



Date Prepared/Revised
10/15/2021

DEP USE ONLY

Date Received

FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3044 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 08/20/2021

Sample Collection Time: 12:13 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

09/07/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	11	SM20-2321
CALCIUM, TOTAL	11.2	EPA 200.7
CALCIUM, DISSOLVED	13.3	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	22.1	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	8.8	EPA 200.7
MAGNESIUM, DISSOLVED	10.3	EPA 200.7
MANGANESE, TOTAL (ug/l)	18	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	21	EPA 200.7
NITRATE-NITROGEN	18.7	EPA 300

T Please indicate detection limit if analyte is not detected.

FORM 52
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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.19	FIELD
pH-LAB (SU)	6.23	SM4500B
POTASSIUM, TOTAL	1.5	EPA 200.7
POTASSIUM, DISSOLVED	2.1	EPA 200.7
SODIUM, TOTAL	7.2	EPA 200.7
SODIUM, DISSOLVED	8.8	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	271	FIELD
SPEC. COND., LAB (umhos/cm)	266	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	11	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	192	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

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QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

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

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FORM 52

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General Reference: Act 101 Section 1103

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: 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) 08/20/2021

Sample Collection Time: 12:21 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

09/07/2021

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

Comments:

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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.172	SM4500D
BICARBONATE ALKALINITY	7	SM20-2321
CALCIUM, TOTAL	13.9	EPA 200.7
CALCIUM, DISSOLVED	14.3	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	22	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	9.3	EPA 200.7
MAGNESIUM, DISSOLVED	9.5	EPA 200.7
MANGANESE, TOTAL (ug/l)	43	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	44	EPA 200.7
NITRATE-NITROGEN	17.4	EPA 300

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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

MILLER

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.11	FIELD
pH-LAB (SU)	6.06	SM4500B
POTASSIUM, TOTAL	2.1	EPA 200.7
POTASSIUM, DISSOLVED	2.4	EPA 200.7
SODIUM, TOTAL	7.1	EPA 200.7
SODIUM, DISSOLVED	7.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	263	FIELD
SPEC. COND., LAB (umhos/cm)	257	EPA 120.1
SULFATE	2.5	EPA 300
ALKALINITY	7	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	190	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.73	SM 2130B

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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

08/20/2021

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

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3056 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 08/20/2021

Sample Collection Time: 12:27 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

09/07/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.11	SM4500D
BICARBONATE ALKALINITY	11	SM20-2321
CALCIUM, TOTAL	10.6	EPA 200.7
CALCIUM, DISSOLVED	10.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	28.7	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	12.9	EPA 200.7
MAGNESIUM, DISSOLVED	12.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	89	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	94	EPA 200.7
NITRATE-NITROGEN	16.9	EPA 300

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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.1	FIELD
pH-LAB (SU)	6.04	SM4500B
POTASSIUM, TOTAL	2.5	EPA 200.7
POTASSIUM, DISSOLVED	2.8	EPA 200.7
SODIUM, TOTAL	8.7	EPA 200.7
SODIUM, DISSOLVED	9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	271	FIELD
SPEC. COND., LAB (umhos/cm)	273	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	110	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	180	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.23	SM 2130B

T Please indicate detection limit if analyte is not detected.

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PRIVATE WATER SUPPLY
QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

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

T Please indicate detection limit if analyte is not detected.



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MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3060 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 08/20/2021

Sample Collection Time: 12:32 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

09/07/2021

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

Comments:

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QUARTERLY WATER QUALITY ANALYSES

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.119	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	11.2	EPA 200.7
CALCIUM, DISSOLVED	11.1	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	21.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	68	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	11.5	EPA 200.7
MAGNESIUM, DISSOLVED	11.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	120	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	120	EPA 200.7
NITRATE-NITROGEN	16.2	EPA 300

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Facility I.D. Number

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PS LCSWMA

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.38	EPA 300
pH-FIELD (SU)	5.72	FIELD
pH-LAB (SU)	5.68	SM4500B
POTASSIUM, TOTAL	2.7	EPA 200.7
POTASSIUM, DISSOLVED	2.9	EPA 200.7
SODIUM, TOTAL	8.3	EPA 200.7
SODIUM, DISSOLVED	8.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	251	FIELD
SPEC. COND., LAB (umhos/cm)	258	EPA 120.1
SULFATE	9.3	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	174	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.14	SM 2130B

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PS LCSWMA

Sample Date

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

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

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: SENSENICH

Address: 3076 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 08/20/2021

Sample Collection Time: 12:41 PM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

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Comments:

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101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.11	SM4500D
BICARBONATE ALKALINITY	10	SM20-2321
CALCIUM, TOTAL	13	EPA 200.7
CALCIUM, DISSOLVED	13.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	53.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	8.6	EPA 200.7
MAGNESIUM, DISSOLVED	8.4	EPA 200.7
MANGANESE, TOTAL (ug/l)	180	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	180	EPA 200.7
NITRATE-NITROGEN	10.2	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.28	FIELD
pH-LAB (SU)	6.25	SM4500B
POTASSIUM, TOTAL	3.7	EPA 200.7
POTASSIUM, DISSOLVED	4	EPA 200.7
SODIUM, TOTAL	24.2	EPA 200.7
SODIUM, DISSOLVED	25.3	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	325	FIELD
SPEC. COND., LAB (umhos/cm)	331	EPA 120.1
SULFATE	12.7	EPA 300
ALKALINITY	10	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	208	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.64	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.11	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

08/20/2021

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

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

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
10/15/2021

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3079 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 08/20/2021

Sample Collection Time: 2:28 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

09/07/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.143	SM4500D
BICARBONATE ALKALINITY	33	SM20-2321
CALCIUM, TOTAL	10.1	EPA 200.7
CALCIUM, DISSOLVED	9.6	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	33.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	6	EPA 200.7
MAGNESIUM, DISSOLVED	5.6	EPA 200.7
MANGANESE, TOTAL (ug/l)	55	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	52	EPA 200.7
NITRATE-NITROGEN	0.2 ND	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.65	FIELD
pH-LAB (SU)	6.6	SM4500B
POTASSIUM, TOTAL	2.3	EPA 200.7
POTASSIUM, DISSOLVED	2.5	EPA 200.7
SODIUM, TOTAL	14.3	EPA 200.7
SODIUM, DISSOLVED	14.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	222	FIELD
SPEC. COND., LAB (umhos/cm)	215	EPA 120.1
SULFATE	9	EPA 300
ALKALINITY	33	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	124	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.12	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

08/20/2021

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
10/15/2021

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D[°] 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) 08/20/2021

Sample Collection Time: 12:52 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

09/07/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.117	SM4500D
BICARBONATE ALKALINITY	190	SM20-2321
CALCIUM, TOTAL	0.12	EPA 200.7
CALCIUM, DISSOLVED	0.14	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	246	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	0.056	EPA 200.7
MAGNESIUM, DISSOLVED	0.1 ND	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	6.4	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	7.48	FIELD
pH-LAB (SU)	7.44	SM4500B
POTASSIUM, TOTAL	2.3	EPA 200.7
POTASSIUM, DISSOLVED	2.5	EPA 200.7
SODIUM, TOTAL	227	EPA 200.7
SODIUM, DISSOLVED	242	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	1185	FIELD
SPEC. COND., LAB (umhos/cm)	1200	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	190	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)	0.14	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

08/20/2021

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
10/15/2021

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: 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) 08/20/2021

Sample Collection Time: 11:56 AM

Laboratory(ies) Performing Analysis ALS Environmental

(include address and phone number)

301 Fulling Mill Road

Middletown, PA 17057

(717) 944-5541

Lab Accreditation Number(s) 22-293

Lab Analysis Date 09/07/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.146	SM4500D
BICARBONATE ALKALINITY	14	SM20-2321
CALCIUM, TOTAL	12.6	EPA 200.7
CALCIUM, DISSOLVED	12.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	40.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	6	EPA 200.7
MAGNESIUM, DISSOLVED	5.7	EPA 200.7
MANGANESE, TOTAL (ug/l)	7.6	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	7.6	EPA 200.7
NITRATE-NITROGEN	4.7	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6	FIELD
pH-LAB (SU)	6.06	SM4500B
POTASSIUM, TOTAL	1.6	EPA 200.7
POTASSIUM, DISSOLVED	1.9	EPA 200.7
SODIUM, TOTAL	15.6	EPA 200.7
SODIUM, DISSOLVED	16	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	234	FIELD
SPEC. COND., LAB (umhos/cm)	236	EPA 120.1
SULFATE	9	EPA 300
ALKALINITY	14	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	162	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 KIRCHNER

Sample Date

08/20/2021

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

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

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
10/15/2021

DEP USE ONLY

Date Received

FORM 52

MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: 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) 08/20/2021

Sample Collection Time: 12:02 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

09/07/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS FRY

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.117	SM4500D
BICARBONATE ALKALINITY	19	SM20-2321
CALCIUM, TOTAL	18.2	EPA 200.7
CALCIUM, DISSOLVED	18.6	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	97.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	12.7	EPA 200.7
MAGNESIUM, DISSOLVED	12.5	EPA 200.7
MANGANESE, TOTAL (ug/l)	46	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	45	EPA 200.7
NITRATE-NITROGEN	9.5	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

FRY

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.24	FIELD
pH-LAB (SU)	6.26	SM4500B
POTASSIUM, TOTAL	3.1	EPA 200.7
POTASSIUM, DISSOLVED	3.4	EPA 200.7
SODIUM, TOTAL	39.3	EPA 200.7
SODIUM, DISSOLVED	41.3	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	508	FIELD
SPEC. COND., LAB (umhos/cm)	513	EPA 120.1
SULFATE	7.2	EPA 300
ALKALINITY	19	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	286	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.65	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.67	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

08/20/2021

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

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

T Please indicate detection limit if analyte is not detected.



Date Prepared/Revised
10/15/2021

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: BECK

Address: 3125 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 08/20/2021

Sample Collection Time: 1:01 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

09/07/2021

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

Comments:

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.152	SM4500D
BICARBONATE ALKALINITY	12	SM20-2321
CALCIUM, TOTAL	0.099	EPA 200.7
CALCIUM, DISSOLVED	0.1 ND	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	81.4	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	0.05 ND	EPA 200.7
MAGNESIUM, DISSOLVED	0.1 ND	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	10.5	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

BECK

Sample Date

08/20/2021

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.04	FIELD
pH-LAB (SU)	6.12	SM4500B
POTASSIUM, TOTAL	0.55	EPA 200.7
POTASSIUM, DISSOLVED	0.77	EPA 200.7
SODIUM, TOTAL	150	EPA 200.7
SODIUM, DISSOLVED	164	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	441	FIELD
SPEC. COND., LAB (umhos/cm)	450	EPA 120.1
SULFATE	11.9	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	254	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.76	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

08/20/2021

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

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

T Please indicate detection limit if analyte is not detected.



September 13, 2021

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3106 RIVER RD	Workorder:	3196413
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 2021-3106 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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ALS Environmental



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

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

SAMPLE SUMMARY

Workorder: 3196413 3RD QTR 2021-3106 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196413001	3106 River Road, Conestoga, PA	Water	8/20/2021 12:02	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196413 3RD QTR 2021-3106 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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

PROJECT SUMMARY

Workorder: 3196413 3RD QTR 2021-3106 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196413 3RD QTR 2021-3106 RIVER RD

Lab ID: **3196413001**

Date Collected: 8/20/2021 12:02

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 03:07	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:07	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.1	C	%	62 - 133	SW846 8260B			8/27/21 03:07	PDK	J
4-Bromofluorobenzene (S)	101	C	%	79 - 114	SW846 8260B			8/27/21 03:07	PDK	J
Dibromofluoromethane (S)	89.1	C	%	78 - 116	SW846 8260B			8/27/21 03:07	PDK	J
Toluene-d8 (S)	90.8	C	%	76 - 127	SW846 8260B			8/27/21 03:07	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	19	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	19	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.117	C	mg/L	0.100	ASTM D6919-09			9/3/21 00:18	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:25	ALK	B
Chloride	97.5	C	mg/L	2.0	EPA 300.0			8/21/21 08:59	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 08:59	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/25/21 16:38	PAG	I
Nitrate-N	9.5	C	mg/L	0.20	EPA 300.0			8/21/21 08:59	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 08:59	MBS	C
pH	6.26	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	513	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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ANALYTICAL RESULTS

Workorder: 3196413 3RD QTR 2021-3106 RIVER RD

Lab ID: **3196413001**

Date Collected: 8/20/2021 12:02

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	7.2	C	mg/L	2.0	EPA 300.0			8/21/21 08:59	MBS	C
Total Dissolved Solids	286	C	mg/L	25	S2540C-11			8/24/21 11:16	BBD	C
Total Organic Carbon (TOC)	0.65	C	mg/L	0.50	SM5310B-2011			8/25/21 00:35	PAG	F
Turbidity	0.67	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	18.2	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:24	SRT	D1
Calcium, Dissolved	18.6	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:38	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:24	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:38	SRT	E
Magnesium, Total	12.7	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:24	SRT	D1
Magnesium, Dissolved	12.5	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:38	SRT	E
Manganese, Total	0.046	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:24	SRT	D1
Manganese, Dissolved	0.045	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:38	SRT	E
Potassium, Total	3.1	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:24	SRT	D1
Potassium, Dissolved	3.4	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:38	SRT	E
Sodium, Total	39.3	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:24	SRT	D1
Sodium, Dissolved	41.3	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:38	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.24	C	pH_Units		Field			8/20/21 12:02	BGS	L
Specific Conductance, Field	508	C	umhos/cm	1	Field			8/20/21 12:02	BGS	L
Temperature	15.20	C	Deg. C		Field			8/20/21 12:02	BGS	L

Susan J. Scherer

Ms. Susan J Scherer

Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196413 3RD QTR 2021-3106 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196413001	1	3106 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196413001	2	3106 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196413 3RD QTR 2021-3106 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196413001	3106 River Road, Conestoga, PA	ASTM D6919-09		
3196413001	3106 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3196413001	3106 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3196413001	3106 River Road, Conestoga, PA	EPA 300.0		
3196413001	3106 River Road, Conestoga, PA	EPA 410.4		
3196413001	3106 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3196413001	3106 River Road, Conestoga, PA	Field		
3196413001	3106 River Road, Conestoga, PA	S2540C-11		
3196413001	3106 River Road, Conestoga, PA	S4500HB-11		
3196413001	3106 River Road, Conestoga, PA	SM2130B-2011		
3196413001	3106 River Road, Conestoga, PA	SM2320B-2011		
3196413001	3106 River Road, Conestoga, PA	SM2510B-2011		
3196413001	3106 River Road, Conestoga, PA	SM5310B-2011		
3196413001	3106 River Road, Conestoga, PA	SW846 8260B		
3196413001	3106 River Road, Conestoga, PA	SW846 9020B		

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CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS

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

Generated by ALS

COC #

3196413

1 of 1

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ALS C

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

Client Name: LCSWMA - Aaron Fry

Address: 3106 River Road

Conestoga, PA 17516

Contact: Aaron Fry

Phone#: (717) 669-8831

Project Name#: LCSWMA - Quarterly

Bill To: LCSWMA - Aaron Fry

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

Rush-Subject to ALS approval and surcharges.

Date Required: _____ Approved By: _____

Email? ☐ -YFax? ☐ -Y No.:

Sample Description/Location

(as it will appear on the lab report)

Sample Date Time

1 3106RIVERRD 08/20/21 1202 G DW

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Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):

Relinquished By / Company Name

Date Time

Received By / Company Name

Date Time

Date Time

Date Time

Date Time

Date Time

Receipt Information (complete by receiving Lab)	
Cooler Temp: 1	Therm ID: 543
No. of Coolers: Y N	Initial
Custody Seals Present?	
(if present) Seals Intact?	
Received on Ice?	
COC Labels Complete/Accurate?	
Cont. in Good Cond.?	
Correct Containers?	
Correct Sample Volumes?	
Correct Preservation?	
Headspace/Volatiles?	

Courier/Tracking #:

Sample/COC Comments

Enter Number of Containers Per Sample or Field Results Below.

Matrix

G or C

TOC

O-OH

TOX

SW846-8260 VOCs

FM

NH3-N, COD

Dissolved Metals: Ca, Fe, Mg, Mn, K, Na

Metals: Ca, Fe, Mg, Mn, K, Na

PH, TDS, NO2, NO3, Cl, SO4, F, TB, SPC

Alkalinity, HCO3

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ANALYSES/METHOD REQUESTED

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Container Type

Container Size

Preservation

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H2SO4

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

3196413

Condition of Sample Receipt Form

Client: LC SWWA ☒ Lancaster County Solid Waste Authority Initials: JS Date: 9/20/21

1. Were airbills / tracking numbers present and recorded?.....	<u>NONE</u>	YES	NO
Tracking number: _____			
2. Are Custody Seals on shipping containers intact?.....	<u>NONE</u>	YES	NO
3. Are Custody Seals on sample containers intact?.....	<u>NONE</u>	YES	NO
4. Is there a COC (Chain-of-Custody) present?.....		<u>YES</u>	NO
5. Are the COC and bottle labels complete, legible and in agreement?.....		<u>YES</u>	NO
5a. Does the COC contain sample locations?.....		<u>YES</u>	NO
5b. Does the COC contain date and time of sample collection for all samples?.....		<u>YES</u>	NO
5c. Does the COC contain sample collectors name?.....		<u>YES</u>	NO
5d. Does the COC note the type(s) of preservation for all bottles?.....		<u>YES</u>	NO
5e. Does the COC note the number of bottles submitted for each sample?.....		<u>YES</u>	NO
5f. Does the COC note the type of sample (composite or grab)?.....		<u>YES</u>	NO
5g. Does the COC note the matrix of the sample(s)?.....		<u>YES</u>	NO
6. Are all aqueous samples requiring preservation preserved correctly?.....	<u>N/A</u>	<u>YES</u>	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?.....		<u>YES</u>	NO
8. Are all samples within holding times for the requested analyses?.....		<u>YES</u>	NO
9. Were all sample containers received intact and headspace free when required? (No broken, leaking, frozen, etc.).....		<u>YES</u>	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E LL Hg)?.....	<u>N/A</u>	<u>YES</u>	NO
11. Were the samples received on ice?.....		<u>YES</u>	NO
12. Were sample temperatures measured at 0-6, 0-10°C?.....		<u>YES</u>	NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below.....		<u>YES</u>	<u>NO</u>
13a. Are the samples required for SDWA compliance reporting?.....	<u>N/A</u>	<u>YES</u>	NO
13b. Did the client provide a SDWA PWS ID#?.....	<u>N/A</u>	<u>YES</u>	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?.....	<u>N/A</u>	<u>YES</u>	NO
13d. Did the client provide the SDWA sample location ID/Description?.....	<u>N/A</u>	<u>YES</u>	NO
13e. Did the client provide the SDWA sample type (D, E, P, C, P, S)?.....	<u>N/A</u>	<u>YES</u>	NO

Cooler = _____

Temperature (°C) 1

Thermometer ID 575

Radiological (uCi) _____

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

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

Rev 1/20/2020



September 13, 2021

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3100 RIVER RD	Workorder:	3196414
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 2021-3100 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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ALS Environmental



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

SAMPLE SUMMARY

Workorder: 3196414 3RD QTR 2021-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196414001	3100 River Road, Conestoga, PA	Water	8/20/2021 11:56	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196414 3RD QTR 2021-3100 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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

PROJECT SUMMARY

Workorder: 3196414 3RD QTR 2021-3100 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196414 3RD QTR 2021-3100 RIVER RD

Lab ID: **3196414001**

Date Collected: 8/20/2021 11:56

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 03:30	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:30	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	91.3	C	%	62 - 133	SW846 8260B			8/27/21 03:30	PDK	J
4-Bromofluorobenzene (S)	95.8	C	%	79 - 114	SW846 8260B			8/27/21 03:30	PDK	J
Dibromofluoromethane (S)	88.9	C	%	78 - 116	SW846 8260B			8/27/21 03:30	PDK	J
Toluene-d8 (S)	89.7	C	%	76 - 127	SW846 8260B			8/27/21 03:30	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	14	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	14	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.146	C	mg/L	0.100	ASTM D6919-09			9/1/21 22:29	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:15	ALK	B
Chloride	40.6	C	mg/L	2.0	EPA 300.0			8/21/21 08:45	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 08:45	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/25/21 17:03	PAG	I
Nitrate-N	4.7	C	mg/L	0.20	EPA 300.0			8/21/21 08:45	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 08:45	MBS	C
pH	6.06	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	236	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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ANALYTICAL RESULTS

Workorder: 3196414 3RD QTR 2021-3100 RIVER RD

Lab ID: **3196414001**

Date Collected: 8/20/2021 11:56

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	9.0	C	mg/L	2.0	EPA 300.0			8/21/21 08:45	MBS	C
Total Dissolved Solids	162	C	mg/L	25	S2540C-11			8/24/21 11:16	BBD	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			8/25/21 00:35	PAG	F
Turbidity	0.16	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	12.6	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:34	SRT	D1
Calcium, Dissolved	12.2	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:41	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:34	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:41	SRT	E
Magnesium, Total	6.0	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:34	SRT	D1
Magnesium, Dissolved	5.7	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:41	SRT	E
Manganese, Total	0.0076	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:34	SRT	D1
Manganese, Dissolved	0.0076	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:41	SRT	E
Potassium, Total	1.6	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:34	SRT	D1
Potassium, Dissolved	1.9	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:41	SRT	E
Sodium, Total	15.6	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:34	SRT	D1
Sodium, Dissolved	16.0	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:41	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.00	C	pH_Units		Field			8/20/21 11:56	BGS	L
Specific Conductance, Field	234	C	umhos/cm	1	Field			8/20/21 11:56	BGS	L
Temperature	15.30	C	Deg. C		Field			8/20/21 11:56	BGS	L

Susan J. Scherer

Ms. Susan J Scherer

Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196414 3RD QTR 2021-3100 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196414001	1	3100 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196414001	2	3100 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196414 3RD QTR 2021-3100 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196414001	3100 River Road, Conestoga, PA	ASTM D6919-09		
3196414001	3100 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3196414001	3100 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3196414001	3100 River Road, Conestoga, PA	EPA 300.0		
3196414001	3100 River Road, Conestoga, PA	EPA 410.4		
3196414001	3100 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3196414001	3100 River Road, Conestoga, PA	Field		
3196414001	3100 River Road, Conestoga, PA	S2540C-11		
3196414001	3100 River Road, Conestoga, PA	S4500HB-11		
3196414001	3100 River Road, Conestoga, PA	SM2130B-2011		
3196414001	3100 River Road, Conestoga, PA	SM2320B-2011		
3196414001	3100 River Road, Conestoga, PA	SM2510B-2011		
3196414001	3100 River Road, Conestoga, PA	SM5310B-2011		
3196414001	3100 River Road, Conestoga, PA	SW846 8260B		
3196414001	3100 River Road, Conestoga, PA	SW846 9020B		

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301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

3196414

Chain of Sample Receipt Form

Client: W. J. Smith Work C

Lancaster County Solid Waste
Authority

Initials:

Date:

9/13/21 8/20/21

1. Were airbills / tracking numbers present and recorded?	<u>NONE</u>	YES	NO
Tracking number: _____			
2. Are Custody Seals on shipping containers intact?	<u>NONE</u>	YES	NO
3. Are Custody Seals on sample containers intact?	<u>NONE</u>	YES	NO
4. Is there a COC (Chain-of-Custody) present?	<u>YES</u>	YES	NO
5. Are the COC and bottle labels complete, legible and in agreement?	<u>YES</u>	YES	NO
5a. Does the COC contain sample locations?	<u>YES</u>	YES	NO
5b. Does the COC contain date and time of sample collection for all samples?	<u>YES</u>	YES	NO
5c. Does the COC contain sample collectors name?	<u>YES</u>	YES	NO
5d. Does the COC note the type(s) of preservation for all bottles?	<u>YES</u>	YES	NO
5e. Does the COC note the number of bottles submitted for each sample?	<u>YES</u>	YES	NO
5f. Does the COC note the type of sample, composite or grab?	<u>YES</u>	YES	NO
5g. Does the COC note the matrix of the samples?	<u>YES</u>	YES	NO
6. Are all aqueous samples requiring preservation preserved correctly?	<u>N/A</u>	YES	NO
7. Were all samples placed in the proper containers for the requested analyses with sufficient volume?	<u>YES</u>	YES	NO
8. Are all samples within holding times for the requested analyses?	<u>YES</u>	YES	NO
9. Were all sample containers received intact and headspace free when required? (not broken, is, long, frozen, etc.)	<u>YES</u>	YES	NO
10. Did we receive trip blanks / applies only for methods EPA 504, EPA 824.2 and 1631E (LE-Hg)?	<u>N/A</u>	YES	NO
11. Were the samples received on ice?	<u>YES</u>	YES	NO
12. Were sample temperatures measured at 0.0-6.0°C?	<u>YES</u>	YES	NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below.	<u>YES</u>	YES	<u>NO</u>
13a. Are the samples required for SDWA compliance reporting?	<u>N/A</u>	YES	NO
13b. Did the client provide a SDWA PWS ID?	<u>N/A</u>	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	<u>N/A</u>	YES	NO
13d. Did the client provide the SDWA sample location ID, Description?	<u>N/A</u>	YES	NO
13e. Did the client provide the SDWA sample type ID, E, R, C, P, S?	<u>N/A</u>	YES	NO

Cooler # _____

Temperature (°C) 1 _____

Thermometer ID 523 _____

Radiological (µCi) _____

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

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

8-15-19-2019

ALS



September 13, 2021

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3088 RIVER RD	Workorder:	3196415
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 2021-3088 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3196415 3RD QTR 2021-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196415001	3088 River Road, Conestoga PA	Water	8/20/2021 12:52	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196415 3RD QTR 2021-3088 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 3196415 3RD QTR 2021-3088 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196415 3RD QTR 2021-3088 RIVER RD

Lab ID: **3196415001**

Date Collected: 8/20/2021 12:52

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 03:53	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 03:53	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.6	C	%	62 - 133	SW846 8260B			8/27/21 03:53	PDK	J
4-Bromofluorobenzene (S)	100	C	%	79 - 114	SW846 8260B			8/27/21 03:53	PDK	J
Dibromofluoromethane (S)	90	C	%	78 - 116	SW846 8260B			8/27/21 03:53	PDK	J
Toluene-d8 (S)	90.4	C	%	76 - 127	SW846 8260B			8/27/21 03:53	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	190	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	190	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.117	C	mg/L	0.100	ASTM D6919-09			9/3/21 02:07	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:25	ALK	B
Chloride	246	C	mg/L	2.0	EPA 300.0			8/21/21 09:12	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:12	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/26/21 15:22	PAG	I
Nitrate-N	6.4	C	mg/L	0.20	EPA 300.0			8/21/21 09:12	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:12	MBS	C
pH	7.44	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	1200	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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

Workorder: 3196415 3RD QTR 2021-3088 RIVER RD

Lab ID: **3196415001**

Date Collected: 8/20/2021 12:52

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	ND	C	mg/L	2.0	EPA 300.0			8/21/21 09:12	MBS	C
Total Dissolved Solids	644	C	mg/L	25	S2540C-11			8/24/21 11:16	BBD	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			8/25/21 00:35	PAG	F
Turbidity	0.14	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	0.12	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:37	SRT	D1
Calcium, Dissolved	0.14	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:45	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:37	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:45	SRT	E
Magnesium, Total	0.056	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:37	SRT	D1
Magnesium, Dissolved	ND	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:45	SRT	E
Manganese, Total	ND	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:37	SRT	D1
Manganese, Dissolved	ND	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:45	SRT	E
Potassium, Total	2.3	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:37	SRT	D1
Potassium, Dissolved	2.5	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:45	SRT	E
Sodium, Total	227	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:37	SRT	D1
Sodium, Dissolved	242	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:45	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.48	C	pH_Units		Field			8/20/21 12:52	BGS	L
Specific Conductance, Field	1185	C	umhos/cm	1	Field			8/20/21 12:52	BGS	L
Temperature	17.30	C	Deg. C		Field			8/20/21 12:52	BGS	L

Ms. Susan J Scherer

Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196415 3RD QTR 2021-3088 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196415001	1	3088 River Road, Conestoga PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196415001	2	3088 River Road, Conestoga PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196415 3RD QTR 2021-3088 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196415001	3088 River Road, Conestoga PA	ASTM D6919-09		
3196415001	3088 River Road, Conestoga PA	EPA 200.7	EPA ACID	
3196415001	3088 River Road, Conestoga PA	EPA 200.7	EPA TRMD	
3196415001	3088 River Road, Conestoga PA	EPA 300.0		
3196415001	3088 River Road, Conestoga PA	EPA 410.4		
3196415001	3088 River Road, Conestoga PA	EPA 420.4	420.4/9066	
3196415001	3088 River Road, Conestoga PA	Field		
3196415001	3088 River Road, Conestoga PA	S2540C-11		
3196415001	3088 River Road, Conestoga PA	S4500HB-11		
3196415001	3088 River Road, Conestoga PA	SM2130B-2011		
3196415001	3088 River Road, Conestoga PA	SM2320B-2011		
3196415001	3088 River Road, Conestoga PA	SM2510B-2011		
3196415001	3088 River Road, Conestoga PA	SM5310B-2011		
3196415001	3088 River Road, Conestoga PA	SW846 8260B		
3196415001	3088 River Road, Conestoga PA	SW846 9020B		

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301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

Condition of Sample Receipt Form

3196415

Client: LC Smith Work Order: Lancaster County Solid Waste Authority Trials: 1 Date: 8/20/21

1. Were airbills / tracking numbers present and recorded? NONE YES NO
Tracking number: _____
2. Are Custody Seals on shipping containers intact? NONE YES NO
3. Are Custody Seals on sample containers intact? NONE YES NO
4. Is there a COC (Chain-of-Custody) present? YES YES NO
5. Are the COC and bottle labels complete, legible and in agreement? YES YES NO
 - 5a. Does the COC contain sample locations? YES YES NO
 - 5b. Does the COC contain date and time of sample collection for all samples? YES YES NO
 - 5c. Does the COC contain sample collectors name? YES YES NO
 - 5d. Does the COC note the type(s) of preservation for all bottles? YES YES NO
 - 5e. Does the COC note the number of bottles submitted for each sample? YES YES NO
 - 5f. Does the COC note the type of sample, composite or grab? YES YES NO
 - 5g. Does the COC note the matrix of the samples? YES YES NO
6. Are all aqueous samples requiring preservation preserved correctly? N/A YES NO
7. Were all samples placed in the proper containers for the requested analyses with sufficient volume? YES YES NO
8. Are all samples within holding times for the requested analyses? YES YES NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.) YES YES NO
10. Did we receive trip blanks / ampuls only for methods EPA 504, EPA 504.2 and 1631E (H₂O)? N/A YES NO
11. Were the samples received on ice? YES YES NO
12. Were sample temperatures measured at 0.0-6.0°C? YES YES NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below: YES YES NO
 - 13a. Are the samples required for SDWA compliance reporting? N/A YES NO
 - 13b. Did the client provide a SDWA PWS ID#? N/A YES NO
 - 13c. Are all Aqueous unpreserved SDWA samples pH 5-9? N/A YES NO
 - 13d. Did the client provide the SDWA sample location ID / Description? N/A YES NO
 - 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)? N/A YES NO

Cooler # _____

Temperature (°C): 1 _____

Thermometer ID: 542 _____

Radiological (uCi): _____

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

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

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September 13, 2021

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

Certificate of Analysis

Project Name:	FREY FARM	Workorder:	3196416
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 20213079 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3196416 3RD QTR 20213079 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196416001	3079RIVERRD	Water	8/20/2021 14:28	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196416 3RD QTR 20213079 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 3196416 3RD QTR 20213079 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196416 3RD QTR 20213079 RIVER RD

Lab ID: **3196416001**
Sample ID: **3079RIVERRD**

Date Collected: 8/20/2021 14:28 Matrix: Water
Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 04:15	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:15	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	91.5	C	%	62 - 133	SW846 8260B			8/27/21 04:15	PDK	J
4-Bromofluorobenzene (S)	99.5	C	%	79 - 114	SW846 8260B			8/27/21 04:15	PDK	J
Dibromofluoromethane (S)	89.1	C	%	78 - 116	SW846 8260B			8/27/21 04:15	PDK	J
Toluene-d8 (S)	90.8	C	%	76 - 127	SW846 8260B			8/27/21 04:15	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	33	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	33	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.143	C	mg/L	0.100	ASTM D6919-09			9/1/21 23:10	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:19	ALK	B
Chloride	33.6	C	mg/L	2.0	EPA 300.0			8/21/21 13:25	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 13:25	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/26/21 15:47	PAG	I
Nitrate-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 13:25	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 13:25	MBS	C
pH	6.60	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	215	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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ANALYTICAL RESULTS

Workorder: 3196416 3RD QTR 20213079 RIVER RD

Lab ID: **3196416001**
Sample ID: **3079RIVERRD**

Date Collected: 8/20/2021 14:28 Matrix: Water
Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	9.0	C	mg/L	2.0	EPA 300.0			8/21/21 13:25	MBS	C
Total Dissolved Solids	124	C	mg/L	25	S2540C-11			8/24/21 11:16	BBD	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			8/25/21 00:35	PAG	F
Turbidity	0.12	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	10.1	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:40	SRT	D1
Calcium, Dissolved	9.6	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:48	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:40	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:48	SRT	E
Magnesium, Total	6.0	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:40	SRT	D1
Magnesium, Dissolved	5.6	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:48	SRT	E
Manganese, Total	0.055	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:40	SRT	D1
Manganese, Dissolved	0.052	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:48	SRT	E
Potassium, Total	2.3	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:40	SRT	D1
Potassium, Dissolved	2.5	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:48	SRT	E
Sodium, Total	14.3	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:40	SRT	D1
Sodium, Dissolved	14.2	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:48	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.65	C	pH_Units		Field			8/20/21 14:28	BGS	L
Specific Conductance, Field	222	C	umhos/cm	1	Field			8/20/21 14:28	BGS	L
Temperature	15.80	C	Deg. C		Field			8/20/21 14:28	BGS	L

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196416 3RD QTR 20213079 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196416001	1	3079RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196416001	2	3079RIVERRD	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196416 3RD QTR 20213079 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196416001	3079RIVERRD	ASTM D6919-09		
3196416001	3079RIVERRD	EPA 200.7	EPA ACID	
3196416001	3079RIVERRD	EPA 200.7	EPA TRMD	
3196416001	3079RIVERRD	EPA 300.0		
3196416001	3079RIVERRD	EPA 410.4		
3196416001	3079RIVERRD	EPA 420.4	420.4/9066	
3196416001	3079RIVERRD	Field		
3196416001	3079RIVERRD	S2540C-11		
3196416001	3079RIVERRD	S4500HB-11		
3196416001	3079RIVERRD	SM2130B-2011		
3196416001	3079RIVERRD	SM2320B-2011		
3196416001	3079RIVERRD	SM2510B-2011		
3196416001	3079RIVERRD	SM5310B-2011		
3196416001	3079RIVERRD	SW846 8260B		
3196416001	3079RIVERRD	SW846 9020B		

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

Condition of Sample Receipt Form

3196416

Client: LO SWIFT Work C: Lancaster County Solid Waste Authority Initials: PC Date: 8/20/21

1. Were airbills / tracking numbers present and recorded? NONE YES NO
Tracking number: _____
2. Are Custody Seals on shipping containers intact? NONE YES NO
3. Are Custody Seals on sample containers intact? NONE YES NO
4. Is there a COC (Chain-of-Custody) present? YES YES NO
5. Are the COC and bottle labels complete, legible and in agreement? YES YES NO
 - 5a. Does the COC contain sample locations? YES YES NO
 - 5b. Does the COC contain date and time of sample collection for all samples? YES YES NO
 - 5c. Does the COC contain sample collector's name? YES YES NO
 - 5d. Does the COC note the type(s) of preservation for all bottles? YES YES NO
 - 5e. Does the COC note the number of bottles submitted for each sample? YES YES NO
 - 5f. Does the COC note the type of sample, composite or grab? YES YES NO
 - 5g. Does the COC note the matrix of the sample(s)? YES YES NO
6. Are all aqueous samples requiring preservation preserved correctly? N/A YES NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume? YES YES NO
8. Are all samples within holding times for the requested analyses? YES YES NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.) YES YES NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 821-2 and 1631E, IL Hg)? N/A YES NO
11. Were the samples received on ice? YES YES NO
12. Were sample temperatures measured at 0.0-8.0°C? YES YES NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below. YES YES NO
 - 13a. Are the samples required for SDWA compliance reporting? N/A YES NO
 - 13b. Did the client provide a SDWA PWS ID#? N/A YES NO
 - 13c. Are all aqueous unpreserved SDWA samples pH 5-9? N/A YES NO
 - 13d. Did the client provide the SDWA sample location ID, Description? N/A YES NO
 - 13e. Did the client provide the SDWA sample type ID, E, P, C, B, S? N/A YES NO

Cooler # _____

Temperature (°C) 1 _____

Thermometer ID 436 _____

Radiological (µCi) _____

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

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



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September 13, 2021

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3076 RIVER RD	Workorder:	3196417
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 2021-3076 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3196417 3RD QTR 2021-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196417001	3076 River Road, Conestoga, PA	Water	8/20/2021 12:41	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196417 3RD QTR 2021-3076 RIVER RD

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
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U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 3196417 3RD QTR 2021-3076 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196417 3RD QTR 2021-3076 RIVER RD

Lab ID: **3196417001**

Date Collected: 8/20/2021 12:41

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 04:38	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 04:38	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.4	C	%	62 - 133	SW846 8260B			8/27/21 04:38	PDK	J
4-Bromofluorobenzene (S)	102	C	%	79 - 114	SW846 8260B			8/27/21 04:38	PDK	J
Dibromofluoromethane (S)	89.5	C	%	78 - 116	SW846 8260B			8/27/21 04:38	PDK	J
Toluene-d8 (S)	90.9	C	%	76 - 127	SW846 8260B			8/27/21 04:38	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	10	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	10	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.110	C	mg/L	0.100	ASTM D6919-09			9/3/21 03:01	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:25	ALK	B
Chloride	53.9	C	mg/L	2.0	EPA 300.0			8/21/21 08:59	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 08:59	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/26/21 16:13	PAG	I
Nitrate-N	10.2	C	mg/L	0.20	EPA 300.0			8/21/21 08:59	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 08:59	MBS	C
pH	6.25	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	331	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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ANALYTICAL RESULTS

Workorder: 3196417 3RD QTR 2021-3076 RIVER RD

Lab ID: **3196417001**

Date Collected: 8/20/2021 12:41

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	12.7	C	mg/L	2.0	EPA 300.0			8/21/21 08:59	MBS	C
Total Dissolved Solids	208	C	mg/L	25	S2540C-11			8/24/21 11:16	BBD	C
Total Organic Carbon (TOC)	0.64	C	mg/L	0.50	SM5310B-2011			8/25/21 00:35	PAG	F
Turbidity	0.11	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	13.0	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:44	SRT	D1
Calcium, Dissolved	13.2	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:52	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:44	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:52	SRT	E
Magnesium, Total	8.6	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:44	SRT	D1
Magnesium, Dissolved	8.4	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:52	SRT	E
Manganese, Total	0.18	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:44	SRT	D1
Manganese, Dissolved	0.18	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:52	SRT	E
Potassium, Total	3.7	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:44	SRT	D1
Potassium, Dissolved	4.0	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:52	SRT	E
Sodium, Total	24.2	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:44	SRT	D1
Sodium, Dissolved	25.3	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:52	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.28	C	pH_Units		Field			8/20/21 12:41	BGS	L
Specific Conductance, Field	325	C	umhos/cm	1	Field			8/20/21 12:41	BGS	L
Temperature	15.60	C	Deg. C		Field			8/20/21 12:41	BGS	L

Susan J. Scherer

Ms. Susan J Scherer

Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196417 3RD QTR 2021-3076 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196417001	1	3076 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196417001	2	3076 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

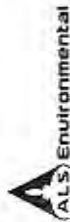
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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196417 3RD QTR 2021-3076 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196417001	3076 River Road, Conestoga, PA	ASTM D6919-09		
3196417001	3076 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3196417001	3076 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3196417001	3076 River Road, Conestoga, PA	EPA 300.0		
3196417001	3076 River Road, Conestoga, PA	EPA 410.4		
3196417001	3076 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3196417001	3076 River Road, Conestoga, PA	Field		
3196417001	3076 River Road, Conestoga, PA	S2540C-11		
3196417001	3076 River Road, Conestoga, PA	S4500HB-11		
3196417001	3076 River Road, Conestoga, PA	SM2130B-2011		
3196417001	3076 River Road, Conestoga, PA	SM2320B-2011		
3196417001	3076 River Road, Conestoga, PA	SM2510B-2011		
3196417001	3076 River Road, Conestoga, PA	SM5310B-2011		
3196417001	3076 River Road, Conestoga, PA	SW846 8260B		
3196417001	3076 River Road, Conestoga, PA	SW846 9020B		

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Consolidated by ALS

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

Client Name: LCSWMA - Brian Sensenich

Address: 3076 Rover Road

Conestoga, PA 17516

Contact: Brian Sensenich

Phone#: (717) 676-5779

Project Name#: LCSWMA - Quarterly

Bill To: LCSWMA - Brian Sensenich

☒ 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 3076RIVER RD 08/20/21 1241 G DW

2

3

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5

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Project Comments:

Relinquished By / Company Name

1 Brian Sensenich ALS

3

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LOGGED BY (signature):

REVIEWED BY (signature):

Date Time Received By / Company Name

8/20/21 12:52 VMG

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10

Reportable to PADEP?

Yes ☐ No ☒

PWSID #

EDDS: Format Type

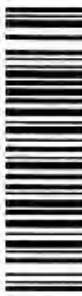
ALS Field Services: ☐ Pickup ☐ Labor

☐ Composite Sampling ☐ Rental Equipment

☐ Other:

ALS Environmental

Rev 8/04



COC #:

ALS Qu

3196417

Container Type

Container Size

Preservative

AG 40 ml HCl

AN 125 ml H2SO4

AN 250 ml H2SO4

AN 40 ml HCl

CG 40 ml HCl

PL 125 ml HNO3

PL 500 ml

PL 500 ml

PL 500 ml

PL 500 ml

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Therm ID:

913

No. of Coolers:

Y N

Custody Seals Present?

(if present) Seals Intact?

Received on Ice?

COC/Labels Complete/Accurate?

Cont. in Good Cond.?

Correct Containers?

Correct Sample Volumes?

Correct Preservation?

Headspace/Volatiles?

Courier/Tracking #:

Sample/COC Comments

Alkalinity, HCO3

PH, TDS, NO2, NO3, Cl, SO4, F,

Tb, SPC

Metals: Ca, Fe, Mg, Mn, K, Na

Dissolved Metals: Ca, Fe, Mg, Mn,

K, Na

NH3-N, COD

FM

SW846-8260 VOCs

TOX

O-OH

TOC

**Matrix

*G or C

Enter Number of Containers Per Sample or Field Results Below.

1 1 1 1 1 1

2 2 2 2 2 2

3 3 3 3 3 3

4 4 4 4 4 4

5 5 5 5 5 5

6 6 6 6 6 6

7 7 7 7 7 7

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10 10 10 10 10 10

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CLP-like

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Sample Disposal

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

Condition of Sample Receipt Form
3196417

Client: LC S. V. 004 Work Ord: Lancaster County Solid Waste Authority Initials: [Signature] Date: 2/20/21

- | 1. Were airbills / tracking numbers present and recorded? | NONE | YES | NO |
|---|------|-----|----|
| Tracking number: _____ | | | |
| 2. Are Custody Seals on shipping containers intact? | NONE | YES | NO |
| 3. Are Custody Seals on sample containers intact? | NONE | YES | NO |
| 4. Is there a COC (Chain-of-Custody) present? | | YES | NO |
| 5. Are the COC and bottle labels complete, legible and in agreement? | | YES | NO |
| 5a. Does the COC contain sample locations? | | YES | NO |
| 5b. Does the COC contain date and time of sample collection for all samples? | | YES | NO |
| 5c. Does the COC contain sample collectors name? | | YES | NO |
| 5d. Does the COC note the type(s) of preservation for all bottles? | | YES | NO |
| 5e. Does the COC note the number of bottles submitted for each sample? | | YES | NO |
| 5f. Does the COC note the type of sample, composite or grab? | | YES | NO |
| 5g. Does the COC note the matrix of the samples? | | YES | NO |
| 6. Are all aqueous samples requiring preservation preserved correctly? | N/A | YES | NO |
| 7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume? | | YES | NO |
| 8. Are all samples within holding times for the requested analyses? | | YES | NO |
| 9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.) | | YES | NO |
| 10. Did we receive trip blanks (applies only for methods EPA 804, EPA 814-2 and 1631E Hg)? | N/A | YES | NO |
| 11. Were the samples received on ice? | | YES | NO |
| 12. Were sample temperatures measured at 0-8, 0°C | | YES | NO |
| 13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below: | | YES | NO |
| 13a. Are the samples required for SDWA compliance reporting? | N/A | YES | NO |
| 13b. Did the client provide a SDWA PWS ID#? | N/A | YES | NO |
| 13c. Are all aqueous unpreserved SDWA samples pH 5-9? | N/A | YES | NO |
| 13d. Did the client provide the SDWA sample location ID/Description? | N/A | YES | NO |
| 13e. Did the client provide the SDWA sample type ID, E, R, C, F, S? | N/A | YES | NO |

Cooler #							
Temperature (°C)	1						
Thermometer ID	573						
Radioisotope (μCi)							

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

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

Rev. 1/23, 2020



September 13, 2021

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3052 RIVER RD	Workorder:	3196420
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 2021-3052 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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**SAMPLE SUMMARY**Workorder: 3196420 3RD QTR 2021-3052 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196420001	3052 River Road, Conestoga, PA	Water	8/20/2021 12:21	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196420 3RD QTR 2021-3052 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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ALS Environmental



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

PROJECT SUMMARY

Workorder: 3196420 3RD QTR 2021-3052 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196420 3RD QTR 2021-3052 RIVER RD

Lab ID: **3196420001**

Date Collected: 8/20/2021 12:21

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 05:46	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:46	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.2	C	%	62 - 133	SW846 8260B			8/27/21 05:46	PDK	J
4-Bromofluorobenzene (S)	98.2	C	%	79 - 114	SW846 8260B			8/27/21 05:46	PDK	J
Dibromofluoromethane (S)	89	C	%	78 - 116	SW846 8260B			8/27/21 05:46	PDK	J
Toluene-d8 (S)	91.2	C	%	76 - 127	SW846 8260B			8/27/21 05:46	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	7	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	7	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.172	C	mg/L	0.100	ASTM D6919-09			9/3/21 00:59	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:25	ALK	B
Chloride	22.0	C	mg/L	2.0	EPA 300.0			8/21/21 09:27	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:27	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/26/21 12:31	PAG	I
Nitrate-N	17.4	C	mg/L	0.20	EPA 300.0			8/21/21 09:27	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:27	MBS	C
pH	6.06	C,2,3	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	257	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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

Workorder: 3196420 3RD QTR 2021-3052 RIVER RD

Lab ID: **3196420001**

Date Collected: 8/20/2021 12:21

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	2.5	C	mg/L	2.0	EPA 300.0			8/21/21 09:27	MBS	C
Total Dissolved Solids	190	C	mg/L	25	S2540C-11			8/24/21 13:03	BBD	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			8/24/21 18:50	PAG	F
Turbidity	0.73	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	13.9	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:54	SRT	D1
Calcium, Dissolved	14.3	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:02	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:54	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:02	SRT	E
Magnesium, Total	9.3	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:54	SRT	D1
Magnesium, Dissolved	9.5	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:02	SRT	E
Manganese, Total	0.043	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:54	SRT	D1
Manganese, Dissolved	0.044	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:02	SRT	E
Potassium, Total	2.1	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:54	SRT	D1
Potassium, Dissolved	2.4	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:02	SRT	E
Sodium, Total	7.1	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:54	SRT	D1
Sodium, Dissolved	7.4	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:02	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.11	C	pH_Units		Field			8/20/21 12:21	BGS	L
Specific Conductance, Field	263	C	umhos/cm	1	Field			8/20/21 12:21	BGS	L
Temperature	15.40	C	Deg. C		Field			8/20/21 12:21	BGS	L

Ms. Susan J Scherer

Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196420 3RD QTR 2021-3052 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196420001	1	3052 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196420001	2	3052 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
3196420001	3	3052 River Road, Conestoga, PA	S4500HB-11	pH
The difference between duplicate measurements of this sample was greater than 0.1 pH units for the pH analysis				

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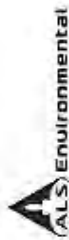
ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3196420 3RD QTR 2021-3052 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196420001	3052 River Road, Conestoga, PA	ASTM D6919-09		
3196420001	3052 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3196420001	3052 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3196420001	3052 River Road, Conestoga, PA	EPA 300.0		
3196420001	3052 River Road, Conestoga, PA	EPA 410.4		
3196420001	3052 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3196420001	3052 River Road, Conestoga, PA	Field		
3196420001	3052 River Road, Conestoga, PA	S2540C-11		
3196420001	3052 River Road, Conestoga, PA	S4500HB-11		
3196420001	3052 River Road, Conestoga, PA	SM2130B-2011		
3196420001	3052 River Road, Conestoga, PA	SM2320B-2011		
3196420001	3052 River Road, Conestoga, PA	SM2510B-2011		
3196420001	3052 River Road, Conestoga, PA	SM5310B-2011		
3196420001	3052 River Road, Conestoga, PA	SW846 8260B		
3196420001	3052 River Road, Conestoga, PA	SW846 9020B		

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /

SAMPLER. INSTRUCTIONS ON THE BACK.

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/ID: 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 3052RIVERRD	08/20/21	1221
2		
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>[Signature]</i>	8/20/21	1225	2 <i>[Signature]</i>	8/20/21	1725
3			4		
5			6		
7			8		
9			10		

* G=Grab, C=Composite

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

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

Rev 8/04

COC: 3196420

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
Preservative	HCl	H2SO4	H2SO4	HCl	---	H2SO4	HNO3	HNO3	None

ANALYSES/METHOD REQUESTED

*G or C	**Matrix	TOC	O-OH	TOX	SW846-8260 VOCs	FM	NH3-N, COD	Dissolved Metals: Ca, Fe, Mg, Mn, K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	pH, TDS, NO2, NO3, Cl, SO4, F, Pb, SpC	Alkalinity, HCO3
1	DW	2	1	2	23 x						1
2					AS						
3					3/2/12						
4											
5											
6											
7											
8											
9											
10											

Enter Number of Containers Per Sample or Field Results Below.

Sample/COC Comments

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

Standard	CLP-like	USACE	USACE	Navy	NY	NJ	PA	NC
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Reportable to PADEP?

Yes ☐ No ☐

PWSID #

EDDS: Format Type

Sample Disposal

Lab ☐ Special ☐

Special Processing

USACE ☐ Navy ☐ NY ☐ NJ ☐ PA ☐ NC ☐

State Samples Collected In

Therm ID: 573

No. of Coolers: Y N Initial

Cooler Temp: 1

Custody Seals Present?

(If present) Seals Intact?

Received on Ice?

COC Labels Complete/Accurate?

Cont. in Good Cond?

Correct Containers?

Correct Sample Volumes?

Correct Preservation?

Headspace/Volatiles?

Courier/Tracking #:



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

Condition of Sample Receipt Form

3196420

Client: WCSWHA Wor **Lancaster County Solid Waste Authority**

Initials: ME Date: 8/26/21

1. Were airbills / tracking numbers present and recorded? NONE YES NO
Tracking number: _____
2. Are Custody Seals on shipping containers intact? NONE YES NO
3. Are Custody Seals on sample containers intact? NONE YES NO
4. Is there a COC (Chain-of-Custody) present? YES NO
5. Are the COC and bottle labels complete, legible and in agreement? YES NO
 - 5a. Does the COC contain sample locations? YES NO
 - 5b. Does the COC contain date and time of sample collection for all samples? YES NO
 - 5c. Does the COC contain sample collector's name? YES NO
 - 5d. Does the COC note the type(s) of preservation for all bottles? YES NO
 - 5e. Does the COC note the number of bottles submitted for each sample? YES NO
 - 5f. Does the COC note the type of sample: composite or grab? YES NO
 - 5g. Does the COC note the matrix of the samples? YES NO
6. Are all aqueous samples requiring preservation preserved properly? N/A YES NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume? YES NO
8. Are all samples within holding times for the requested analyses? YES NO
9. Were all sample containers received intact and headspace free, when required? (not broken, leaking, frozen, etc.) YES NO
10. Did we receive trip blanks (apples only for methods EPA 804, EPA 824.2 and 1631/ELL Hg)? N/A YES NO
11. Were the samples received on ice? YES NO
12. Were sample temperatures measured at 0-6.0°C? YES NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below. YES NO
 - 13a. Are the samples required for SDWA compliance reporting? N/A YES NO
 - 13b. Did the client provide a SDWA PWS ID#? N/A YES NO
 - 13c. Are all aqueous unpreserved SDWA samples pH 5-9? N/A YES NO
 - 13d. Did the client provide the SDWA sample location ID (Description)? N/A YES NO
 - 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)? N/A YES NO

Cooler # _____
Temperature (°C) 1 _____
Thermometer ID 543 _____
Radiological (uCi) _____

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

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

Rev 1/20/2020

ALS



September 13, 2021

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3044 RIVER RD	Workorder:	3196421
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 2021-3044 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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

SAMPLE SUMMARY

Workorder: 3196421 3RD QTR 2021-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196421001	3044 River Road, Conestoga, PA	Water	8/20/2021 12:13	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196421 3RD QTR 2021-3044 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 3196421 3RD QTR 2021-3044 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196421 3RD QTR 2021-3044 RIVER RD

Lab ID: **3196421001**

Date Collected: 8/20/2021 12:13

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 06:08	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 06:08	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.3	C	%	62 - 133	SW846 8260B			8/27/21 06:08	PDK	J
4-Bromofluorobenzene (S)	98.2	C	%	79 - 114	SW846 8260B			8/27/21 06:08	PDK	J
Dibromofluoromethane (S)	90.4	C	%	78 - 116	SW846 8260B			8/27/21 06:08	PDK	J
Toluene-d8 (S)	89.1	C	%	76 - 127	SW846 8260B			8/27/21 06:08	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	11	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	11	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	ND	C	mg/L	0.100	ASTM D6919-09			9/3/21 02:48	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:25	ALK	B
Chloride	22.1	C	mg/L	2.0	EPA 300.0			8/21/21 09:13	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:13	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/26/21 12:59	PAG	I
Nitrate-N	18.7	C	mg/L	0.20	EPA 300.0			8/21/21 09:13	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:13	MBS	C
pH	6.23	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	266	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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Workorder: 3196421 3RD QTR 2021-3044 RIVER RD

Lab ID: **3196421001**

Date Collected: 8/20/2021 12:13

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	ND	C	mg/L	2.0	EPA 300.0			8/21/21 09:13	MBS	C
Total Dissolved Solids	192	C	mg/L	25	S2540C-11			8/24/21 13:03	BBD	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			8/25/21 21:05	PAG	F
Turbidity	ND	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	11.2	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:57	SRT	D1
Calcium, Dissolved	13.3	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:12	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:57	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:12	SRT	E
Magnesium, Total	8.8	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:57	SRT	D1
Magnesium, Dissolved	10.3	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:12	SRT	E
Manganese, Total	0.018	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:57	SRT	D1
Manganese, Dissolved	0.021	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:12	SRT	E
Potassium, Total	1.5	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:57	SRT	D1
Potassium, Dissolved	2.1	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:12	SRT	E
Sodium, Total	7.2	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:57	SRT	D1
Sodium, Dissolved	8.8	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 15:12	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.19	C	pH_Units		Field			8/20/21 12:13	BGS	L
Specific Conductance, Field	271	C	umhos/cm	1	Field			8/20/21 12:13	BGS	L
Temperature	15.70	C	Deg. C		Field			8/20/21 12:13	BGS	L

Ms. Susan J Scherer

Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196421 3RD QTR 2021-3044 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196421001	1	3044 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196421001	2	3044 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196421 3RD QTR 2021-3044 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196421001	3044 River Road, Conestoga, PA	ASTM D6919-09		
3196421001	3044 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3196421001	3044 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3196421001	3044 River Road, Conestoga, PA	EPA 300.0		
3196421001	3044 River Road, Conestoga, PA	EPA 410.4		
3196421001	3044 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3196421001	3044 River Road, Conestoga, PA	Field		
3196421001	3044 River Road, Conestoga, PA	S2540C-11		
3196421001	3044 River Road, Conestoga, PA	S4500HB-11		
3196421001	3044 River Road, Conestoga, PA	SM2130B-2011		
3196421001	3044 River Road, Conestoga, PA	SM2320B-2011		
3196421001	3044 River Road, Conestoga, PA	SM2510B-2011		
3196421001	3044 River Road, Conestoga, PA	SM5310B-2011		
3196421001	3044 River Road, Conestoga, PA	SW846 8260B		
3196421001	3044 River Road, Conestoga, PA	SW846 9020B		

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

3196421

Continuation of Sample Receipt Form

Client: SWHA Wor

Lancaster County Solid Waste
Authority

Initials: JS

Date: 9/30/21

1. Were airbills / tracking numbers present and _____ NONE YES NO
Tracking number _____
2. Are Custody Seals on shipping containers intact? _____ NONE YES NO
3. Are Custody Seals on sample containers intact? _____ NONE YES NO
4. Is there a COC (Chain-of-Custody) present? _____ YES YES NO
5. Are the COC and bottle labels complete, legible and in agreement? _____ YES NO
 - 5a. Does the COC contain sample locations? _____ YES NO
 - 5b. Does the COC contain date and time of sample collection for all samples? _____ YES NO
 - 5c. Does the COC contain sample collector's name? _____ YES NO
 - 5d. Does the COC note the type(s) of preservation for all bottles? _____ YES NO
 - 5e. Does the COC note the number of bottles submitted for each sample? _____ YES NO
 - 5f. Does the COC note the type of sample, composite or grab? _____ YES NO
 - 5g. Does the COC note the matrix of the sample(s)? _____ YES NO
6. Are all aqueous samples requiring preservation preserved correctly? _____ N/A YES NO
7. Were all samples placed in the proper containers for the requested analyses with sufficient volume? _____ YES YES NO
8. Are all samples within holding times for the requested analyses? _____ YES YES NO
9. Were all sample containers received intact and headspace free when required? (imp. broken, leaking, frozen, etc.) _____ YES YES NO
10. Did we receive trip blanks (batches only for methods EPA 804, EPA 824-2 and 1631B-4LL Hg)? _____ N/A YES NO
11. Were the samples received on ice? _____ YES YES NO
12. Were sample temperatures measured at 0.0-6.0 °C? _____ YES YES NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below: _____ YES NO
 - 13a. Are the samples required for SDWA compliance reporting? _____ N/A YES NO
 - 13b. Did the client provide a SDWA PWS ID? _____ N/A YES NO
 - 13c. Are all aqueous unpreserved SDWA samples pH 5-9? _____ N/A YES NO
 - 13d. Did the client provide the SDWA sample location ID/Description? _____ N/A YES NO
 - 13e. Did the client provide the SDWA sample type (D, E, B, C, F, S)? _____ N/A YES NO

Cooler # _____

Temperature (°C): 1 _____

Thermometer ID: 545 _____

Radiological (µCi): _____

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

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

Rev 1/20/2020

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September 13, 2021

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

Certificate of Analysis

Project Name:	FREY FARM	Workorder:	3196418
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 20213060 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3196418 3RD QTR 20213060 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196418001	3060RIVERRD	Water	8/20/2021 12:32	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196418 3RD QTR 20213060 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 3196418 3RD QTR 20213060 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196418 3RD QTR 20213060 RIVER RD

Lab ID: **3196418001**
Sample ID: **3060RIVERRD**

Date Collected: 8/20/2021 12:32 Matrix: Water
Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 05:00	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:00	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	94	C	%	62 - 133	SW846 8260B			8/27/21 05:00	PDK	J
4-Bromofluorobenzene (S)	99.8	C	%	79 - 114	SW846 8260B			8/27/21 05:00	PDK	J
Dibromofluoromethane (S)	91	C	%	78 - 116	SW846 8260B			8/27/21 05:00	PDK	J
Toluene-d8 (S)	90.4	C	%	76 - 127	SW846 8260B			8/27/21 05:00	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	ND	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.119	C	mg/L	0.100	ASTM D6919-09			9/2/21 16:09	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:25	ALK	B
Chloride	21.6	C	mg/L	2.0	EPA 300.0			8/21/21 09:54	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:54	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/26/21 11:31	PAG	I
Nitrate-N	16.2	C	mg/L	0.20	EPA 300.0			8/21/21 09:54	MBS	C
Nitrite-N	0.38	C	mg/L	0.20	EPA 300.0			8/21/21 09:54	MBS	C
pH	5.68	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	258	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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ANALYTICAL RESULTS

Workorder: 3196418 3RD QTR 20213060 RIVER RD

Lab ID: **3196418001**
Sample ID: **3060RIVERRD**

Date Collected: 8/20/2021 12:32 Matrix: Water
Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	9.3	C	mg/L	2.0	EPA 300.0			8/21/21 09:54	MBS	C
Total Dissolved Solids	174	C	mg/L	25	S2540C-11			8/24/21 11:16	BBD	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			8/25/21 00:35	PAG	F
Turbidity	0.14	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	11.2	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:47	SRT	D1
Calcium, Dissolved	11.1	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:55	SRT	E
Iron, Total	0.068	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:47	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:55	SRT	E
Magnesium, Total	11.5	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:47	SRT	D1
Magnesium, Dissolved	11.2	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:55	SRT	E
Manganese, Total	0.12	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:47	SRT	D1
Manganese, Dissolved	0.12	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:55	SRT	E
Potassium, Total	2.7	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:47	SRT	D1
Potassium, Dissolved	2.9	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:55	SRT	E
Sodium, Total	8.3	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:47	SRT	D1
Sodium, Dissolved	8.5	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:55	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.72	C	pH_Units		Field			8/20/21 12:32	BGS	L
Specific Conductance, Field	251	C	umhos/cm	1	Field			8/20/21 12:32	BGS	L
Temperature	15.10	C	Deg. C		Field			8/20/21 12:32	BGS	L

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196418 3RD QTR 20213060 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196418001	1	3060RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196418001	2	3060RIVERRD	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196418 3RD QTR 20213060 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196418001	3060RIVERRD	ASTM D6919-09		
3196418001	3060RIVERRD	EPA 200.7	EPA ACID	
3196418001	3060RIVERRD	EPA 200.7	EPA TRMD	
3196418001	3060RIVERRD	EPA 300.0		
3196418001	3060RIVERRD	EPA 410.4		
3196418001	3060RIVERRD	EPA 420.4	420.4/9066	
3196418001	3060RIVERRD	Field		
3196418001	3060RIVERRD	S2540C-11		
3196418001	3060RIVERRD	S4500HB-11		
3196418001	3060RIVERRD	SM2130B-2011		
3196418001	3060RIVERRD	SM2320B-2011		
3196418001	3060RIVERRD	SM2510B-2011		
3196418001	3060RIVERRD	SM5310B-2011		
3196418001	3060RIVERRD	SW846 8260B		
3196418001	3060RIVERRD	SW846 9020B		

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Submitted by: *_____*

CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS

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

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Submitted by: *Stacy*

ENT /

CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS

AREAS MUST BE COMPLETED BY:

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(ALS), ENVIRONMENTAL

Monday, September 13, 2021 5:53:04 PM

Page 9 of 10

ALS

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

Rev 8/04



301 Fulling Mill Road
Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

3196418

Position of Sample Receipt Form

Client: LC SWHA

Lancaster County Solid Waste
Authority

Initials: JS

Date: 9/20/21

1. Were airbills / tracking numbers present and recorded? NONE YES NO
Tracking number: _____
2. Are Custody Seals on shipping containers intact? NONE YES NO
3. Are Custody Seals on sample containers intact? NONE YES NO
4. Is there a COC (Chain-of-Custody) present? YES NO
5. Are the COC and bottle labels complete, legible and in agreement? YES NO
 - 5a. Does the COC contain sample locations? YES NO
 - 5b. Does the COC contain date and time of sample collection for all samples? YES NO
 - 5c. Does the COC contain sample collectors name? YES NO
 - 5d. Does the COC note the type(s) of preservation for all bottles? YES NO
 - 5e. Does the COC note the number of bottles submitted for each sample? YES NO
 - 5f. Does the COC note the type of sample, composite or grab? YES NO
 - 5g. Does the COC note the matrix of the samples? YES NO
6. Are all aqueous samples requiring preservation preserved correctly? N/A YES NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume? YES NO
8. Are all samples within holding times for the requested analyses? YES NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.) YES NO
10. Did we receive tap blanks / blanks only for in-house EPA 504, EPA 824.2 and 1631E (LL Hg)? N/A YES NO
11. Were the samples received on ice? YES NO
12. Were sample temperatures measured at 0-6, 0-6 °C? YES NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below YES NO
 - 13a. Are the samples required for SDWA compliance reporting? N/A YES NO
 - 13b. Did the client provide a SDWA PWS ID#? N/A YES NO
 - 13c. Are all aqueous unpreserved SDWA samples pH 5-9? N/A YES NO
 - 13d. Did the client provide the SDWA sample location ID / Description? N/A YES NO
 - 13e. Did the client provide the SDWA sample type ID, E, R, C, P, Si? N/A YES NO

Cooler # _____

Temperature (°C) 1 _____

Thermometer ID 573 _____

Radiological (µCi) _____

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

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

Rev 1/10, 2020

ALS



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

September 13, 2021

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

Certificate of Analysis

Project Name:	FREY FARM	Workorder:	3196419
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 20213056 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3196419 3RD QTR 20213056 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196419001	3056RIVERRD	Water	8/20/2021 12:27	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196419 3RD QTR 20213056 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 3196419 3RD QTR 20213056 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196419 3RD QTR 20213056 RIVER RD

Lab ID: **3196419001**
Sample ID: **3056RIVERRD**

Date Collected: 8/20/2021 12:27 Matrix: Water
Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/27/21 05:23	PDK	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/27/21 05:23	PDK	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	93.7	C	%	62 - 133	SW846 8260B			8/27/21 05:23	PDK	J
4-Bromofluorobenzene (S)	101	C	%	79 - 114	SW846 8260B			8/27/21 05:23	PDK	J
Dibromofluoromethane (S)	89.7	C	%	78 - 116	SW846 8260B			8/27/21 05:23	PDK	J
Toluene-d8 (S)	91.3	C	%	76 - 127	SW846 8260B			8/27/21 05:23	PDK	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	11	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	110	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.110	C	mg/L	0.100	ASTM D6919-09			9/3/21 02:34	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:25	ALK	B
Chloride	28.7	C	mg/L	2.0	EPA 300.0			8/21/21 09:40	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:40	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/26/21 12:01	PAG	I
Nitrate-N	16.9	C	mg/L	0.20	EPA 300.0			8/21/21 09:40	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:40	MBS	C
pH	6.04	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:17	MXF	9/7/21 09:36	MXF	H
Specific Conductance	273	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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ANALYTICAL RESULTS

Workorder: 3196419 3RD QTR 20213056 RIVER RD

Lab ID: **3196419001**
Sample ID: **3056RIVERRD**

Date Collected: 8/20/2021 12:27 Matrix: Water
Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	ND	C	mg/L	2.0	EPA 300.0			8/21/21 09:40	MBS	C
Total Dissolved Solids	180	C	mg/L	25	S2540C-11			8/24/21 11:16	BBD	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			8/25/21 00:35	PAG	F
Turbidity	0.23	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	10.6	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:50	SRT	D1
Calcium, Dissolved	10.8	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:58	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:50	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:58	SRT	E
Magnesium, Total	12.9	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:50	SRT	D1
Magnesium, Dissolved	12.9	C	mg/L	0.10	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:58	SRT	E
Manganese, Total	0.089	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:50	SRT	D1
Manganese, Dissolved	0.094	C	mg/L	0.0050	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:58	SRT	E
Potassium, Total	2.5	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:50	SRT	D1
Potassium, Dissolved	2.8	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:58	SRT	E
Sodium, Total	8.7	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 09:50	SRT	D1
Sodium, Dissolved	9.0	C	mg/L	0.50	EPA 200.7	8/27/21 07:07	SRT	8/27/21 14:58	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.10	C	pH_Units		Field			8/20/21 12:27	BGS	L
Specific Conductance, Field	271	C	umhos/cm	1	Field			8/20/21 12:27	BGS	L
Temperature	15.20	C	Deg. C		Field			8/20/21 12:27	BGS	L

Susan J. Scherer

Ms. Susan J Scherer
Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196419 3RD QTR 20213056 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196419001	1	3056RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196419001	2	3056RIVERRD	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

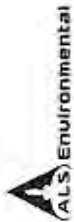
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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196419 3RD QTR 20213056 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196419001	3056RIVERRD	ASTM D6919-09		
3196419001	3056RIVERRD	EPA 200.7	EPA ACID	
3196419001	3056RIVERRD	EPA 200.7	EPA TRMD	
3196419001	3056RIVERRD	EPA 300.0		
3196419001	3056RIVERRD	EPA 410.4		
3196419001	3056RIVERRD	EPA 420.4	420.4/9066	
3196419001	3056RIVERRD	Field		
3196419001	3056RIVERRD	S2540C-11		
3196419001	3056RIVERRD	S4500HB-11		
3196419001	3056RIVERRD	SM2130B-2011		
3196419001	3056RIVERRD	SM2320B-2011		
3196419001	3056RIVERRD	SM2510B-2011		
3196419001	3056RIVERRD	SM5310B-2011		
3196419001	3056RIVERRD	SW846 8260B		
3196419001	3056RIVERRD	SW846 9020B		

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Client Name: Lancaster County Solid Waste MA		Container Type	AG	AN	AN	PL	PL	PL	PL	PL	PL	J Lab)																																																																																																																																				
Address: 1299 Harrisburg Pike, P.O. Box 4424		Container Size	40 ml	125 ml	250 ml	40 ml	125 ml	125 ml	125 ml	500 ml	500 ml																																																																																																																																					
Lancaster, PA 17604		Preservative	HCl	H2SO4	H2SO4	HCl	H2SO4	HNO3	HNO3	None	None																																																																																																																																					
Contact: Dan Brown		ANALYSES/METHOD REQUESTED																																																																																																																																														
Phone#: (717) 735-0193		Enter Number of Containers Per Sample or Field Results Below.																																																																																																																																														
Project Name#: LCSWMA - Quarterly		<table border="1"> <tr> <th>Sample Description/Location (as it will appear on the lab report)</th> <th>Sample Date</th> <th>Time</th> <th>TOC</th> <th>O-H</th> <th>TOX</th> <th>FM</th> <th>NH3-N, COD</th> <th>Disolved Metals: Ca, Fe, Mg, Mn, K, Na</th> <th>Metals: Ca, Fe, Mg, Mn, K, Na</th> <th>pH, TDS, NO2, NO3, Cl, SO4, F, Tb, SpC</th> <th>Alkalinity, HCO3</th> </tr> <tr> <td>1 3056RIVERRD</td> <td>08/20/21</td> <td>1227</td> <td>G DW</td> <td>2</td> <td>1</td> <td>2</td> <td>23^x</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>											Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	TOC	O-H	TOX	FM	NH3-N, COD	Disolved Metals: Ca, Fe, Mg, Mn, K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	pH, TDS, NO2, NO3, Cl, SO4, F, Tb, SpC	Alkalinity, HCO3	1 3056RIVERRD	08/20/21	1227	G DW	2	1	2	23 ^x	1	1	1	1	2												3												4												5												6												7												8												9												10											
Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	TOC	O-H	TOX	FM	NH3-N, COD	Disolved Metals: Ca, Fe, Mg, Mn, K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	pH, TDS, NO2, NO3, Cl, SO4, F, Tb, SpC	Alkalinity, HCO3																																																																																																																																					
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Date Required: _____ Approved By: _____		Cooler Temp: _____ Therm ID: 83	
Email? <input type="checkbox"/> -Y	Fax? <input type="checkbox"/> -Y No.:	No. of Coolers: _____ Y N Initial	
TAT <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days.		Custody Seals Present? <input type="checkbox"/>	
Rush-Subject to ALS approval and surcharges.		(if present) Seals Intact? <input type="checkbox"/>	
Received on ice? <input type="checkbox"/>		Received on ice? <input type="checkbox"/>	
COC Labels Complete/Accurate? <input type="checkbox"/>		COC Labels Complete/Accurate? <input type="checkbox"/>	
Correct Containers? <input type="checkbox"/>		Correct Containers? <input type="checkbox"/>	
Correct Sample Volumes? <input type="checkbox"/>		Correct Sample Volumes? <input type="checkbox"/>	
Correct Preservation? <input type="checkbox"/>		Correct Preservation? <input type="checkbox"/>	
Headspace/Volatiles? <input type="checkbox"/>		Headspace/Volatiles? <input type="checkbox"/>	
Courier/Tracking #: _____		Sample/COC Comments	
ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor		ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor	
<input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment		<input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment	
<input type="checkbox"/> Other: _____		<input type="checkbox"/> Other: _____	
Project Comments:		Project Comments:	
Relinquished By / Company Name		Relinquished By / Company Name	
Date		Date	
Time		Time	
Received By / Company Name		Received By / Company Name	
Date		Date	
Time		Time	
LOGGED BY (signature):		LOGGED BY (signature):	
REVIEWED BY (signature):		REVIEWED BY (signature):	
Date		Date	
Time		Time	
Received By / Company Name		Received By / Company Name	
Date		Date	
Time		Time	
Standard		Standard	
CLP-like		CLP-like	
USACE		USACE	
Data Deliverables		Data Deliverables	
Reportable to PADEP?		Reportable to PADEP?	
Yes <input type="checkbox"/>		Yes <input type="checkbox"/>	
PWSID #		PWSID #	
EDDS: Format Type-		EDDS: Format Type-	
State Samples Collected In		State Samples Collected In	
USACE <input type="checkbox"/>		USACE <input type="checkbox"/>	
Navy <input type="checkbox"/>		Navy <input type="checkbox"/>	
NY <input type="checkbox"/>		NY <input type="checkbox"/>	
NJ <input type="checkbox"/>		NJ <input type="checkbox"/>	
PA <input type="checkbox"/>		PA <input type="checkbox"/>	
NC <input type="checkbox"/>		NC <input type="checkbox"/>	
Sample Disposal		Sample Disposal	
Lab <input checked="" type="checkbox"/>		Lab <input checked="" type="checkbox"/>	
Special <input type="checkbox"/>		Special <input type="checkbox"/>	



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

Condition of Sample Receipt Form

3196419

Client: LS SWA Work: Lancaster County Solid Waste Authority Initials: LS Date: 9/30/21

- | | | | |
|---|-------------|-----|-----------|
| 1. Were airdrills / tracking numbers present and recorded? | <u>NONE</u> | YES | NO |
| Tracking number: _____ | | | |
| 2. Are Custody Seals on shipping containers intact? | <u>NONE</u> | YES | NO |
| 3. Are Custody Seals on sample containers intact? | <u>NONE</u> | YES | NO |
| 4. Is there a COC (Chain of Custody) present? | <u>YES</u> | YES | NO |
| 5. Are the COC and bottle labels complete, legible and in agreement? | <u>YES</u> | YES | NO |
| 5a. Does the COC contain sample locations? | <u>YES</u> | YES | NO |
| 5b. Does the COC contain date and time of sample collection for all samples? | <u>YES</u> | YES | NO |
| 5c. Does the COC contain sample collector's name? | <u>YES</u> | YES | NO |
| 5d. Does the COC note the type(s) of preservation for all bottles? | <u>YES</u> | YES | NO |
| 5e. Does the COC note the number of bottles submitted for each sample? | <u>YES</u> | YES | NO |
| 5f. Does the COC note the type of sample: composite or grab? | <u>YES</u> | YES | NO |
| 5g. Does the COC note the matrix of the samples? | <u>YES</u> | YES | NO |
| 6. Are all aqueous samples requiring preservation preserved correctly? | <u>N/A</u> | YES | NO |
| 7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume? | <u>YES</u> | YES | NO |
| 8. Are all samples within holding times for the requested analyses? | <u>YES</u> | YES | NO |
| 9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.) | <u>YES</u> | YES | NO |
| 10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1831E /CL Hg)? | <u>N/A</u> | YES | NO |
| 11. Were the samples received on ice? | <u>YES</u> | YES | NO |
| 12. Were sample temperatures measured at 0.0-6.0 °C? | <u>YES</u> | YES | NO |
| 13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below | <u>YES</u> | YES | <u>NO</u> |
| 13a. Are the samples required for SDWA compliance reporting? | <u>N/A</u> | YES | NO |
| 13b. Did the client provide a SDWA PWS ID#? | <u>N/A</u> | YES | NO |
| 13c. Are all aqueous unpreserved SDWA samples pH 5-9? | <u>N/A</u> | YES | NO |
| 13d. Did the client provide the SDWA sample location ID / Description? | <u>N/A</u> | YES | NO |
| 13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)? | <u>N/A</u> | YES | NO |

Cooler #: _____

Temperature (°C): 1 _____

Thermometer ID: 5-13 _____

Radiological (µCi): _____

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

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

Rev 1/20, 2020



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

September 13, 2021

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3125 RIVER RD	Workorder:	3196404
Purchase Order:	PO-1000371	Workorder ID:	3RD QTR 2020-3125 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 20, 2021.

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

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

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3196404 3RD QTR 2020-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3196404001	3125 River Road, Conestoga, PA	Water	8/20/2021 13:01	8/20/2021 17:25	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3196404 3RD QTR 2020-3125 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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PROJECT SUMMARY

Workorder: 3196404 3RD QTR 2020-3125 RIVER RD

Workorder Comments

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

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ANALYTICAL RESULTS

Workorder: 3196404 3RD QTR 2020-3125 RIVER RD

Lab ID: **3196404001**

Date Collected: 8/20/2021 13:01

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
1,2-Dibromoethane	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
1,1-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
1,2-Dichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
1,1-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
cis-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
trans-1,2-Dichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
Ethylbenzene	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
Methylene Chloride	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
Tetrachloroethene	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
Toluene	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
Total Xylenes	ND	C	ug/L	3.0	SW846 8260B			8/26/21 17:46	TMP	J
1,1,1-Trichloroethane	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
Trichloroethene	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
Trichlorofluoromethane	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
Vinyl Chloride	ND	C	ug/L	1.0	SW846 8260B			8/26/21 17:46	TMP	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	92.8	C	%	62 - 133	SW846 8260B			8/26/21 17:46	TMP	J
4-Bromofluorobenzene (S)	101	C	%	79 - 114	SW846 8260B			8/26/21 17:46	TMP	J
Dibromofluoromethane (S)	88.5	C	%	78 - 116	SW846 8260B			8/26/21 17:46	TMP	J
Toluene-d8 (S)	93.5	C	%	76 - 127	SW846 8260B			8/26/21 17:46	TMP	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	12	C	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	C
Alkalinity, Total	12	C,1	mg/L	5	SM2320B-2011			8/30/21 23:52	MBS	A
Ammonia-N	0.152	C	mg/L	0.100	ASTM D6919-09			9/1/21 22:43	ALK	B
Chemical Oxygen Demand (COD)	ND	C	mg/L	15	EPA 410.4			9/2/21 13:25	ALK	B
Chloride	81.4	C	mg/L	2.0	EPA 300.0			8/21/21 09:26	MBS	C
Fluoride	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:26	MBS	C
Halogen, Total Organic (TOX)	ND	C	ug/L	20.0	SW846 9020B			8/24/21 14:57	PAG	I
Nitrate-N	10.5	C	mg/L	0.20	EPA 300.0			8/21/21 09:26	MBS	C
Nitrite-N	ND	C	mg/L	0.20	EPA 300.0			8/21/21 09:26	MBS	C
pH	6.12	C,2	pH_Units		S4500HB-11			8/30/21 23:52	MBS	C
Phenolics	ND	C	mg/L	0.005	EPA 420.4	9/2/21 18:16	MXF	9/7/21 09:36	MXF	H
Specific Conductance	450	C	umhos/cm	1	SM2510B-2011			9/3/21 13:00	MBS	C

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ANALYTICAL RESULTS

Workorder: 3196404 3RD QTR 2020-3125 RIVER RD

Lab ID: **3196404001**

Date Collected: 8/20/2021 13:01

Matrix: Water

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

Date Received: 8/20/2021 17:25

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Sulfate	11.9	C	mg/L	2.0	EPA 300.0			8/21/21 09:26	MBS	C
Total Dissolved Solids	254	C	mg/L	25	S2540C-11			8/24/21 11:16	BBD	C
Total Organic Carbon (TOC)	ND	C	mg/L	0.50	SM5310B-2011			8/24/21 21:34	PAG	F
Turbidity	0.76	C	NTU	0.10	SM2130B-2011			8/21/21 07:06	LXZ	C
METALS										
Calcium, Total	0.099	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 08:31	SRT	D1
Calcium, Dissolved	ND	C	mg/L	0.10	EPA 200.7	8/25/21 06:27	SRT	8/25/21 14:10	SRT	E
Iron, Total	ND	C	mg/L	0.030	EPA 200.7	8/22/21 11:28	AHI	8/24/21 08:31	SRT	D1
Iron, Dissolved	ND	C	mg/L	0.060	EPA 200.7	8/25/21 06:27	SRT	8/25/21 14:10	SRT	E
Magnesium, Total	ND	C	mg/L	0.050	EPA 200.7	8/22/21 11:28	AHI	8/24/21 08:31	SRT	D1
Magnesium, Dissolved	ND	C	mg/L	0.10	EPA 200.7	8/25/21 06:27	SRT	8/25/21 14:10	SRT	E
Manganese, Total	ND	C	mg/L	0.0025	EPA 200.7	8/22/21 11:28	AHI	8/24/21 08:31	SRT	D1
Manganese, Dissolved	ND	C	mg/L	0.0050	EPA 200.7	8/25/21 06:27	SRT	8/25/21 14:10	SRT	E
Potassium, Total	0.55	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 08:31	SRT	D1
Potassium, Dissolved	0.77	C	mg/L	0.50	EPA 200.7	8/25/21 06:27	SRT	8/25/21 14:10	SRT	E
Sodium, Total	150	C	mg/L	0.25	EPA 200.7	8/22/21 11:28	AHI	8/24/21 08:31	SRT	D1
Sodium, Dissolved	164	C	mg/L	0.50	EPA 200.7	8/25/21 06:27	SRT	8/25/21 14:10	SRT	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.04	C	pH_Units		Field			8/20/21 13:01	BGS	L
Specific Conductance, Field	441	C	umhos/cm	1	Field			8/20/21 13:01	BGS	L
Temperature	16.10	C	Deg. C		Field			8/20/21 13:01	BGS	L

Susan J. Scherer

Ms. Susan J Scherer

Project Coordinator

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**ANALYTICAL RESULTS**

Workorder: 3196404 3RD QTR 2020-3125 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3196404001	1	3125 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
3196404001	2	3125 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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**ANALYSIS - PREP METHOD CROSS REFERENCE TABLE**

Workorder: 3196404 3RD QTR 2020-3125 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	Leachate Method
3196404001	3125 River Road, Conestoga, PA	ASTM D6919-09		
3196404001	3125 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3196404001	3125 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3196404001	3125 River Road, Conestoga, PA	EPA 300.0		
3196404001	3125 River Road, Conestoga, PA	EPA 410.4		
3196404001	3125 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3196404001	3125 River Road, Conestoga, PA	Field		
3196404001	3125 River Road, Conestoga, PA	S2540C-11		
3196404001	3125 River Road, Conestoga, PA	S4500HB-11		
3196404001	3125 River Road, Conestoga, PA	SM2130B-2011		
3196404001	3125 River Road, Conestoga, PA	SM2320B-2011		
3196404001	3125 River Road, Conestoga, PA	SM2510B-2011		
3196404001	3125 River Road, Conestoga, PA	SM5310B-2011		
3196404001	3125 River Road, Conestoga, PA	SW846 8260B		
3196404001	3125 River Road, Conestoga, PA	SW846 9020B		

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

3196404

Condition of Sample Receipt Form

Client: LANCASTER COUNTY SOLID WASTE

Lancaster County Solid Waste
Authority

Initials: LS

Date: 9/20/21

1. Were airbills / tracking numbers present and recorded?.....	<u>NONE</u>	YES	NO
Tracking number: _____			
2. Are Custody Seals on shipping containers intact?.....	<u>NONE</u>	YES	NO
3. Are Custody Seals on sample containers intact?.....	<u>NONE</u>	YES	NO
4. Is there a COC (Chain of Custody) present?.....	<u>YES</u>	YES	NO
5. Are the COC and bottle labels complete, legible and in agreement?.....	<u>YES</u>	YES	NO
5a. Does the COC contain sample locations?.....	<u>YES</u>	YES	NO
5b. Does the COC contain date and time of sample collection for all samples?.....	<u>YES</u>	YES	NO
5c. Does the COC contain sample collector's name?.....	<u>YES</u>	YES	NO
5d. Does the COC note the type(s) of preservation for all bottles?.....	<u>YES</u>	YES	NO
5e. Does the COC note the number of bottles submitted for each sample?.....	<u>YES</u>	YES	NO
5f. Does the COC note the type of sample, composite or grab?.....	<u>YES</u>	YES	NO
5g. Does the COC note the matrix of the sample(s)?.....	<u>YES</u>	YES	NO
6. Are all aqueous samples requiring preservation preserved correctly?.....	<u>N/A</u>	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?.....	<u>YES</u>	YES	NO
8. Are all samples within holding times for the requested analyses?.....	<u>YES</u>	YES	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.).....	<u>YES</u>	YES	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 504.2 and 1631 ETL Hg)?.....	<u>N/A</u>	YES	NO
11. Were the samples received on ice?.....	<u>YES</u>	YES	NO
12. Were sample temperatures measured at 0-6.0°C.....	<u>YES</u>	YES	NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below.....	<u>YES</u>	YES	<u>NO</u>
13a. Are the samples required for SDWA compliance reporting?.....	<u>N/A</u>	YES	NO
13b. Did the client provide a SDWA PWS ID#?.....	<u>N/A</u>	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?.....	<u>N/A</u>	YES	NO
13d. Did the client provide the SDWA sample location ID, Description?.....	<u>N/A</u>	YES	NO
13e. Did the client provide the SDWA sample type (D, E, F, C, P, S)?.....	<u>N/A</u>	YES	NO

Cooler # _____

Temperature (°C) 1

Thermometer ID 543

Radiological (µCi) _____

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

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

Rev 1/10/2020