|-----------|--------|--------|-------|------|------------|
| Turbidity | Turb   | ND     | NTU   | 0.10 | C,ND       |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227030001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:33 PM | Analyst  | MLW |

RESULTS

| Compound                | CAS No | Result | Units | RDL | Qualifiers |
|-------------------------|--------|--------|-------|-----|------------|
| Alkalinity, Bicarbonate | HCO3   | 167    | mg/L  | 5   | C          |

Wet Chemistry (General)  
SM2320B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227030001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | SM2320B-2011        | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:33 PM | Analyst  | MLW |

RESULTS

| Compound          | CAS No | Result | Units | RDL | Qualifiers |
|-------------------|--------|--------|-------|-----|------------|
| Alkalinity, Total | ALKT   | 167    | mg/L  | 5   | C,1        |

Wet Chemistry (General)  
SM2510B-2011

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227030001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM2510B-2011       | Fraction |     |
| Batch  | 820538             | Dilution | 1   |
| Date   | 02/18/2022 3:49 PM | Analyst  | BXD |

RESULTS

| Compound             | CAS No | Result | Units    | RDL | Qualifiers |
|----------------------|--------|--------|----------|-----|------------|
| Specific Conductance | Cond   | 680    | umhos/cm | 1   | C          |

Wet Chemistry (General)  
S2540C-11



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3125 River Road, Conestoga, PA | Collected   | 02/11/2022 2:05 PM |
| Lab Sample ID    | 3227030001                     | Lab Receipt | 02/11/2022 4:38 PM |

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227030001-A(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | S2540C-11          | Fraction |     |
| Batch  | 819356             | Dilution | 1   |
| Date   | 02/15/2022 9:54 AM | Analyst  | SMS |

RESULTS

| Compound               | CAS No | Result | Units | RDL | Qualifiers |
|------------------------|--------|--------|-------|-----|------------|
| Total Dissolved Solids | TDS    | 464    | mg/L  | 25  | C          |

Wet Chemistry (General)  
S4500HB-11

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227030001-A(Unpreserved) |
| Batch  | N/A | Aliquot   | 50 mL                     |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                     |          |     |
|--------|---------------------|----------|-----|
| Method | S4500HB-11          | Fraction |     |
| Batch  | 819333              | Dilution | 1   |
| Date   | 02/14/2022 10:33 PM | Analyst  | MLW |

RESULTS

| Compound | CAS No | Result | Units    | RDL | Qualifiers |
|----------|--------|--------|----------|-----|------------|
| pH       | PH     | 8.03   | pH_Units |     | C,3        |

Wet Chemistry (General)  
SM5310B-2011

Prep

|        |     |           |                                 |
|--------|-----|-----------|---------------------------------|
| Method | N/A | Container | 3227030001-F(Hydrochloric Acid) |
| Batch  | N/A | Aliquot   | 6 mL                            |
| Date   | N/A | Tech.     | N/A                             |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | SM5310B-2011       | Fraction |     |
| Batch  | 819398             | Dilution | 1   |
| Date   | 02/15/2022 3:07 AM | Analyst  | PAG |

RESULTS

| Compound                   | CAS No | Result | Units | RDL  | Qualifiers |
|----------------------------|--------|--------|-------|------|------------|
| Total Organic Carbon (TOC) | TOC    | ND     | mg/L  | 0.50 | C,ND       |

FLD  
Field

Prep

|        |     |           |                           |
|--------|-----|-----------|---------------------------|
| Method | N/A | Container | 3227030001-M(Unpreserved) |
| Batch  | N/A | Aliquot   |                           |
| Date   | N/A | Tech.     | N/A                       |

Analysis

|        |                    |          |     |
|--------|--------------------|----------|-----|
| Method | Field              | Fraction |     |
| Batch  | 820603             | Dilution | 1   |
| Date   | 02/11/2022 2:05 PM | Analyst  | BGS |

RESULTS

| Compound                    | CAS No | Result | Units    | RDL | Qualifiers |
|-----------------------------|--------|--------|----------|-----|------------|
| pH, Field (SM4500B)         | PHF    | 7.93   | pH_Units |     | C          |
| Specific Conductance, Field | CONDf  | 673    | umhos/cm | 1   | C          |



|                  |                                |             |                    |
|------------------|--------------------------------|-------------|--------------------|
| Client Sample ID | 3125 River Road, Conestoga, PA | Collected   | 02/11/2022 2:05 PM |
| Lab Sample ID    | 3227030001                     | Lab Receipt | 02/11/2022 4:38 PM |

RESULTS

| Compound    | CAS No | Result | Units  | RDL | Qualifiers |
|-------------|--------|--------|--------|-----|------------|
| Temperature | Temp   | 14.30  | Deg. C |     | C          |



|                  |             |             |                    |
|------------------|-------------|-------------|--------------------|
| Client Sample ID | Field Blank | Collected   | 02/11/2022 3:00 PM |
| Lab Sample ID    | 3227030002  | Lab Receipt | 02/11/2022 4:38 PM |

Volatiles - GC/MS  
EPA 524.2

Prep

|        |     |           |                              |
|--------|-----|-----------|------------------------------|
| Method | N/A | Container | 3227030002-A(Ascorbic + HCl) |
| Batch  | N/A | Aliquot   | 5 mL                         |
| Date   | N/A | Tech.     | N/A                          |

Analysis

|        |                    |          |           |
|--------|--------------------|----------|-----------|
| Method | EPA 524.2          | Fraction | VOA_Trace |
| Batch  | 822267             | Dilution | 1         |
| Date   | 02/24/2022 5:34 AM | Analyst  | PDK       |

RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 96.40 %  | 70 - 130  |            |



|                  |            |             |                    |
|------------------|------------|-------------|--------------------|
| Client Sample ID | Trip Blank | Collected   | 02/11/2022 4:38 PM |
| Lab Sample ID    | 3227030003 | Lab Receipt | 02/11/2022 4:38 PM |

Volatiles - GC/MS  
EPA 524.2

Prep

|        |     |           |                              |
|--------|-----|-----------|------------------------------|
| Method | N/A | Container | 3227030003-A(Ascorbic + HCl) |
| Batch  | N/A | Aliquot   | 5 mL                         |
| Date   | N/A | Tech.     | N/A                          |

Analysis

|        |                    |          |           |
|--------|--------------------|----------|-----------|
| Method | EPA 524.2          | Fraction | VOA_Trace |
| Batch  | 822267             | Dilution | 1         |
| Date   | 02/24/2022 6:52 AM | Analyst  | PDK       |

RESULTS

| Compound                 | CAS No    | Result | Units | RDL  | Qualifiers |
|--------------------------|-----------|--------|-------|------|------------|
| 1,1,1-Trichloroethane    | 71-55-6   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethane       | 75-34-3   | ND     | ug/L  | 0.50 | C,ND       |
| 1,1-Dichloroethene       | 75-35-4   | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dibromoethane        | 106-93-4  | ND     | ug/L  | 0.50 | C,ND       |
| 1,2-Dichloroethane       | 107-06-2  | ND     | ug/L  | 0.50 | C,ND       |
| Benzene                  | 71-43-2   | ND     | ug/L  | 0.50 | C,ND       |
| cis-1,2-Dichloroethene   | 156-59-2  | ND     | ug/L  | 0.50 | C,ND       |
| Ethylbenzene             | 100-41-4  | ND     | ug/L  | 0.50 | C,ND       |
| Methylene Chloride       | 75-09-2   | ND     | ug/L  | 0.50 | C,ND       |
| Tetrachloroethene        | 127-18-4  | ND     | ug/L  | 0.50 | C,ND       |
| Toluene                  | 108-88-3  | ND     | ug/L  | 0.50 | C,ND       |
| Total Xylenes            | 1330-20-7 | ND     | ug/L  | 0.50 | C,ND       |
| trans-1,2-Dichloroethene | 156-60-5  | ND     | ug/L  | 0.50 | C,ND       |
| Trichloroethene          | 79-01-6   | ND     | ug/L  | 0.50 | C,ND       |
| Trichlorofluoromethane   | 75-69-4   | ND     | ug/L  | 0.50 | C,ND       |
| Vinyl Chloride           | 75-01-4   | ND     | ug/L  | 0.50 | C,ND       |

SURROGATES

| Compound             | CAS No   | Recovery | Limits(%) | Qualifiers |
|----------------------|----------|----------|-----------|------------|
| 4-Bromofluorobenzene | 460-00-4 | 96.20 %  | 70 - 130  |            |



Sample - Method Cross Reference Table

| Lab ID     | Sample ID                      | Analysis Method | Preparation Method | Leachate Method |
|------------|--------------------------------|-----------------|--------------------|-----------------|
| 3227030001 | 3125 River Road, Conestoga, PA | Field           | N/A                |                 |
|            |                                | EPA 200.7       | EPA TRMD           |                 |
|            |                                | EPA 200.7       | EPA ACID           |                 |
|            |                                | EPA 524.2       | N/A                |                 |
|            |                                | ASTM D6919-09   | N/A                |                 |
|            |                                | EPA 300.0       | N/A                |                 |
|            |                                | EPA 410.4       | N/A                |                 |
|            |                                | EPA 420.4       | 420.4/9066         |                 |
|            |                                | S2540C-11       | N/A                |                 |
|            |                                | S4500HB-11      | N/A                |                 |
|            |                                | SM2130B-2011    | N/A                |                 |
|            |                                | SM2320B-2011    | N/A                |                 |
|            |                                | SM2510B-2011    | N/A                |                 |
|            |                                | SM5310B-2011    | N/A                |                 |
|            |                                | SW846 9020B     | N/A                |                 |
| 3227030002 | Field Blank                    | EPA 524.2       | N/A                |                 |
| 3227030003 | Trip Blank                     | EPA 524.2       | N/A                |                 |

