

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

www.lcswma.org

July 22, 2019

Mr. Timothy Long PG; Licensed Professional Geologist Pennsylvania Department of Environmental Protection Bureau of Waste Management 909 Elmerton Avenue Harrisburg, PA 17110-8200

REF: 2nd Quarter 2019 Form 19, 50 and 52 Submittal Frey Farm Landfill: BWM Permit #101389

Dear Mr. Long:

In accordance with the Municipal Waste Management Regulations, the Lancaster County Solid Waste Management Authority (LCSWMA) continues the above-referenced monitoring program.

Groundwater:

In accordance with the Municipal Waste Management Regulations, the Lancaster County Solid Waste Management Authority (LCSWMA) continues the above-referenced monitoring program. Attached are the Forms 19, lab reports, and excel csv file for your LandLinks Access database. I have attached per your request:

- USEPA MCL's exceedance report; Samples 2W, 2SW, 3A, 28, & 33W exceeded
 the primary standard for nitrate, samples are consistent with historic data the
 cause is attributed to agricultural impacts. No other MCL's were exceeded.
- USEPA SMCL's exceedance report; Samples 2W, 2DW, 3AW, 4AW, 5W, 17W, 18W, 26RW, 30RW, 31W, 32W, 33W exceeded the secondary standard for manganese, Samples 2SW, 17W, 31W, 32W & 33W exceeded the secondary standard for iron, Samples 2SW, 4AW, 5W, 17W & 26RW exceeded the secondary standard for total dissolved solids, and Samples 2DW, 4AW, & 17W exceeded the secondary standard for chlorides all samples are consistent with historic levels and exceedances are attributed to soil parent material, geologic conditions and historic land use. ARM reviews the site historic Chloride issues annually and has assessed the causes. No other SMCL's were exceeded.
- A copy of the field sampling data sheets for all locations.

Other than mentioned above ground water monitoring concentrations where consistent with historic data no significant deviations were observed.



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In accordance with both the Pennsylvania Municipal Waste Management and the Federal Subtitle D Regulations, the Lancaster County Solid Waste Management Authority (LCSWMA) continues to complete the above referenced monitoring program. Enclosed is the Department's Form 50 - "Municipal Waste Landfill Leachate Analysis" for the quarterly monitoring period.

- LCSWMA continues to monitor the Form 50 parameters from location FFLEINFS. This location is the lowest down-gradient point in the leachate collection system for the Frey Farm Landfill and represents "raw" leachate characteristics for the facility, as collected from the six (6) landfill cells.
- As indicated on the Form 50, the primary leachate collection and secondary detection systems encompass approximately 93 acres of drainage area.
- At your request, we have included analyses of the six (6) secondary individual detection zone discharges with an individual Form 50 for each.
- Included on the CD are files which contains the FFLEINFS data in a compatible format for your LandLinks software. The CD also contains a pdf file of the laboratory results and the Form 50.

In accordance with Section 273.255(d)(1)(2) and (3) of the Municipal Waste Management Regulations, the Lancaster County Solid Waste Management Authority (LCSWMA) is providing this secondary flow report.

The 2nd Quarter Frey Farm Landfill (FFLF) secondary flow was noted at 1.95 gallons per day per acre (gpdpa); which is below the regulatory limit of 100 gpdpa. The 2nd Quarter secondary flow was 0.91% of the primary flow, which is below the regulatory 10% (maximum). Table 1 indicates this quarter's weekly flow information for the six (6) operational cells at the FFLF, cells 2 and 4 continue to indicate no secondary flow present.

 Consistent with all previous monitoring events, LCSWMA remains well below the secondary leachate flow threshold (100-gpdpa)



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Contiguous Landowners:

Attached are the Forms 52, lab reports, and excel csv file for your Landlinks Access database. MCL and SMCL exceedances are as follows:

- USEPA MCL's exceedance report; samples (3044RIVERRD, 3052RIVERRD, 3056 RIVERRD, 3060RIVERRD, 3076RIVERRD, and 3106RIVERRD) exceeded the limit for nitrate, samples are consistent with historic data the cause is attributed to agricultural impacts. No other MCL's were exceeded.
- USEPA SMCL's exceedance report; sample 3088RIVERRD exceeded the limit for chloride; samples 3088RIVERRD and 3125RIVERRD exceeded the limit for total dissolved solids and samples 3056RIVERRD, 3060RIVERRD, 3076RIVERRD, 3079RIVERRD and 3106RIVERRD exceeded the limit for manganese which is consistent with historic data and are attributed to natural soil and geologic conditions.

Ground water monitoring concentrations where consistent with historic data, no significant deviations where observed.

Please do not hesitate in contacting me if you have any questions or concerns at nrogers@lcswma.org.

Respectfully submitted,

Thick Man

Nick Rogers

FFLF Facility Manager

Enclosures

Cc:

Michelle Marsh, John Ridinger, Dan Brown, Jeff Musser, Jordan Gallagher Ed Rawski, Randy Weiss (PADEP)

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 07/15/2019
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section 1103			
SECTION A. SITE IDENTIFIER			
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name:	rey Farm Landfill		
Facility ID (as issued by DEP):	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm I	andfill		
County: Lancaster C	County		
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name:LCSWMA			
Address: 3044 RIVE	R ROAD		
Phone No.:			
Sampling Point: Latitude: 39 c	57 ' 30.58 " Longitude: 76 ° 26 ' 11.25 "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:			
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micr			
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 10:53 AM		
Laboratory(ies) Performing Analysis	ALS Environmental		
(include address and phone number)	34 Dogwood Lane		
	Middletown, PA 17057 (717) 944-5541		
Lab Accreditation Number(s)	22-293		
Lab Analysis Date	06/05/2019		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number
101389

Monitoring Point I.D. No.

Sample Date

PS

05/24/2019

LCSWMA

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	11	SM20-2321
CALCIUM, TOTAL	12	EPA 200.7
CALCIUM, DISSOLVED	12.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	20.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	9.9	EPA 200.7
MAGNESIUM, DISSOLVED	9.7	EPA 200.7
MANGANESE, TOTAL (ug/l)	34	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	33	EPA 200.7
NITRATE-NITROGEN	18.3	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.6	FIELD
pH-LAB (SU)	6.56	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	1.2	EPA 200.7
SODIUM, TOTAL	7.6	EPA 200.7
SODIUM, DISSOLVED	7.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	220	FIELD
SPEC. COND., LAB (umhos/cm)	212	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	11	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	126	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.8	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.2	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

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/Revise 07/15/2019	d
DEP USE ONLY	
Date Received	

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

General Reference: Act 101 Section 1103			
	SECTION A. SITE IDENTIFIER		
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name:	rey Farm Landfill		
Facility ID (as issued by DEP):	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm I	andfill		
County: Lancaster C	county		
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name:MILLER			
Address: 3052 RIVE	ROAD		
Phone No.:			
Sampling Point: Latitude: 39 c	57 ' 29.85 " Longitude: 76 ° 26 ' 11.45 "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:	ft.		
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micr			
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 11:06 AM		
Laboratory(ies) Performing Analysis	ALS Environmental		
(include address and phone number)	34 Dogwood Lane		
	Middletown, PA 17057 (717) 944-5541		
Lab Accreditation Number(s)	22-293		
Lab Analysis Date	06/06/2019		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.142	SM4500D
BICARBONATE ALKALINITY	6	SM20-2321
CALCIUM, TOTAL	16.4	EPA 200.7
CALCIUM, DISSOLVED	18	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	21.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	7.2	EPA 200.7
MAGNESIUM, DISSOLVED	7.5	EPA 200.7
MANGANESE, TOTAL (ug/l)	21	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	21	EPA 200.7
NITRATE-NITROGEN	17.8	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number 101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.29	FIELD
pH-LAB (SU)	6.32	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	1.3	EPA 200.7
SODIUM, TOTAL	7.4	EPA 200.7
SODIUM, DISSOLVED	7.7	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	209	FIELD
SPEC. COND., LAB (umhos/cm)	205	EPA 120.1
SULFATE	2.6	EPA 300
ALKALINITY	6	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	162	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.79	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.18	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

05/24/2019

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 07/15/2019
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section 1103			
SECTION A. SITE IDENTIFIER			
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name:	rey Farm Landfill		
Facility ID (as issued by DEP):	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm I	andfill		
County: Lancaster C	county		
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name:LCSWMA			
Address: 3056 RIVE	R ROAD		
Phone No.:			
Sampling Point: Latitude: 39 c	57 ' 28.44 " Longitude: 76 ° 26 ' 10.43 "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:			
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micron)?: X Yes No			
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 10:00 AM		
Laboratory(ies) Performing Analysis	ALS Environmental		
(include address and phone number)	34 Dogwood Lane		
	Middletown, PA 17057 (717) 944-5541		
Lab Accreditation Number(s)	22-293		
Lab Analysis Date	06/12/2019		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number
101389

Monitoring Point I.D. No.

LCSWMA

PS

Sample Date 05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.207	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	8.1	EPA 200.7
CALCIUM, DISSOLVED	9	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	28.6	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	12.6	EPA 200.7
MAGNESIUM, DISSOLVED	14.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	120	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	140	EPA 200.7
NITRATE-NITROGEN	19.1	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.7	FIELD
pH-LAB (SU)	5.63	SM4500B
POTASSIUM, TOTAL	1.7	EPA 200.7
POTASSIUM, DISSOLVED	1.2	EPA 200.7
SODIUM, TOTAL	7.5	EPA 200.7
SODIUM, DISSOLVED	8.1	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	215	FIELD
SPEC. COND., LAB (umhos/cm)	207	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	138	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

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 07/15/2019		
DEP USE ONLY		
Date Received		

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

General Reference: Act 101 Section	1103		
SECTION A. SITE IDENTIFIER			
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name:	rey Farm Landfill		
Facility ID (as issued by DEP):	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm I	andfill		
County: Lancaster C	county		
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name: LCSWMA			
Address: 3060 RIVE	ROAD		
Phone No.:			
Sampling Point: Latitude: 39 c	57 ' 27.63 " Longitude: 76 ° 26 ' 10.01 "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:	ft.		
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micr	on)?: X Yes No		
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 10:09 AM		
Laboratory(ies) Performing Analysis	ALS Environmental		
(include address and phone number)	34 Dogwood Lane		
	Middletown, PA 17057 (717) 944-5541		
Lab Accreditation Number(s)	22-293		
Lab Analysis Date	06/04/2019		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.185	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	9.7	EPA 200.7
CALCIUM, DISSOLVED	10.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	22.9	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	10.8	EPA 200.7
MAGNESIUM, DISSOLVED	10.8	EPA 200.7
MANGANESE, TOTAL (ug/l)	120	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	120	EPA 200.7
NITRATE-NITROGEN	17.5	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.49	FIELD
pH-LAB (SU)	5.52	SM4500B
POTASSIUM, TOTAL	2	EPA 200.7
POTASSIUM, DISSOLVED	1.8	EPA 200.7
SODIUM, TOTAL	7.1	EPA 200.7
SODIUM, DISSOLVED	7.1	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	209	FIELD
SPEC. COND., LAB (umhos/cm)	197	EPA 120.1
SULFATE	10.3	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	102	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.58	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

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 07/15/2019		
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FORM 52 MUNICIPAL WASTE LANDFILL PRIVATE WATER SUPPLY QUARTERLY WATER QUALITY ANALYSES

General Reference: Act 101 Section 1103			
	SECTION A. SITE IDENTIFIER		
Applicant/permittee: La	ancaster County Solid Waste Manage		
Site Name: F	rey Farm Landfill		
Facility ID (as issued by DEP): 1	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGIT	ΓUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm L	andfill		
County: Lancaster C			
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name: SENSENICH			
Address: 3076 RIVER			
Phone No.:			
Sampling Point: Latitude: 39 o	57 ' 28.2 " Longitude: 76 ° 26 ' 11.1 "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:	 ft.		
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micro	on)?: X Yes No		
Sample Date:(mm/dd/yy) 05/24	4/2019 Sample Collection Time: 11:22 AM		
Laboratory(ies) Performing Analysis	ALS Environmental		
(include address and phone number)	34 Dogwood Lane		
	Middletown, PA 17057 (717) 944-5541		
Lab Accreditation Number(s)	22-293		
Lab Analysis Date	06/05/2019		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.606	SM4500D
BICARBONATE ALKALINITY	7	SM20-2321
CALCIUM, TOTAL	13.8	EPA 200.7
CALCIUM, DISSOLVED	15.8	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	45.5	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	8.3	EPA 200.7
MAGNESIUM, DISSOLVED	8.8	EPA 200.7
MANGANESE, TOTAL (ug/l)	250	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	260	EPA 200.7
NITRATE-NITROGEN	11.8	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.22	FIELD
pH-LAB (SU)	6.27	SM4500B
POTASSIUM, TOTAL	3.2	EPA 200.7
POTASSIUM, DISSOLVED	3.2	EPA 200.7
SODIUM, TOTAL	18.7	EPA 200.7
SODIUM, DISSOLVED	20	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	275	FIELD
SPEC. COND., LAB (umhos/cm)	269	EPA 120.1
SULFATE	20.2	EPA 300
ALKALINITY	7	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	138	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.95	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.84	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

05/24/2019

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 07/15/2019
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section	1103	
SECTION A. SITE IDENTIFIER		
Applicant/permittee:	ancaster County Solid Waste Manage	
Site Name:	rey Farm Landfill	
Facility ID (as issued by DEP):	01389	
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION	
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")	
Facility Name: Frey Farm I	andfill	
County: Lancaster C	county	
Township or Municipality: MANOR TO	WNSHIP	
Landowner Name:LCSWMA		
Address: 3079 RIVE	ROAD	
Phone No.:		
Sampling Point: Latitude: 39 c	57 ' 21.99 " Longitude: 76 ° 26 ' 10.58 "	
Depth to Water Level:	ft. Measured from: X Land Surface TOC	
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL	
Total Well Depth:	ft.	
Sampling Depth:	ft. Sampling Method: Pumped Bailed	
Well Purged: Yes	X No Well Volumes Purged:	
Sample Field Filtered (must be 0.45 micr		
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 1:15 PM	
Laboratory(ies) Performing Analysis	ALS Environmental	
(include address and phone number)	34 Dogwood Lane	
	Middletown, PA 17057 (717) 944-5541	
Lab Accreditation Number(s)	22-293	
Lab Analysis Date	06/04/2019	
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.	
Comments:		

Facility I.D. Number
101389

Monitoring Point I.D. No.

LCSWMA

PS

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.841	SM4500D
BICARBONATE ALKALINITY	28	SM20-2321
CALCIUM, TOTAL	9.9	EPA 200.7
CALCIUM, DISSOLVED	10.1	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	37.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	5.2	EPA 200.7
MAGNESIUM, DISSOLVED	5	EPA 200.7
MANGANESE, TOTAL (ug/l)	310	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	290	EPA 200.7
NITRATE-NITROGEN	0.2 ND	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.65	FIELD
pH-LAB (SU)	6.72	SM4500B
POTASSIUM, TOTAL	1.8	EPA 200.7
POTASSIUM, DISSOLVED	1.5	EPA 200.7
SODIUM, TOTAL	12.4	EPA 200.7
SODIUM, DISSOLVED	11.8	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	183	FIELD
SPEC. COND., LAB (umhos/cm)	178	EPA 120.1
SULFATE	21.8	EPA 300
ALKALINITY	28	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	161	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

05/24/2019

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 07/15/2019
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section	1103	
SECTION A. SITE IDENTIFIER		
Applicant/permittee:	ancaster County Solid Waste Manage	
Site Name:	rey Farm Landfill	
Facility ID (as issued by DEP):	01389	
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION	
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")	
Facility Name: Frey Farm I	andfill	
County: Lancaster C	County	
Township or Municipality: MANOR TO	WNSHIP	
Landowner Name:WEBER		
Address: 3088 RIVE	R ROAD	
Phone No.:		
Sampling Point: Latitude: 39 c	57 ' 21 " Longitude: 76 ° 26 ' 7.1 "	
Depth to Water Level:	ft. Measured from: X Land Surface TOC	
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL	
Total Well Depth:		
Sampling Depth:	ft. Sampling Method: Pumped Bailed	
Well Purged: Yes	X No Well Volumes Purged:	
Sample Field Filtered (must be 0.45 micr		
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 12:15 PM	
Laboratory(ies) Performing Analysis	ALS Environmental	
(include address and phone number)	34 Dogwood Lane	
	Middletown, PA 17057 (717) 944-5541	
Lab Accreditation Number(s)	22-293	
Lab Analysis Date	06/05/2019	
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.	
Comments:		

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	129	SM20-2321
CALCIUM, TOTAL	0.18	EPA 200.7
CALCIUM, DISSOLVED	0.17	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	259	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	0.11	EPA 200.7
MAGNESIUM, DISSOLVED	0.1 ND	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	8.9	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	7.54	FIELD
pH-LAB (SU)	7.48	SM4500B
POTASSIUM, TOTAL	3.1	EPA 200.7
POTASSIUM, DISSOLVED	2.7	EPA 200.7
SODIUM, TOTAL	228	EPA 200.7
SODIUM, DISSOLVED	228	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	1141	FIELD
SPEC. COND., LAB (umhos/cm)	1150	EPA 120.1
SULFATE	2	EPA 300
ALKALINITY	129	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	625	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.11	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

05/24/2019

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 07/15/2019
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section 1103		
	SECTION A. SITE IDENTIFIER	
Applicant/permittee:	ancaster County Solid Waste Manage	
Site Name: F	rey Farm Landfill	
Facility ID (as issued by DEP):	01389	
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION	
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")	
Facility Name: Frey Farm L	andfill	
County: Lancaster C	County	
Township or Municipality: MANOR TO	WNSHIP	
Landowner Name: KIRCHNER		
Address: 3100 RIVER	R ROAD	
Phone No.:		
Sampling Point: Latitude: 39 o	57 ' 17.9 " Longitude: 76 ° 26 ' 6.28 "	
Depth to Water Level:	ft. Measured from: X Land Surface TOC	
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL	
Total Well Depth:		
Sampling Depth:	ft. Sampling Method: Pumped Bailed	
Well Purged: Yes	X No Well Volumes Purged:	
Sample Field Filtered (must be 0.45 micro		
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 11:53 AM	
Laboratory(ies) Performing Analysis	ALS Environmental	
(include address and phone number)	34 Dogwood Lane	
	Middletown, PA 17057 (717) 944-5541	
Lab Accreditation Number(s)	22-293	
Lab Analysis Date	06/05/2019	
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.	
Comments:		

1.

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 05/24/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.116	SM4500D
BICARBONATE ALKALINITY	12	SM20-2321
CALCIUM, TOTAL	12.1	EPA 200.7
CALCIUM, DISSOLVED	13.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	40.1	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	5.9	EPA 200.7
MAGNESIUM, DISSOLVED	5.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	10	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	16	EPA 200.7
NITRATE-NITROGEN	4.8	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

05/24/2019

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.36	FIELD
pH-LAB (SU)	6.44	SM4500B
POTASSIUM, TOTAL	1.3	EPA 200.7
POTASSIUM, DISSOLVED	1.1	EPA 200.7
SODIUM, TOTAL	15	EPA 200.7
SODIUM, DISSOLVED	15.3	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	203	FIELD
SPEC. COND., LAB (umhos/cm)	196	EPA 120.1
SULFATE	15.8	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	142	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

05/24/2019

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 07/15/2019
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section 1103		
	SECTION A. SITE IDENTIFIER	
Applicant/permittee:	ancaster County Solid Waste Manage	
Site Name:	rey Farm Landfill	
Facility ID (as issued by DEP):	01389	
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION	
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")	
Facility Name: Frey Farm I	andfill	
County: Lancaster C	County	
Township or Municipality: MANOR TO	WNSHIP	
Landowner Name: FRY		
Address: 3106 RIVE	R ROAD	
Phone No.:		
Sampling Point: Latitude: 39 c	57 ' 17.27 " Longitude: 76 ° 26 ' 5.6 "	
Depth to Water Level:	ft. Measured from: X Land Surface TOC	
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL	
Total Well Depth:		
Sampling Depth:	ft. Sampling Method: Pumped Bailed	
Well Purged: Yes	X No Well Volumes Purged:	
Sample Field Filtered (must be 0.45 micr	on)?: X Yes No	
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 1:05 PM	
Laboratory(ies) Performing Analysis	ALS Environmental	
(include address and phone number)	34 Dogwood Lane	
	Middletown, PA 17057 (717) 944-5541	
Lab Accreditation Number(s)	22-293	
Lab Analysis Date	06/05/2019	
Were any holding times exceeded?: Yes X No If yes, please explain in comments field.		
Comments:		

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS FRY

Sample Date

05/24/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	8	SM20-2321
CALCIUM, TOTAL	16.6	EPA 200.7
CALCIUM, DISSOLVED	20.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	107	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	48	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	11.8	EPA 200.7
MAGNESIUM, DISSOLVED	13.3	EPA 200.7
MANGANESE, TOTAL (ug/l)	71	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	70	EPA 200.7
NITRATE-NITROGEN	13.4	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS FRY

Sample Date

05/24/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.18	FIELD
pH-LAB (SU)	6.28	SM4500B
POTASSIUM, TOTAL	1.5	EPA 200.7
POTASSIUM, DISSOLVED	1.4	EPA 200.7
SODIUM, TOTAL	42.6	EPA 200.7
SODIUM, DISSOLVED	43.9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	481	FIELD
SPEC. COND., LAB (umhos/cm)	470	EPA 120.1
SULFATE	9.4	EPA 300
ALKALINITY	8	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	243	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.8	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.3	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number 101389

Monitoring Point I.D. No.

PS FRY

Sample Date

05/24/2019

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 07/15/2019
DEP USE ONLY
Date Received

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

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

General Reference: Act 101 Section	1103						
SECTION A. SITE IDENTIFIER							
Applicant/permittee:	ancaster County Solid Waste Manage						
Site Name:	rey Farm Landfill						
Facility ID (as issued by DEP):	01389						
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION						
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")						
Facility Name: Frey Farm I	andfill						
County: Lancaster C	County						
Township or Municipality: MANOR TO	WNSHIP						
Landowner Name:BECK							
Address: 3125 RIVE	R ROAD						
Phone No.:							
Sampling Point: Latitude: 39 c	57 ' 11.6 " Longitude: 76 ° 26 ' 5.4 "						
Depth to Water Level:	ft. Measured from: X Land Surface TOC						
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL						
Total Well Depth:							
Sampling Depth:	ft. Sampling Method: Pumped Bailed						
Well Purged: Yes	X No Well Volumes Purged:						
Sample Field Filtered (must be 0.45 micr	on)?: X Yes No						
Sample Date:(mm/dd/yy) 05/2	4/2019 Sample Collection Time: 12:54 PM						
Laboratory(ies) Performing Analysis	ALS Environmental						
(include address and phone number)	34 Dogwood Lane						
	Middletown, PA 17057 (717) 944-5541						
Lab Accreditation Number(s)	22-293						
Lab Analysis Date	06/06/2019						
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.						
Comments:							

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

05/24/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	171	SM20-2321
CALCIUM, TOTAL	0.18	EPA 200.7
CALCIUM, DISSOLVED	0.71	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.2
CHLORIDE	107	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	0.14	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	6.3	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number 101389

Monitoring Point I.D. No.

PS BECK

Sample Date

05/24/2019

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	8.01	FIELD
pH-LAB (SU)	7.94	SM4500B
POTASSIUM, TOTAL	0.52	EPA 200.7
POTASSIUM, DISSOLVED	0.5 ND	EPA 200.7
SODIUM, TOTAL	159	EPA 200.7
SODIUM, DISSOLVED	169	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	779	FIELD
SPEC. COND., LAB (umhos/cm)	785	EPA 120.1
SULFATE	22.2	EPA 300
ALKALINITY	171	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	512	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.3	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

05/24/2019

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

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

T Please indicate detection limit if analyte is not detected.





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

June 5, 2019

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

Certificate of Analysis

Project Name: CONTIGUOUS LANDOWNER-

3044 RIVER RD

Purchase Order: PO1000126

Workorder: **3035954**

Workorder ID: 2ND QTR 2019-3044 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

ALS Environmental Laboratory Locations Across North America

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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: 3035954 2ND QTR 2019-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035954001	3044 River Road, Conestoga, PA	Water	5/24/2019 10:53	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035954 2ND QTR 2019-3044 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 3035954 2ND QTR 2019-3044 RIVER RD

Lab ID: 3035954001 Date Collected: 5/24/2019 10:53 Matrix: Water

Sample ID: 3044 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

VOLATUE ODG.::::CC				RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/3/19 15:23	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 15:23	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	123		%	62 - 133	SW846 8260B			6/3/19 15:23	DD	K
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			6/3/19 15:23	DD	K
Dibromofluoromethane (S)	119	4	%	78 - 116	SW846 8260B			6/3/19 15:23	DD	K
Toluene-d8 (S)	114		%	76 - 127	SW846 8260B			6/3/19 15:23	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	11		mg/L	5	SM2320B-2011			5/25/19 15:25	MBW	С
Alkalinity, Total	11	1	mg/L	5	SM2320B-2011			5/25/19 15:25	MBW	С
Ammonia-N	ND		mg/L	0.100	D6919-09			5/31/19 20:57	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
` '	20.8		mg/L	2.0	EPA 300.0			5/25/19 09:02	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 09:02	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/5/19 13:09	PAG	1
Nitrate-N 1	18.3		mg/L	0.20	EPA 300.0			5/25/19 09:02	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 09:02	CHW	С
pH 6	6.56	2	pH_Units		S4500HB-11			5/25/19 15:25	MBW	С
Phenolics N	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance 2	212		umhos/cm	1	SM2510B-2011		_	5/25/19 15:25	MBW	С

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

ANALYTICAL RESULTS

Workorder: 3035954 2ND QTR 2019-3044 RIVER RD

Lab ID: 3035954001 Date Collected: 5/24/2019 10:53 Matrix: Water

Sample ID: 3044 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters Results F	lag Units	551						
		RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Sulfate ND	mg/L	2.0	EPA 300.0			5/25/19 09:02	CHW	С
Total Dissolved Solids 126	3 mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC) 0.80	mg/L	0.50	SM5310B-2011			5/29/19 04:00	PAG	F
Turbidity 0.20	NTU	0.10	SM2130B-2011			5/25/19 07:32	MBW	С
METALS								
Calcium, Total 12.0	mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:22	MNP	D1
Calcium, Dissolved 12.8	mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:40	MNP	Ε
Iron, Total ND	mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:22	MNP	D1
Iron, Dissolved ND	mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:40	MNP	Е
Magnesium, Total 9.9	mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:22	MNP	D1
Magnesium, Dissolved 9.7	mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:40	MNP	E
Manganese, Total 0.034	mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:22	MNP	D1
Manganese, Dissolved 0.033	mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:40	MNP	E
Potassium, Total 1.4	mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:22	MNP	D1
Potassium, Dissolved 1.2	mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:40	MNP	Е
Sodium, Total 7.6	mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:22	MNP	D1
Sodium, Dissolved 7.6	mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:40	MNP	Ε
FIELD PARAMETERS								
pH, Field (SM4500B) 6.60	pH_Units		Field			5/24/19 10:53	BGS	Ν
Specific Conductance, Field 220	umhos/cm	1	Field			5/24/19 10:53	BGS	Ν
Temperature 13.20	Deg. C		Field			5/24/19 10:53	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035954 2ND QTR 2019-3044 RIVER RD

PARAMETER QUAL	IFIERS
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Lab ID	#	Sample ID	Analytical Method	Analyte
3035954001	1	3044 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
3035954001	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.

3035954001 3 3044 River Road, Conestoga, PA S2540C-11 Total Dissolved Solids

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

3035954001 4 3044 River Road, Conestoga, PA SW846 8260B Dibromofluoromethane

The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 119 and the control limits were 78 to 116. This result was reported at a dilution of 1.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035954 2ND QTR 2019-3044 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	
3035954001	3044 River Road, Conestoga, PA	D6919-09		
3035954001	3044 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3035954001	3044 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3035954001	3044 River Road, Conestoga, PA	EPA 300.0		
3035954001	3044 River Road, Conestoga, PA	EPA 410.4		
3035954001	3044 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3035954001	3044 River Road, Conestoga, PA	Field		
3035954001	3044 River Road, Conestoga, PA	S2540C-11		
3035954001	3044 River Road, Conestoga, PA	S4500HB-11		
3035954001	3044 River Road, Conestoga, PA	SM2130B-2011		
3035954001	3044 River Road, Conestoga, PA	SM2320B-2011		
3035954001	3044 River Road, Conestoga, PA	SM2510B-2011		
3035954001	3044 River Road, Conestoga, PA	SM5310B-2011		
3035954001	3044 River Road, Conestoga, PA	SW846 8260B		
3035954001	3044 River Road, Conestoga, PA	SW846 9020B		

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Report ID: 3035954 - 6/5/2019 Page 7 of 9

34 Dogwood Lans + Middletown, PA 17057 + 717 944 5541 + Far. 717 944 1430			ALL SHA	ADED AREAS MUST BE COMPLETED BY	EAS ML	ST BE C	OMPLE	TEO BY T	DED AREAS MUST BE COMPLETED BY THE CLIENT !	NT/			
	717,944,1430	Charlenge	8	SAMPI	ER, INS	TRUCT	NO SNC	SAMPLER, INSTRUCTIONS ON THE BACK	×		= '	208	* 7 5 6 5
lient Name: Lancaster County Solid Waste MA		Type	AG	À.	AN	8	Ţ	7	- P.	ď	7		were unumarist to impreted by Recelving Lab)
Address: 1299 Harrsburg Pike, P.O. Box 4424		Container	40 ml	125 ml	250 ml	40 ml	1	500 ml	250 ml	250 ml	77	500 ml Co	Cooler Temp: 5.18 Therm ID: U.S.
Lancaster, PA 17604		Preservative	HC	H2SO4	H2S04	PC	1	H2SO4	HNO3	HN03	None	None No.	No. of Coolers: Y N Initial
contact: Mark Reider					AN	ALYSES/	METHOD	ANALYSES/METHOD REQUESTED	8				Custody Seals Present?
Phone#: (717)735-0193									4				(if present) Soals Intact?
noject Namel#: LCSWMA - Quarterly									uw 16	6	33		Received on Ice?
3ili To: Lancaster County Solid Waste MA	1								W.	и,,	os	٥	COC/Labels Complete/Accurate?
TAT X Normal-Standard TAT is 10:12 business days Rush-Subject to ALS approval and surcharges.	ss days. rcharges.)Cs			s: Ca, Fe	'uw '6W	103° CI'		Correct Containers?
quire						OA 09		O	lstaN	Fe, I	1'701	COS	Correct Sample Volumes?
mail? -Y		1		b		978-91		л' cc		eე :s		ł "Vlin	Correct Preservation?
Same			:00	HO-0	XO	₽8W.	W	1-EHI	osail 6M ,	letal	H, T		HeadspaceNotables?
	Time	.e.	1		Enter Num	ber of Con	tainers Pe	Enter Number of Containers Per Sample or Field Results Below	Field Re	ults Belov	d		Sample/COC Comments
3044RIVERRD 05/24/19	1053	G DW	1 2	٠	2	3/1	×	T.	1	٠		+	
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0			ij	Ш								10	□Composite_Sampling □Rental_Equipment □Other:
'roject Comments:	LOGGED BY(signature):	(signature)						BIND		greti	s	Standard	Special Processing State Samples
	REVIEWED BY(signature):	8Y(signatur	*					3ivo		Wat	eta rable	CLP-like	USACE Collected In
Relinguished By / Company Name	Date	Time //		Rece	ived By /	Received By / Company Name	Name	7	Dake	Time	ovilad Delive	- NSACE	Navy
24 - 24 - 24 - 24 - 24 - 24 - 24 - 24 -	Mark	100	N.	3	1		l	7		101	Report	Reportable to PADEP?	Sample Disposal X
			9		1		1				Yes		X qe
			8				1				PWSID#		Special
		1	10			l	h				EDDS:	EDDS: Format Type-	



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

F: (717) 944-1430

Condition of Sample Receipt Form

. Were airbills / tracking numbers present and recorded?	YES	NO
Tracking number:		
2. Are Custody Seals on shipping containers intact?	YES	NO
3. Are Custody Seals on sample containers intact?	YES	NO
4. Is there a COC (Chain-of-Custody) present?	NEO .	NO
5. Are the COC and bottle labels complete, legible and in agreement?		NO
. 5a. Does the COC contain sample locations?	-	NO
5b. Does the COC contain date and time of sample collection for all samples?	-	NO
5c. Does the COC contain sample collectors name?	(FE)	NO
5d. Does the COC note the type(s) of preservation for all bottles?	CUES	NO
Se. Does the COC note the number of bottles submitted for each sample?	MES	NO
5f. Does the COC note the type of sample, composite or grab?	TES	NO
5g. Does the COC note the matrix of the sample(s)?	(YES)	NO
5. Are all aqueous samples requiring preservation preserved correctly?	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	(FES)	NO
8. Are all samples within holding times for the requested analyses?	AS	0
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)	OB.	No.
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	YES	NO
11. Were the samples received on ice?	YES	NO
12. Were sample temperatures measured at 0.0-6.0°C.	YES	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		NO
13a. Are the samples required for SDWA compliance reporting?	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	YES	NO
Cooler #:		
Temperature (°C): 5,8		
Thermometer ID. T. H.Ma)		
Radiological (µCi):		

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

Ph is expired, but will be analyzed with a qualifier

- LD station

Rev. 4/29/2019





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June 6, 2019

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

Certificate of Analysis

Project Name: CONTIGUOUS LANDOWNER-

3052 RIVER RD

Purchase Order: PO1000126

Workorder: **3035957**

Workorder ID: 2ND QTR 2019-3052 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

ALS Environmental Laboratory Locations Across North America

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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: 3035957 2ND QTR 2019-3052 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035957001	3052 River Road, Conestoga, PA	Water	5/24/2019 11:06	5/24/2019 15:31	Mr. Brian G Shade

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

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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: 3035957 2ND QTR 2019-3052 RIVER RD

Notes

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

Standard Acronyms/Flags

- J Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
- U Indicates that the analyte was Not Detected (ND)
- N Indicates presumptive evidence of the presence of a compound
- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- RDL Reporting Detection Limit
- ND Not Detected indicates that the analyte was Not Detected at the RDL
- Cntr Analysis was performed using this container
- RegLmt Regulatory Limit
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- %Rec Percent Recovery
- RPD Relative Percent Difference
- LOD DoD Limit of Detection
- LOQ DoD Limit of Quantitation
- 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

DL

* Result outside of QC limits

DoD Detection Limit

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

ANALYTICAL RESULTS

Workorder: 3035957 2ND QTR 2019-3052 RIVER RD

Lab ID: 3035957001 Date Collected: 5/24/2019 11:06 Matrix: Water

Sample ID: 3052 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/3/19 16:56	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 16:56	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	128		%	62 - 133	SW846 8260B			6/3/19 16:56	DD	K
4-Bromofluorobenzene (S)	115	5	%	79 - 114	SW846 8260B			6/3/19 16:56	DD	K
Dibromofluoromethane (S)	119	4	%	78 - 116	SW846 8260B			6/3/19 16:56	DD	K
Toluene-d8 (S)	113		%	76 - 127	SW846 8260B			6/3/19 16:56	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	6		mg/L	5	SM2320B-2011			5/25/19 16:17	MBW	С
Alkalinity, Total	6	1	mg/L	5	SM2320B-2011			5/25/19 16:17	MBW	С
Ammonia-N	0.142		mg/L	0.100	D6919-09			5/31/19 20:30	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	21.2		mg/L	2.0	EPA 300.0			5/25/19 08:58	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 08:58	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/6/19 11:32	PAG	I
Nitrate-N	17.8		mg/L	0.20	EPA 300.0			5/25/19 08:58	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 08:58	CHW	С
рН	6.32	2	pH_Units		S4500HB-11			5/25/19 16:17	MBW	С
Phenolics	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance	205		umhos/cm	1	SM2510B-2011		_	5/25/19 16:17	MRW	С

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

ANALYTICAL RESULTS

Workorder: 3035957 2ND QTR 2019-3052 RIVER RD

Lab ID: 3035957001 Date Collected: 5/24/2019 11:06 Matrix: Water

Sample ID: 3052 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Sulfate	2.6		mg/L	2.0	EPA 300.0			5/25/19 08:58	CHW	С
Total Dissolved Solids	162	3	mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC)	0.79		mg/L	0.50	SM5310B-2011			5/29/19 08:18	PAG	F
Turbidity	0.18		NTU	0.10	SM2130B-2011			5/25/19 08:36	R2B	С
METALS										
Calcium, Total	16.4		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:29	MNP	D1
Calcium, Dissolved	18.0		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:47	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:29	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:47	MNP	Ε
Magnesium, Total	7.2		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:29	MNP	D1
Magnesium, Dissolved	7.5		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:47	MNP	Е
Manganese, Total	0.021		mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:29	MNP	D1
Manganese, Dissolved	0.021		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:47	MNP	Е
Potassium, Total	1.4		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:29	MNP	D1
Potassium, Dissolved	1.3		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:47	MNP	E
Sodium, Total	7.4		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:29	MNP	D1
Sodium, Dissolved	7.7		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:47	MNP	Е
FIELD PARAMETERS										
pH, Field (SM4500B)	6.29		pH_Units		Field			5/24/19 11:06	BGS	Ν
Specific Conductance, Field	209		umhos/cm	1	Field			5/24/19 11:06	BGS	Ν
Temperature	13.50		Deg. C		Field			5/24/19 11:06	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035957 2ND QTR 2019-3052 RIVER RD

PARAMETER QUAL	IFIERS
----------------	--------

Lab ID	#	Sample ID	Analytical Method	Analyte
3035957001	1	3052 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
3035957001	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.

3035957001 3 3052 River Road, Conestoga, PA S2540C-11 Total Dissolved Solids

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

3035957001 4 3052 River Road, Conestoga, PA SW846 8260B Dibromofluoromethane

The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 119 and the control limits were 78 to 116. This result was reported at a dilution of 1.

3035957001 5 3052 River Road, Conestoga, PA SW846 8260B 4-Bromofluorobenzene

The surrogate 4-Bromofluorobenzene for method SW846 8260B was outside of control limits. The % Recovery was reported as 115 and the control limits were 79 to 114. This result was reported at a dilution of 1.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035957 2ND QTR 2019-3052 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3035957001	3052 River Road, Conestoga, PA	D6919-09	
3035957001	3052 River Road, Conestoga, PA	EPA 200.7	EPA ACID
3035957001	3052 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
3035957001	3052 River Road, Conestoga, PA	EPA 300.0	
3035957001	3052 River Road, Conestoga, PA	EPA 410.4	
3035957001	3052 River Road, Conestoga, PA	EPA 420.4	420.4/9066
3035957001	3052 River Road, Conestoga, PA	Field	
3035957001	3052 River Road, Conestoga, PA	S2540C-11	
3035957001	3052 River Road, Conestoga, PA	S4500HB-11	
3035957001	3052 River Road, Conestoga, PA	SM2130B-2011	
3035957001	3052 River Road, Conestoga, PA	SM2320B-2011	
3035957001	3052 River Road, Conestoga, PA	SM2510B-2011	
3035957001	3052 River Road, Conestoga, PA	SM5310B-2011	
3035957001	3052 River Road, Conestoga, PA	SW846 8260B	
3035957001	3052 River Road, Conestoga, PA	SW846 9020B	

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(ALS) Enutronmental		9			1	100	Š	REQUEST FOR ANALYSIS					1	io I
is required to a construction of the construct	1 - Fax 713	944 1430	4	ALL SHAI	DED AREAS MUST BE COMPLETED BY SAMPLER. INSTRUCTIONS ON THE BA	DED AREAS MUST BE COMPLET SAMPLER, INSTRUCTIONS ON	T BE CO	NS ON 7		THE CLIENT CK.	NT /		¥	
Client Name: LCSWMA - Gerald E. Miller, Sr.			Container	AG	AN	AN	90		Я	Я	4	교	*	5 D 3 5 9 5 7 % eceiving Lab)
Address: 3052 River Road			Container	40 ml	125 ml	250 ml	40 m	1	250 ml	125 ml	125 ml	500 mi	500 ml Cc	Cooler Temp: 9.1 Therm ID: 431
Conestoga, PA 17516			Preservative	5	H2S04	H2SO4	宁	1	H2SO4	HNO3	HNO3	None	None No.	
Contact: Gerald E. Miller, Sr.						ANA	ANALYSES/METHOD	ETHOD A	REQUESTED	ED				Custody Seals Present7
Phone#: (717) 872-5117		Ī								1		ŀ		(if present) Seals Infact?
Project Namel#: LCSWMA - Quarterly										nM,)	.E.	_	Received on Ice?
Bill To: Lancaster County Solid Waste MA										'BW	EN '	†0 9	0	COC/Labels Complete/Accurate?
TAT X Normal-Standard TAT is 10-12 business days. Rush-Subject to ALS approval and surcharges. Approved By: Email?	0-12 business or roval and surch Approved By:	days. arges.					Seo AOC®		go	Metals: Ca, Fe,	a, Fe, Mg, Mn, k	NOS' NO3' CI' 3	нсоз	Cont in Good Cond.? Correct Containers? Correct Sample Volumes?
				3	Н	3	8-918		о'и-		D ::\$ 8	SpC SpC	, Kiliniiy,	Headanaco/Volation?
Sample Description/Location Sa (as it will appear on the lab report)	Sample Date	Time	0 10 O'	001	0-0 E	Enter Number of Containers Per Sample	rol Conta	iners Per		Field Res	Or Field Results Below	'Hd		Courier/Tracking #: Sample/COC Comments
1.3052RIVERRD 05/	05/24/19	1106	G DW	2	+	2	37	×	-	÷	-	-	+	
2			17	ij			10			ij				
89							17							
4														
2						1 6								
9														
7						1	I							
8								. 4-						
6													7,0	14
10	ī												, L	DONer:
Project Comments:		LOGGED BY(signature):	signature):						300		-	Si	Standard	Special Processing State Samples
		RVIEWED B	REVIEWED BY(signature):						100		311	eta	CLP-like	USACE Collected in
Retinguished By I Company Name		Date	Time //5-3/	/	Receiv	Received By / Company Name	ompany	Name	25	Bate	Time 153	Delive	USACE	Navy N
3		10/12		1	3				100			Report	Reportable to PADEP?	Sample Disposal X
2				9								Yes		Lab X NC
7				80								# QISMd		Special
				40								200	FOR FARMS JUNE	



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

Condition of Sample Receipt Form

. Were airbills / tracking numbers present and recorded?	E YES	NO
Tracking number:		
. Are Custody Seals on shipping containers intact?	YES	NO
. Are Custody Seals on sample containers intact?	YES	NO
Is there a COC (Chain-of-Custody) present?	VES	NO
. Are the COC and bottle labels complete, legible and in agreement?		NO
Sa. Does the COC contain sample locations?	VES	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?		NO
5d. Does the COC note the type(s) of preservation for all bottles?	CYES	NO
Se. Does the COC note the number of bottles submitted for each sample?		NO
5f. Does the COC note the type of sample, composite or grab?		NO
5g. Does the COC note the matrix of the sample(s)?	(YES	NO
. Are all aqueous samples requiring preservation preserved correctly?	(YES)	NO
. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	(E)	NO
. Are all samples within holding times for the requested analyses?	20	NO
Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)	- AS	140
0. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	YES	NO
1. Were the samples received on ices		NO
2. Were sample temperatures measured at 0.0-6.0°C		NO
3. 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?		CNO
13b. Did the client provide a SDWA PWS ID#?	1	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-97	YES	МО
	100	МО
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?		
Thermometer ID T HAVO	_	
a series and and		
Radiological (µCl):		

Rev. 4/29/2019

~ COS 5/24/15





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

June 14, 2019

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

Certificate of Analysis

Project Name: FREY FARM Workorder: 3035925

Purchase Order: PO1000126 Workorder ID: 2ND QTR 2019 3056 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3035925 2ND QTR 2019 3056 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035925001	3056RIVERRD	Water	5/24/2019 10:00	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035925 2ND QTR 2019 3056 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 3035925 2ND QTR 2019 3056 RIVER RD

Lab ID: 3035925001 Date Collected: 5/24/2019 10:00 Matrix: Water

Sample ID: 3056RIVERRD Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/1/19 04:49	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/1/19 04:49	PDK	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	118		%	62 - 133	SW846 8260B			6/1/19 04:49	PDK	K
4-Bromofluorobenzene (S)	110		%	79 - 114	SW846 8260B			6/1/19 04:49	PDK	K
Dibromofluoromethane (S)	110		%	78 - 116	SW846 8260B			6/1/19 04:49	PDK	K
Toluene-d8 (S)	115		%	76 - 127	SW846 8260B			6/1/19 04:49	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND		mg/L	5	SM2320B-2011			5/25/19 12:34	MBW	С
Alkalinity, Total	ND	1	mg/L	5	SM2320B-2011			5/25/19 12:34	MBW	С
Ammonia-N	0.207		mg/L	0.100	D6919-09			5/31/19 05:09	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	28.6		mg/L	2.0	EPA 300.0			5/25/19 05:07	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 05:07	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/4/19 14:50	PAG	1
Nitrate-N	19.1		mg/L	0.20	EPA 300.0			5/25/19 05:07	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 05:07	CHW	С
рН	5.63	2	pH_Units		S4500HB-11			5/25/19 12:34	MBW	С
Phenolics	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance	207		umhos/cm	1	SM2510B-2011		_	5/25/19 12:34	MBW	С

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ANALYTICAL RESULTS

Workorder: 3035925 2ND QTR 2019 3056 RIVER RD

Lab ID: 3035925001 Date Collected: 5/24/2019 10:00 Matrix: Water

Sample ID: 3056RIVERRD Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Sulfate	ND		mg/L	2.0	EPA 300.0			5/25/19 05:07	CHW	С
Total Dissolved Solids	138	3	mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			5/28/19 23:41	PAG	F
Turbidity	0.10		NTU	0.10	SM2130B-2011			5/25/19 07:32	MBW	С
METALS										
Calcium, Total	8.1		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:51	MNP	D1
Calcium, Dissolved	9.0		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/12/19 15:30	MNP	Е
Iron, Total	ND		mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:51	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/12/19 15:30	MNP	Ε
Magnesium, Total	12.6		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:51	MNP	D1
Magnesium, Dissolved	14.2		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/12/19 15:30	MNP	Е
Manganese, Total	0.12		mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:51	MNP	D1
Manganese, Dissolved	0.14		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/12/19 15:30	MNP	Е
Potassium, Total	1.7		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:51	MNP	D1
Potassium, Dissolved	1.2		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/12/19 15:30	MNP	Е
Sodium, Total	7.5		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:51	MNP	D1
Sodium, Dissolved	8.1		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/12/19 15:30	MNP	Е
FIELD PARAMETERS										
pH, Field (SM4500B)	5.70		pH_Units		Field			5/24/19 10:00	BGS	Ν
Specific Conductance, Field	215		umhos/cm	1	Field			5/24/19 10:00	BGS	Ν
Temperature	13.60		Deg. C		Field			5/24/19 10:00	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035925 2ND QTR 2019 3056 RIVER RD

PARAMETER	QUALIFIERS
------------------	------------

Lab ID	#	Sample ID	Analytical Method	Analyte
3035925001	1	3056RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg	CaCO3/L.	
3035925001	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.

3035925001 3 3056RIVERRD S2540C-11 Total Dissolved Solids

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035925 2ND QTR 2019 3056 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	
3035925001	3056RIVERRD	D6919-09		
3035925001	3056RIVERRD	EPA 200.7	EPA ACID	
3035925001	3056RIVERRD	EPA 200.7	EPA TRMD	
3035925001	3056RIVERRD	EPA 300.0		
3035925001	3056RIVERRD	EPA 410.4		
3035925001	3056RIVERRD	EPA 420.4	420.4/9066	
3035925001	3056RIVERRD	Field		
3035925001	3056RIVERRD	S2540C-11		
3035925001	3056RIVERRD	S4500HB-11		
3035925001	3056RIVERRD	SM2130B-2011		
3035925001	3056RIVERRD	SM2320B-2011		
3035925001	3056RIVERRD	SM2510B-2011		
3035925001	3056RIVERRD	SM5310B-2011		
3035925001	3056RIVERRD	SW846 8260B		
3035925001	3056RIVERRD	SW846 9020B		

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schopmatier - intocernativitisti - Prensid-Austria - In 2014 (19) - cernapadan. 34 Dogwood Land - Middletown, PA 17057 - 717.944.5541 + Fac. 717.944.1430			L SITA	SAMP	ER. INS	TRUCT	ONS ON	SAMPLER, INSTRUCTIONS ON THE BACK	K.		(7)			-
Client Name: Lancaster County Solid Waste MA	-	Container	AG	AN	AN	93	1	Ы	Ы	Ы	P. P.	* 30	3 5 9 2 5 * dby R	d by Receiving Lab)
Address: 1299 Harrisburg Pike, P.O. Box 4424.	٥	Container	40 ml	125 ml	250 ml	40 m)	ı,	500 ml	250 ml	250 ml	21	500 ml Cr	Cooler Temp: 4,2 Therm ID: 40	101
Lancaster, PA 17604	E	Preservative	HCI	H2SO#	H2SO4	Ę	ı	H2SO4	HNO3	HNO3	None	None No.	ı I	N Initial
Contact: Mark Reider					AN	ALYSES/	METHOD	ANALYSES/METHOD REQUESTED	ED			-	Custody Seals Present?	
Phane#: (717)735-0193													(if present) Seals Intact?	
									uw.		.A.		Received on Ice?	
Bill To: Lancaster County Solid Waste MA	Ī								.ем.	C, Na	bos	9	COC/Labels Complete/Accurate?	
TAT Normal-Standard TAT is 10-12 business days. TAT Rush-Subject to ALS approval and surcharges. Approved By:	des.					eo AOCa		ac	Metals: Ca, Fe,	, Fe, Mg, Mn, K	NOS' NO3' CI'	нсоз	Cont in Good Cond.? Correct Containers? Correct Sample Volumes?	
Fax? -7 No.:	T		1	Н	18	28-916		-N' CC		eg :sje	SpC.	, ylknil	Correct Preservation?	
Sample Description/Location Sample (as if will appear on the lab report) Date Ti	Tine 10 0'	(htaM**	001	0-0	KOT Num	ber of Con	A Lainers Pe	Enter Number of Containers Per Sample or Field Results Below	I Sel K, N	Met Met	'Hd		Courier/Tracking #: Sample/COC Comments	
1 3056RIVERRD 05/24/19 10	1000	G DW	2	÷	2	3	×	-	-		+	-		
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Project Comments:	LOGGED BY (signature):	nature):	Н					3)40		37(1	Si	Standard	Special Processing	State Samples
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96	Date	Time		Rece	ived By,	Received By, I Company Name	Name		Date	Time		USACE	Navy	N.
	5/24/12/2	M3P.	2	the	A	nu	2 123		5/44	1531	a			Z
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7			œ		1						# OISMd		Special	
6			10					i			EDDS:	EDDS: Format Type-		

ALS



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

Condition of Sample Receipt Form

3035925

Loncaster Country Solid Waste US 5/04	
1. Were airbills / tracking numbers present and recorded?	NO
Tracking number:	
2. Are Custody Seals on shipping containers intact?	NO
3. Are Custody Seals on sample containers intact?	NO
4. Is there a COC (Chain-of-Custody) present?	NO
5. Are the COC and bottle labels complete, legible and in agreement?	NO
Sa. Does the COC contain sample locations?	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
Se. Does the COC note the number of bottles submitted for each sample?YES	(NO)
Sf. Does the COC note the type of sample, composite or grab?	NO
Sg. Does the COC note the matrix of the sample(s)?	NO
6. Are all aqueous samples requiring preservation preserved correctly?	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	NO
8. Are all samples within holding times for the requested analyses?	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	NO
11. Were the samples received on ice?	NO.
12. Were sample temperatures measured at 0.0-6.0°C	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below	(NO)
13a. Are the samples required for SDWA compliance reporting?	(00)
13b. Did the client provide a SDWA PWS ID#? YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	NO
13d. Did the client provide the SDWA sample location ID/Description?	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	МО
Cooler #:	
Temperature (°C): 4.2	
Thermometer ID: 401	
Radiological (μCi):	

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

BOHLUTS FIXED BY CUS 5/04

BOHLLES do not have sample dates or times.

Rev. 4/29/2019





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June 5, 2019

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

Certificate of Analysis

Project Name: FREY FARM Workorder: 3035926

Purchase Order: PO1000126 Workorder ID: 2ND QTR 2019 3060 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

Ms. Susan J Scherer Project Coordinator

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SAMPLE SUMMARY

Workorder: 3035926 2ND QTR 2019 3060 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035926001	3060RIVERRD	Water	5/24/2019 10:09	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035926 2ND QTR 2019 3060 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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

ANALYTICAL RESULTS

Workorder: 3035926 2ND QTR 2019 3060 RIVER RD

Lab ID: 3035926001 Date Collected: 5/24/2019 10:09 Matrix: Water

Sample ID: 3060RIVERRD Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/1/19 05:13	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/1/19 05:13	PDK	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	117		%	62 - 133	SW846 8260B			6/1/19 05:13	PDK	K
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			6/1/19 05:13	PDK	K
Dibromofluoromethane (S)	110		%	78 - 116	SW846 8260B			6/1/19 05:13	PDK	K
Toluene-d8 (S)	112		%	76 - 127	SW846 8260B			6/1/19 05:13	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND		mg/L	5	SM2320B-2011			5/25/19 12:43	MBW	С
Alkalinity, Total	ND	1	mg/L	5	SM2320B-2011			5/25/19 12:43	MBW	С
Ammonia-N	0.185		mg/L	0.100	D6919-09			5/31/19 01:43	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	22.9		mg/L	2.0	EPA 300.0			5/25/19 05:19	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 05:19	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/4/19 15:23	PAG	1
Nitrate-N	17.5		mg/L	0.20	EPA 300.0			5/25/19 05:19	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 05:19	CHW	С
рН	5.52	2	pH_Units		S4500HB-11			5/25/19 12:43	MBW	С
Phenolics	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance	197		umhos/cm	1	SM2510B-2011		-	5/25/19 12:43	MBW	С

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

ANALYTICAL RESULTS

Workorder: 3035926 2ND QTR 2019 3060 RIVER RD

Lab ID: 3035926001 Date Collected: 5/24/2019 10:09 Matrix: Water

Sample ID: 3060RIVERRD Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
- arameters	rtoodito	ı iag	Offits	NDE	Widthed	1 Toparou	Dy	7 trialy20a		Onti
Sulfate	10.3		mg/L	2.0	EPA 300.0			5/25/19 05:19	CHW	С
Total Dissolved Solids	102	3	mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC)	0.58		mg/L	0.50	SM5310B-2011			5/28/19 23:41	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			5/25/19 07:32	MBW	С
METALS										
Calcium, Total	9.7		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:56	MNP	D1
Calcium, Dissolved	10.2		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:17	MNP	Ε
Iron, Total	ND		mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:56	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:17	MNP	Ε
Magnesium, Total	10.8		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:56	MNP	D1
Magnesium, Dissolved	10.8		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:17	MNP	Ε
Manganese, Total	0.12		mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:56	MNP	D1
Manganese, Dissolved	0.12		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:17	MNP	Е
Potassium, Total	2.0		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:56	MNP	D1
Potassium, Dissolved	1.8		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:17	MNP	Е
Sodium, Total	7.1		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 11:56	MNP	D1
Sodium, Dissolved	7.1		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:17	MNP	Е
FIELD PARAMETERS										
pH, Field (SM4500B)	5.49		pH_Units		Field			5/24/19 10:09	BGS	Ν
Specific Conductance, Field	209		umhos/cm	1	Field			5/24/19 10:09	BGS	Ν
Temperature	13.20		Deg. C		Field			5/24/19 10:09	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035926 2ND QTR 2019 3060 RIVER RD

2

3060RIVERRD

PARAMETER	QUALIFIERS
------------------	------------

3035926001

Lab ID	#	Sample ID	Analytical Method	Analyte
3035926001	1	3060RIVERRD	SM2320B-2011	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg	CaCO3/L.	

рΗ 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. 3035926001 3060RIVERRD S2540C-11 **Total Dissolved Solids** 3

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

S4500HB-11

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035926 2ND QTR 2019 3060 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	
3035926001	3060RIVERRD	D6919-09		
3035926001	3060RIVERRD	EPA 200.7	EPA ACID	
3035926001	3060RIVERRD	EPA 200.7	EPA TRMD	
3035926001	3060RIVERRD	EPA 300.0		
3035926001	3060RIVERRD	EPA 410.4		
3035926001	3060RIVERRD	EPA 420.4	420.4/9066	
3035926001	3060RIVERRD	Field		
3035926001	3060RIVERRD	S2540C-11		
3035926001	3060RIVERRD	S4500HB-11		
3035926001	3060RIVERRD	SM2130B-2011		
3035926001	3060RIVERRD	SM2320B-2011		
3035926001	3060RIVERRD	SM2510B-2011		
3035926001	3060RIVERRD	SM5310B-2011		
3035926001	3060RIVERRD	SW846 8260B		
3035926001	3060RIVERRD	SW846 9020B		

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			1	4 × ×	Ch ABEAC MITET BE COMPILETED BY				V-III-A	A IVE					•
24 Dymonium - Malbaren de 1992 i France 20 Austria (d. 1914) 1910 i e erra depletation. 34 Octomotol Leine - Maldre (denn., P.A. 1705) i 317 944 5541 i Fran, 717 544, 1430	Fex. 717.944, 1430		ALL SHA		AKEAS PLER.	NSTRUC	TIONS (DED AKEAS MUST BE COMPLETED BY TH SAMPLER. INSTRUCTIONS ON THE BACK	A THE CLIENT	LIENI					
Client Name: Lancasler County Solid Waste MA		-	AG		NY P	90 1		Я	Я.	PL	4				d by Receiving Lab)
Address: 1299 Harrisburg Pike, P.O. Box 4424		Containgr	40 ml	ml 125 ml	ml 250 mL	ml. 40 ml	P	500 ml	nl 250 ml	nl 250 ml	ml 21	. 500 ml	Cooler Temp: 4.6	. 4.6 Them 1D:	104 :
Lancaster, PA 17604		Preservative	오	HZSOM	CM H2SO4	PG HC	7	H2S04	NH HINOS	3 HN03	None St	le None	No. of Coolers:		Y N Initial
Contact: Mark Reider						ANALYSI	S/METH	ANALYSES/METHOD REQUESTED	ESTED				Cust	Custody Seals Present?	
Phone#: (717) 735-0193			L	-	-	-	-		M				lif pri	(if present) Seals Intact?	
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Bill To: Lancaster County Solid Waste MA					_				5W .	K' N		_	COC/Labels C	COC/Labels Complete/Accurate?	
	iness days. I surcharges. Id By:				-	₹0 AOC₹	1.35.75	0	Metals: Ca, Fe	, Fe, Mg, Mn, 1	105' N03' CI'	1003	Correc	Cont. in Good Cond.? Correct Containers? Correct Sample Volumes?	
Email? -Y Fax? -Y No.:				-				'A' CO	olved M		N '\$01	SpC.	8 #	Correct Preservation?	
tion/Location	Sample Date Time	O 10 O' WhiteM"	001	0-0	A 100	wmber of	Containers	Per Sa	e or Field R, N	- las	'Hd		Courier/Tracking #	ing #: Sample/COC Comments	ments
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Project Comments:	LOGGED	LOGGED BY(signature)	4					3190		3001			Standard	Special Processing	S
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Of A Man Description of the State of the Sta	Date	# 2	,	4 /	eceived !	N Com	Received By Company Name	A GILL	S/JU	U IC3	a	Delive S	USACE	Navy	ž ₹
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301 Fulling Mill Road Middletown, PA 17057 P: (717) 944-5541 F: (717) 944-1430

Condition of Sample Receipt Form

Cannoter	Work Order #: 3035926	Initials:	6/24	
	esent and recorded?		NONE	YES NO
The second second second	Tracking number:		\sim	
2. Are Custody Seals on shipping cont	tainers intact?		NÓNE 1	YES NO
	iners intact?			YES NO
	present?			YES NO
	plete, legible and in agreement?			YES NO
	locations?			YES NO
	d time of sample collection for all samples?			YES) NO
	collectors name?		1.	PES NO
	of preservation for all bottles?			YES NO
	er of bottles submitted for each sample?			YES NO
	sample, composite or grab?			YES NO
5g. Does the COC note the matrix	of the sample(s)?			YES NO
	preservation preserved correctly?			YES) NO
7. Were all samples placed in the prop	per containers for the requested analyses, wit	h sufficient volume?	······	YES NO
	es for the requested analyses?			YES NO
9. Were all sample containers received	d intact and headspace free when required? (a	not broken, leaking,	frozen, etc.)	YES NO
10. Did we receive trip blanks (applie	es only for methods EPA 504, EPA 524.2 and 1	63 LE (LL Hg)?	(N/A)	YES NO
11. Were the samples received on ice	?	************		YES NO
	ured at 0.0-6.0°C			YES NO
13. Are the samples DW matrix ? If YE	ES, fill out Reportable Drinking Water question	s below		MES) NO
13a. Are the samples required for	SDWA compliance reporting?	***********************	N/A	YES (NO)
13b. Did the client provide a SDW	A 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 SD	WA sample location ID/Description?	*****************	N/A	YES NO
13e. Did the client provide the SD	WA sample type (D, E, R, C, P, S)?		W/A	YES NO
Cooler #:				
Temperature (°C): 46		وتصرف		
Thermometer ID: 40	<u> </u>			
Radiological (µCi):				

COMMENTS (Required for all NO responses above and any sample non-conformance):
Bottus do not have sample date/time.
*Bottle #s fixed by dls 6/04

Rev. 4/29/2019





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June 5, 2019

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

Certificate of Analysis

Project Name: CONTIGUOUS LANDOWNER-

3076 RIVER RD

Purchase Order: PO1000126

Workorder: **3035955**

Workorder ID: 2ND QTR 2019-3076 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

ALS Environmental Laboratory Locations Across North America

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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: 3035955 2ND QTR 2019-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035955001	3076 River Road, Conestoga, PA	Water	5/24/2019 11:22	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035955 2ND QTR 2019-3076 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 3035955 2ND QTR 2019-3076 RIVER RD

Lab ID: 3035955001 Date Collected: 5/24/2019 11:22 Matrix: Water

Sample ID: 3076 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/3/19 15:46	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 15:46	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	125		%	62 - 133	SW846 8260B			6/3/19 15:46	DD	K
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			6/3/19 15:46	DD	K
Dibromofluoromethane (S)	116		%	78 - 116	SW846 8260B			6/3/19 15:46	DD	K
Toluene-d8 (S)	116		%	76 - 127	SW846 8260B			6/3/19 15:46	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	7		mg/L	5	SM2320B-2011			5/25/19 16:08	MBW	С
Alkalinity, Total	7	1	mg/L	5	SM2320B-2011			5/25/19 16:08	MBW	С
Ammonia-N	0.606		mg/L	0.100	D6919-09			5/31/19 18:54	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	45.5		mg/L	2.0	EPA 300.0			5/25/19 08:46	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 08:46	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/5/19 14:34	PAG	I
Nitrate-N	11.8		mg/L	0.20	EPA 300.0			5/25/19 08:46	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 08:46	CHW	С
pН	6.27	2	pH_Units		S4500HB-11			5/25/19 16:08	MBW	С
Phenolics	ND	=	mg/L	0.005	EPA 420.4	5/29/19 14:29	C D	5/30/19 05:54	C D	Н
Specific Conductance	269		umhos/cm	1	SM2510B-2011	2.22.7020		5/25/19 16:08	_	
Specific Conductation	200		3111103/0111	,	5/4/2010D-2011			3/20/13 10:00	۷۷ ک.۰۰	5

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ANALYTICAL RESULTS

Workorder: 3035955 2ND QTR 2019-3076 RIVER RD

Lab ID: 3035955001 Date Collected: 5/24/2019 11:22 Matrix: Water

Sample ID: 3076 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

	,									
Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Sulfate	20.2		mg/L	2.0	EPA 300.0			5/25/19 08:46	CHW	С
Total Dissolved Solids	138	3	mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC)	0.95		mg/L	0.50	SM5310B-2011			5/29/19 04:00	PAG	F
Turbidity	0.84		NTU	0.10	SM2130B-2011			5/25/19 07:32	MBW	С
METALS										
Calcium, Total	13.8		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:25	MNP	D1
Calcium, Dissolved	15.8		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:44	MNP	Ε
Iron, Total	ND		mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:25	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:44	MNP	Ε
Magnesium, Total	8.3		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:25	MNP	D1
Magnesium, Dissolved	8.8		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:44	MNP	Ε
Manganese, Total	0.25		mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:25	MNP	D1
Manganese, Dissolved	0.26		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:44	MNP	Ε
Potassium, Total	3.2		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:25	MNP	D1
Potassium, Dissolved	3.2		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:44	MNP	Ε
Sodium, Total	18.7		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:25	MNP	D1
Sodium, Dissolved	20.0		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:44	MNP	Ε
FIELD PARAMETERS										
pH, Field (SM4500B)	6.22		pH_Units		Field			5/24/19 11:22	BGS	Ν
Specific Conductance, Field	275		umhos/cm	1	Field			5/24/19 11:22	BGS	Ν
Temperature	13.10		Deg. C		Field			5/24/19 11:22	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035955 2ND QTR 2019-3076 RIVER RD

PARAMETER QUALIFIER	2

Lab ID	#	Sample ID	Analytical Method	Analyte
3035955001	1	3076 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
3035955001	2	3076 River Road, Conestoga, PA	S4500HB-11	рН

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.

3035955001 3 3076 River Road, Conestoga, PA S2540C-11 Total Dissolved Solids

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035955 2ND QTR 2019-3076 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3035955001	3076 River Road, Conestoga, PA	D6919-09	
3035955001	3076 River Road, Conestoga, PA	EPA 200.7	EPA ACID
3035955001	3076 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
3035955001	3076 River Road, Conestoga, PA	EPA 300.0	
3035955001	3076 River Road, Conestoga, PA	EPA 410.4	
3035955001	3076 River Road, Conestoga, PA	EPA 420.4	420.4/9066
3035955001	3076 River Road, Conestoga, PA	Field	
3035955001	3076 River Road, Conestoga, PA	S2540C-11	
3035955001	3076 River Road, Conestoga, PA	S4500HB-11	
3035955001	3076 River Road, Conestoga, PA	SM2130B-2011	
3035955001	3076 River Road, Conestoga, PA	SM2320B-2011	
3035955001	3076 River Road, Conestoga, PA	SM2510B-2011	
3035955001	3076 River Road, Conestoga, PA	SM5310B-2011	
3035955001	3076 River Road, Conestoga, PA	SW846 8260B	
3035955001	3076 River Road, Conestoga, PA	SW846 9020B	

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ame: LCSWMA - Brian Sensenich s: 3076 Rover Road Conestoga, PA 17516 Shian Sensenich (717) 676-5779 Name#: LCSWMA - Quanterly LCSWMA - Brian Sensenich X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days.	Containes	ALL SHAL	DEU AREAS MUST BE COMPLETED BY THI SAMPLER, INSTRUCTIONS ON THE BACK	AS MUS	DED AREAS MUST BE COMPLETED BY SAMPLED INSTRUCTIONS ON THE BA	BIETE		HE CLIENT					
ame: LCSWMA - Brian Sensenich Strokestoga, PA 17516 Conestoga, PA 17516 Shan Sensenich (717) 676-5779 Nameff: LCSWMA - Quarterly LCSWMA - Brian Sensenich X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is Approved By:	Containes			Z .		SON	E BACK.		F			* 5 5 0	-
s: 3076 Rover Road Conestoga, PA 17516 : Grian Sensenich : (717) 676-5779 Name/#: LCSWMA - Quartedy LCSWMA - Brian Sensenich X Normal-Standard TAT is 10-12 business days. X Rush-Subject to ALS approved By:	-	9W	AN	AN	ន	1		F.	7	1	n di	ery mornious (completed by Receiving Lab)	ing Lab)
Conestoga, PA 17516 Brian Sensenich (717) 676-5779 Name/#: LCSWMA - Quarterly LCSWMA - Brian Sensenich X Normal-Standard TAT is 10-12 business days. Rush-Subject to ALS approval and surcharges. Approved By:	Container	40 ml	125 ml	250 ml	40 ml	1	250 ml 12	125 ml 12	125 ml S	500 ml 50	500 ml Cooler Temp:	Temp: 2.1 Therm 10: 40)	
Bra ame	Preservative	HG	H2S04	нгзом	귳	1	H2SO4 H	HNO3 H	HNO3	None N	None No. of Coolers:	,	Initial
all Signature (1)	ij			ANA	YSESIME	THOD RE	ANALYSES/METHOD REQUESTED					Custody Seals Present?	Ī
Name CSS X							,	1		-		(if present) Seals Intact?	
SOI X SEL							JM.					Received on Ice?	
X #							pM.				COCUT	COCILebels Complete/Accurate?	
- Administra					NOCE		als: Ca, Fe		3' MO3' CI'			Cont. in Good Cond.? Correct Containers?	
	-				0928-9		ved Wel			0	ily, HC	Correct Preservation?	
	_	00	но	XC	91/8W	V		eN		ds 'e		Headspace/Volatiles?	
Sample Description/Location Sample of (as it will appear on the lab report) Date Time C	eM")1		To Numbe	r of Contain	Ers Per Se	e o	K, ald Results	Below.	11		CourierTracking #: Sample/COC Comments	
3076RIVERRD 05/24/19 1122 G	NO O	2		24	XXX		-	1	-	1	-		
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A Relinguished By Company, Name Date	Time)	Receiv	ed By / C	Received By / Company Name	эте	J D	Date T			USACE	Navy 🔲	N.
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		9								%ex		×	NO.
		8				1			ā	# OISMA		Special	
		10				W A				EDDS: Format Type-	nat Type-		1
* G=Grab; C=Composite ***Matrix	nix - Al=Air	DW=Dr	nking Wat	ir. GW=Gr	oundwater	OI=Oil; Of	=Other Liqu	id; SL=Sl	og: SO	-Soil: WP=	***Waldx - Al-Air; DW=Drinking Water, GW=Groundwater, Ol=Oil; OL=Oiner Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater		1000

ALS



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

Condition of Sample Receipt Form

Were airbills / tracking numbers present and recorded?	YES	NO
Tracking number:		
Are Custody Seals on shipping containers intact?	YES	NO
Are Custody Seals on sample containers intact?NONE	YES	NO
(s there a COC (Chain-of-Custody) present?	VES	NO
Are the COC and bottle labels complete, legible and in agreement?	YES	NO
. 5a. Does the COC contain sample locations?		NO
5b. Does the COC contain date and time of sample collection for all samples?		NO
Sc. Does the COC contain sample collectors name?	AEZ	NO
5d. Does the COC note the type(s) of preservation for all bottles?	(AB)	NO
Se. Does the COC note the number of bottles submitted for each sample?	MES	NO
5f. Does the COC note the type of sample, composite or grab?		NO
5g. Does the COC note the matrix of the sample(s)?		NO
. Are all aqueous samples requiring preservation preserved correctly?	(YES)	NO
. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	(E)	NO
. Are all samples within holding times for the requested analyses?	25	(No
. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)	1	(NO
0. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	YES	NO
1. Were the samples received on ice?	YES	NO
2. Were sample temperatures measured at 0.0-6.0°C	(YES)	NO
3. 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?	YES	NO
13b. Did the client provide a SDWA PWS ID#?	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-97	YES	NO
13d. Did the client provide the SDWA sample location (D/Description?	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	YES	NO
Cooler #:		
Temperature (°C): 2,1		
Thermometer ID: THYO)		
Radiological (μCi):		

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

Ph 15 expired, but will be analyzed with a gralifier

Rev. 4/29/2019





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June 5, 2019

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

Certificate of Analysis

Project Name: FREY FARM Workorder: 3035947

Purchase Order: PO1000126 Workorder ID: 2ND QTR 2019 3079 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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

Ms. Susan J Scherer Project Coordinator

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SAMPLE SUMMARY

Workorder: 3035947 2ND QTR 2019 3079 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035947001	3079RIVERRD	Water	5/24/2019 13:15	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035947 2ND QTR 2019 3079 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 3035947 2ND QTR 2019 3079 RIVER RD

Lab ID: 3035947001 Date Collected: 5/24/2019 13:15 Matrix: Water

Sample ID: 3079RIVERRD Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/1/19 07:10	PDK	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Trichlorofluoromethane	ND	4	ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/1/19 07:10	PDK	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	122		%	62 - 133	SW846 8260B			6/1/19 07:10	PDK	K
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			6/1/19 07:10	PDK	K
Dibromofluoromethane (S)	114		%	78 - 116	SW846 8260B			6/1/19 07:10	PDK	K
Toluene-d8 (S)	113		%	76 - 127	SW846 8260B			6/1/19 07:10	PDK	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	28		mg/L	5	SM2320B-2011			5/25/19 14:50	MBW	С
Alkalinity, Total	28	1	mg/L	5	SM2320B-2011			5/25/19 14:50	MBW	С
Ammonia-N	0.841		mg/L	0.100	D6919-09			5/31/19 17:59	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	37.4		mg/L	2.0	EPA 300.0			5/25/19 06:35	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 06:35	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/4/19 15:48	PAG	1
Nitrate-N	ND		mg/L	0.20	EPA 300.0			5/25/19 06:35	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 06:35	CHW	С
рН	6.72	2	pH_Units		S4500HB-11			5/25/19 14:50	MBW	С
Phenolics	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance	178		umhos/cm	1	SM2510B-2011		=	5/25/19 14:50	MBW	С

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

ANALYTICAL RESULTS

Workorder: 3035947 2ND QTR 2019 3079 RIVER RD

Lab ID: 3035947001 Date Collected: 5/24/2019 13:15 Matrix: Water

Sample ID: 3079RIVERRD Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
0.46-1-	04.0	9		0.0	EDA 000 0					
Sulfate	21.8	_	mg/L	2.0	EPA 300.0			5/25/19 06:35	CHW	С
Total Dissolved Solids	161	3	mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			5/29/19 04:00	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			5/25/19 07:32	MBW	С
METALS										
Calcium, Total	9.9		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:03	MNP	D1
Calcium, Dissolved	10.1		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:21	MNP	Е
Iron, Total	ND		mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:03	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:21	MNP	E
Magnesium, Total	5.2		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:03	MNP	D1
Magnesium, Dissolved	5.0		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:21	MNP	Ε
Manganese, Total	0.31		mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:03	MNP	D1
Manganese, Dissolved	0.29		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:21	MNP	Ε
Potassium, Total	1.8		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:03	MNP	D1
Potassium, Dissolved	1.5		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:21	MNP	Е
Sodium, Total	12.4		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:03	MNP	D1
Sodium, Dissolved	11.8		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:21	MNP	Е
FIELD PARAMETERS										
pH, Field (SM4500B)	6.65		pH_Units		Field			5/24/19 13:15	BGS	Ν
Specific Conductance, Field	183		umhos/cm	1	Field			5/24/19 13:15	BGS	Ν
Temperature	14.50		Deg. C		Field			5/24/19 13:15	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035947 2ND QTR 2019 3079 RIVER RD

PA	RAN	IETER	QUAL	IFIERS
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Lab ID # Sample ID Analytical Method Analyte

3035947001 1 3079RIVERRD SM2320B-2011 Alkalinity, Total

The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.

3035947001 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.

3035947001 3 3079RIVERRD S2540C-11 Total Dissolved Solids

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

3035947001 4 3079RIVERRD SW846 8260B Trichlorofluoromethane

The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 133 and the control limits were 38 to 123.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035947 2ND QTR 2019 3079 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3035947001	3079RIVERRD	D6919-09	
3035947001	3079RIVERRD	EPA 200.7	EPA ACID
3035947001	3079RIVERRD	EPA 200.7	EPA TRMD
3035947001	3079RIVERRD	EPA 300.0	
3035947001	3079RIVERRD	EPA 410.4	
3035947001	3079RIVERRD	EPA 420.4	420.4/9066
3035947001	3079RIVERRD	Field	
3035947001	3079RIVERRD	S2540C-11	
3035947001	3079RIVERRD	S4500HB-11	
3035947001	3079RIVERRD	SM2130B-2011	
3035947001	3079RIVERRD	SM2320B-2011	
3035947001	3079RIVERRD	SM2510B-2011	
3035947001	3079RIVERRD	SM5310B-2011	
3035947001	3079RIVERRD	SW846 8260B	
3035947001	3079RIVERRD	SW846 9020B	

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34 Dogwood Lane + Middletown, PA (1057 + 717.944.5541 + Fax. 717.944.1430	SE. 717,944,1430	7		SAMPL	ER. INS	SAMPLER, INSTRUCTIONS ON THE BACK	NO SN	THE BA	Ŗ.	ı				
lient Name: Lancaster County Solid Waste MA		Contacher	AG	AN	AN	90	1	4	Ы	4	럾	زُ	U S S Y 4 F F Receive	Receiving Lab)
ddress: 1299 Harrisburg Pike, P.O. Box 4424		Container	40 m	125 ml	250 ml	40 mi	Ţ	500 ml	250 m)	250 ml	27	S00 ml Co	Cooler Temp: 9.7 Therm ID: 40%	
Lancaster, PA 17604		Preservative	÷.	H2S04	H2SO4	护	J	H2SO4	HNO3	HNO3	None	None No.		Initial
onlact: Mark Reider					ANA	ANALYSES/METHOD REQUESTED	ETHOD	REQUEST	TED				Custody Seals Present?	
hane#: (717) 735-0193									4				(if present) Seals Intact?	
roject Namef#: LCSWWA - Quarterly Fire Co.									ıM ,	е	3,		Received on Ice?	
ill To: Lancaster County Solid Waste MA									BW,	K' N	bos	0	COC/Labels Complete/Accurate?	
TAT X Normal-Standard TAT is 10-12 business days. Rash-Subject to ALS approved and surcharges. Approved By:	less days. iurcharges. By:	-				, VOCs		3	etals: Ca, Fe	e' Mg, Mn, 1	75' NO3' CI'	600	Cont. in Good Cond.? Correct Containers? Correct Sample Volumos?	
\\.				7		978 9		100.	M ba	C9'1		oh _A yii	Correct Preservation?	
ax? Y No.		-	_	НС	X	918	-	N-E		:slel	DT.	inils	Headspace/Volatilles?	
Sample Description/Location Sample (as it will appear on the lab ropout) Date	le Time	10 O'	01	20	orter Numb	Enter Number of Containers Per Sample or Field Results Below	ainers Per	Sample o	r Field Res	Me sults Belo	Hq		Courier/Tracking #: Sample/COC Comments	
3079RIVERRD 05/24/19	19 1315	G DW	2	g.	2	3.12	×	+	4	1	146	1		
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Project Comments:	10GGED B	LOGGED BY(signature):						tuvo		211	Sa	Standard	Special Processing	State Samples
	REVIEWED	REVIEWED BY(signature):	re):					živo.		3791	stable	CLP-like	USACE	Collected In
Religquighed By/ Company Name	Date	Time		Rece	ived By (Received By I Company Name	Мате	1	Çate	Time	Delive	USACE	Mavy	N
MASSIMON MED	6/ayla	370	12	4	1			2/5	3/16	13.23	3			2
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	-	1	æ 3								#OISMA	WSIO#	Special	
			9								EDDS:	-ormai iype-		



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

Condition of Sample Receipt Form

Client: Lancaste County Work Order #: 3035947 Initials: Date: 5	24/10	Y-
). Were airbills / tracking numbers present and recorded?NONE	YES	NO
Tracking number:		1.0
2. Are Custody Seals on shipping containers intact?	YES	NO
3. Are Custody Seals on sample containers intact?	YES	NO
4. Is there a COC (Chain-of-Custody) present?	VES	NO
5. Are the COC and bottle labels complete, legible and in agreement?	YES)	NO
. Sa. Does the COC contain sample locations?	(AES)	NO
5b. Does the COC contain date and time of sample collection for all samples?	YES)	NO
Sc. Does the COC contain sample collectors name?	FEB	NO
Sd. Does the COC note the type(s) of preservation for all bottles?	(Ses	NO
Se. Does the COC note the number of bottles submitted for each sample?	MES	NO
5f. Does the COC note the type of sample, composite or grab?	TES	NO
5g: Does the COC note the matrix of the sample(s)?	VES	NO
6. Are all aqueous samples requiring preservation preserved correctly?	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	(MES)	NO
8. Are all samples within holding times for the requested analyses?	OB	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)	(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	YES	NO
11. Were the samples received on ice?	(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C	YES	(NO)
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below	(ES)	NO
13a. Are the samples required for SDWA compliance reporting?	YES	(NO)
13b. Did the client provide a SDWA PWS ID#?	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-97	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	YES	NO
Cooler #		
Temperature (°C); 7.7		
Thermometer ID		
Radiological (µCi):		
COMMENTS OF THE MANO		

Samples temporal above 0'c-6°c

Ph is expired, but will be analyzed with a quelifier

-co 5/24/19

Rev. 4/29/2019





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

June 5, 2019

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

Certificate of Analysis

Project Name: CONTIGUOUS LANDOWNER- Workorder:

3088 RIVER RD

Purchase Order: PO1000126

Vorkorder: 3035949

Workorder ID: 2ND QTR 2019-3088 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

ALS Environmental Laboratory Locations Across North America

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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: 3035949 2ND QTR 2019-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035949001	3088 River Road, Conestoga PA	Water	5/24/2019 12:15	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035949 2ND QTR 2019-3088 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 preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- -- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

- J Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
- U Indicates that the analyte was Not Detected (ND)
- N Indicates presumptive evidence of the presence of a compound
- MDL Method Detection Limit
- PQL Practical Quantitation Limit
- RDL Reporting Detection Limit
- ND Not Detected indicates that the analyte was Not Detected at the RDL
- Cntr Analysis was performed using this container
- RegLmt Regulatory Limit
- LCS Laboratory Control Sample
- MS Matrix Spike
- MSD Matrix Spike Duplicate
- DUP Sample Duplicate
- %Rec Percent Recovery
- RPD Relative Percent Difference LOD DoD Limit of Detection
- LOQ DoD Limit of Quantitation
- DOD Limit of Quantitat

 DL DoD Detection Limit
- Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
- (S) Surrogate Compound
- NC Not Calculated
- * Result outside of QC limits

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ANALYTICAL RESULTS

Workorder: 3035949 2ND QTR 2019-3088 RIVER RD

Lab ID: 3035949001 Date Collected: 5/24/2019 12:15 Matrix: Water

Sample ID: 3088 River Road, Conestoga PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/3/19 12:39	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 12:39	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	115		%	62 - 133	SW846 8260B			6/3/19 12:39	DD	K
4-Bromofluorobenzene (S)	110		%	79 - 114	SW846 8260B			6/3/19 12:39	DD	K
Dibromofluoromethane (S)	112		%	78 - 116	SW846 8260B			6/3/19 12:39	DD	K
Toluene-d8 (S)	115		%	76 - 127	SW846 8260B			6/3/19 12:39	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	129		mg/L	5	SM2320B-2011			5/25/19 14:59	MBW	С
Alkalinity, Total	129	1	mg/L	5	SM2320B-2011			5/25/19 14:59	MBW	С
Ammonia-N	ND		mg/L	0.100	D6919-09			5/31/19 18:12	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	259		mg/L	5.0	EPA 300.0			5/30/19 12:02	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 09:05	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/5/19 11:07	PAG	1
Nitrate-N	8.9		mg/L	0.20	EPA 300.0			5/25/19 09:05	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 09:05	CHW	С
рН	7.48	2	pH_Units		S4500HB-11			5/25/19 14:59	MBW	С
Phenolics	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance	1150		umhos/cm	1	SM2510B-2011		-	5/25/19 14:59	MBW	С

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ANALYTICAL RESULTS

Workorder: 3035949 2ND QTR 2019-3088 RIVER RD

Lab ID: 3035949001 Date Collected: 5/24/2019 12:15 Matrix: Water

Sample ID: 3088 River Road, Conestoga PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Sulfate	2.0		mg/L	2.0	EPA 300.0			5/25/19 09:05	CHW	С
Total Dissolved Solids	625	3	mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			5/29/19 04:00	PAG	F
Turbidity	0.11		NTU	0.10	SM2130B-2011			5/25/19 07:32	MBW	С
METALS										
Calcium, Total	0.18		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:06	MNP	D1
Calcium, Dissolved	0.17		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:24	MNP	Ε
Iron, Total	ND		mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:06	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:24	MNP	Ε
Magnesium, Total	0.11		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:06	MNP	D1
Magnesium, Dissolved	ND		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:24	MNP	Е
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:06	MNP	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:24	MNP	Е
Potassium, Total	3.1		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:06	MNP	D1
Potassium, Dissolved	2.7		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:24	MNP	Е
Sodium, Total	228		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:06	MNP	D1
Sodium, Dissolved	228		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:24	MNP	Ε
FIELD PARAMETERS										
pH, Field (SM4500B)	7.54		pH_Units		Field			5/24/19 12:26	BGS	Ν
Specific Conductance, Field	1141		umhos/cm	1	Field			5/24/19 12:26	BGS	Ν
Temperature	15.10		Deg. C		Field			5/24/19 12:26	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035949 2ND QTR 2019-3088 RIVER RD

PARAMETER QUALIFIER	ER QUALIFIE	RS
---------------------	-------------	----

Lab ID	#	Sample ID	Analytical Method	Analyte
3035949001	1	3088 River Road, Conestoga PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity is	s titrate	d to a pH of 4.5 and reported as mg C	CaCO3/L.	
3035949001	2	3088 River Road, Conestoga PA	S4500HB-11	рН
The pH analysis is a	n "anal	yze immediately" analysis. Parameter	rs identified as "analyze immediately" r	equire analysis within 15 minutes of

collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.

3035949001

3 3088 River Road, Conestoga PA S2540C-11

Total Dissolved Solids

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035949 2ND QTR 2019-3088 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	
3035949001	3088 River Road, Conestoga PA	D6919-09		
3035949001	3088 River Road, Conestoga PA	EPA 200.7	EPA ACID	
3035949001	3088 River Road, Conestoga PA	EPA 200.7	EPA TRMD	
3035949001	3088 River Road, Conestoga PA	EPA 300.0		
3035949001	3088 River Road, Conestoga PA	EPA 410.4		
3035949001	3088 River Road, Conestoga PA	EPA 420.4	420.4/9066	
3035949001	3088 River Road, Conestoga PA	Field		
3035949001	3088 River Road, Conestoga PA	S2540C-11		
3035949001	3088 River Road, Conestoga PA	S4500HB-11		
3035949001	3088 River Road, Conestoga PA	SM2130B-2011		
3035949001	3088 River Road, Conestoga PA	SM2320B-2011		
3035949001	3088 River Road, Conestoga PA	SM2510B-2011		
3035949001	3088 River Road, Conestoga PA	SM5310B-2011		
3035949001	3088 River Road, Conestoga PA	SW846 8260B		
3035949001	3088 River Road, Conestoga PA	SW846 9020B		

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State Continger Continge	ALS) Environmental				REG	CHAIN OF QUEST FC	CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS	CUSTODY/	YSIS	0	Generated by ALS	·			- 5
This Where and De Kalboon Topic Annual Market and De Kalboon Topic To	It deposed are a majbre of this - these filters piot a far liberaries	. some Myddense.		ALL SH	SAMPL	ERS MIL	TRICT	OMPLE	THE BA	S S CLI	I N				-
1982 Richer Road 1982	Client Name; LCSWMA - Hans Weber and D	Deb Kalbach	Containes	AG	AS.	AN	93	1	Ы	4	Ы	1	* 303	*	ving Lab)
The content of the	Address: 3088 River Road		Compiner	40 ml	125 ml	250 ₪	40 ml	1	500 ml	250 ml	250 ml	77	-		
History Walter and Deb Kalbach AMALYSES METHOD REQUESTED Control of Salah Frenser) AMALYSES METHOD REQUESTED Control of Salah Frenser) AMALYSES METHOD REQUESTED Control of Salah Frenser) Amalyses and Deb Kalbach Control of Salah Frenser) Amalyses Method of Salah Frenser) Amalyses Method of Control of Salah Frenser) Amalyses Method of Control of Salah Frenser) Amalyses Method of Control of Salah Frenser) Amalyses Method of Salah Frenser) Amalyses	Conestoga, PA 17516		Preservative	£	H2S04	-		1	H2SO4	HNO3	HNO3	None	-		Initial
TOTAL SECTION CONTRICT CONT	Contact: Hans Weber and Deb Kalbach					AN	ALYSESII	AETHOD	REQUES	ED				Custody Seals Present?	
Community Comm	Phone#: (717) 419-7982									19				(if present) Seals Intact?	1
X Norman-Standard TAT is 10-12 business days. X Norman-Standard TAT is 10-12 business da	Project Name/#: LCSWMA - Quarierly									JW.	е	3		Received on Ice?	
Normal-Standard TAT is 10-12 business days. Coat In Coat Containing Standard TAT is 10-12 business days. Coat Containing Standard TAT is 10-12 business days. Coat Coat Coat Coat Coat Coat Coat Coat	Bill To: LCSWMA - Hans Weber and Deb Ka	albach								ĎW '	KN	os	000	Labels Complete/Accurate?	
1	TAT X Normat-Standard TAT is 10-1 TAT Standard TAT is 10-1 Rush-Subject to ALS approv Date Required:	12 business days. ral and surcharges. proved By:					AOC\$		TA	stals: Ca, Fe	e, Mg, Mn,	15' NO3' CI'	EOS	Cont. In Good Cond.? Correct Containers? Correct Sample Volumes?	
Family Part			_				928		coo	ew ba	Ca, F		ià' HC	Conect Preservation?	
Sample Description Location Sample Page 1	Ц		_	0	НС	X	948/	_0	3-N'		(sle)		inits	Headspace/Volatiles?	
DSG24/19 1215 G DW 2 1 2 2 2 1 1 1 1 1	Sample Description/Location (as it will appear on the lab report)			01	- T	OT PER	ber of Con	Ainers Pe	r Sample o	Pied Re	sufts Belo	HO .	I	I/Tracking #: Sample/COC Comments	
STATE STAT	1 308BRIVER RD	100	_		÷	2	3.8	×	7	6	•	-	-		
First Engineering Engineering First Engineering Engineer	2						9								
Feet Comments Company Name Com	8			L			12/18	ì							
Relinquished By / Company Name Date Time Received By / Company Name Date Time Special Processing Reportable to PADEP? Sample Disposal Special Processing Reviews By / Company Name Date Time Secrived By / Company Name Date Time Special Processing Reviews By / Company Name Date Time Special Processing Reviews By / Company Name Date Time Special Processing	4														
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Comments Conference Conference Conference Comments Com	6												A C		CLabor
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Relinquished By / Company Name Date Time Received By / Company Name Date Time Date Date Disposal X Date Date Date Date Disposal X Date Date Date Date Disposal X Date	Project Comments.	LOGGED BY	(signature):						bio.		341	S	Standard		e Samples
Relinquished By / Company Name Dayte Time Navy N		REVIEWED	8Y(signature	-(i					31/Q		301		CLP-Ilke		llected in
Reportable to PADEP? Sample Disposal X	Relinquished By I Company Nam	Date (ST) Su		2	Rece	ived By	Сотрап	Name	E	18			USACE	ÁxeN	ž 2
Yes Yes Lab X		1		4					1	-		Repor	able to PADE	Sample Disposal	PA
* G=Grab, C=Composite **Metrx - Al=Air, DW=Drinking Water, GW=Groundwater, Ol=Oil; OL=Other Liquid; SL=Sludge, SO=Soil; WP=Wisslewater	15.			9 .								Yes		_	2
* G=Grab, C=Composite **Metrix - Al=Air, DW=Drinking Water, GW=Groundwater, Ol=Oit; OL=Other Liquid; SL=Sludge, SO=Soit; WP=Wispe; WW=Wastewater				, 9			ŀ	ŀ	Î			EDDS:	ormat Type-		
		C=Camposite	ABITIX - AI=	Air, DW=	Ninking W	ater, GW=	Groundwa	er. 01=011	OL=Other	Liquid; SI	-Sludge.	SO=Soil; W	P=Wipe: WW=	Vaslewater	



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

Condition of Sample Receipt Form

Client: Lancaste County Work Order #: 3050949 Initials: (1) Date:	24/10	·
1. Were airbills / tracking numbers present and recorded?	YES	NO
Tracking number:		
2. Are Custody Seals on shipping containers intact?	YES	NO
3. Are Custody Seals on sample containers intact?	YES	NO
4. Is there a COC (Chain-of-Custody) present?	VES	NO
5. Are the COC and bottle labels complete, legible and in agreement?	(YES)	NO
5a. Does the COC contain sample locations?	SES SES	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?		NO
5d. Does the COC note the type(s) of preservation for all bottles?	120	NO
Se. Does the COC note the number of bottles submitted for each sample?		NO
5f. Does the COC note the type of sample, composite or grab?		NO
5g. Does the COC note the matrix of the sample(s)?		NO
6. Are all aqueous samples requiring preservation preserved correctly?	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	MES	NO
8. Are all samples within holding times for the requested analyses?	CHES	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)	VES	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	YES	NO
11. Were the samples received on ice?	(YES)	NO
12. Were sample temperatures measured at 0.0-6.0°C	YES	NO
13. Are the samples DW matrix? If YES, fill out Reportable Drinking Water questions below	(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	YES	CNO
13b. Did the client provide a SDWA PWS ID#?	YES	NO
13c. Are all agueous unpreserved SDWA samples pH 5-97	YES	NO.
13d. Did the client provide the SDWA sample location ID/Description?	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	YES	NO
Temperature (°C): 6.5° Thermometer ID: THMo1		
Radiological (μCi):		

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

Semples tomped above 60-602

Ph is expired, but will be analyzed with a qualifier

Rev. 4/29/2019





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June 5, 2019

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

Certificate of Analysis

3035952

Project Name: CONTIGUOUS LANDOWNER- Workorder:

3100 RIVER RD

Purchase Order: PO1000126 Workorder ID: 2ND QTR 2019-3100 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

ALS Environmental Laboratory Locations Across North America

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SAMPLE SUMMARY

Workorder: 3035952 2ND QTR 2019-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035952001	3100 River Road, Conestoga, PA	Water	5/24/2019 11:53	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035952 2ND QTR 2019-3100 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 3035952 2ND QTR 2019-3100 RIVER RD

Lab ID: 3035952001 Date Collected: 5/24/2019 11:53 Matrix: Water

Sample ID: 3100 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/3/19 14:13	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 14:13	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	120		%	62 - 133	SW846 8260B			6/3/19 14:13	DD	K
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			6/3/19 14:13	DD	K
Dibromofluoromethane (S)	116		%	78 - 116	SW846 8260B			6/3/19 14:13	DD	K
Toluene-d8 (S)	112		%	76 - 127	SW846 8260B			6/3/19 14:13	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	12		mg/L	5	SM2320B-2011			5/25/19 15:17	MBW	С
Alkalinity, Total	12	1	mg/L	5	SM2320B-2011			5/25/19 15:17	MBW	С
Ammonia-N	0.116		mg/L	0.100	D6919-09			5/31/19 18:26	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	40.1		mg/L	2.0	EPA 300.0			5/25/19 09:30	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 09:30	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/5/19 12:30	PAG	1
Nitrate-N	4.8		mg/L	0.20	EPA 300.0			5/25/19 09:30	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 09:30	CHW	С
рН	6.44	2	pH_Units		S4500HB-11			5/25/19 15:17	MBW	С
Phenolics	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance	196		umhos/cm	1	SM2510B-2011		=	5/25/19 15:17	MBW	С

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ANALYTICAL RESULTS

Workorder: 3035952 2ND QTR 2019-3100 RIVER RD

Lab ID: 3035952001 Date Collected: 5/24/2019 11:53 Matrix: Water

Sample ID: 3100 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

	•									
Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Sulfate	15.8		mg/L	2.0	EPA 300.0			5/25/19 09:30	CHW	С
Total Dissolved Solids	142	3	mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	SM5310B-2011			5/29/19 04:00	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			5/25/19 07:32	MBW	С
METALS										
Calcium, Total	12.1		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:19	MNP	D1
Calcium, Dissolved	13.2		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:37	MNP	Е
Iron, Total	ND		mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:19	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:37	MNP	E
Magnesium, Total	5.9		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:19	MNP	D1
Magnesium, Dissolved	5.9		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:37	MNP	E
Manganese, Total	0.010		mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:19	MNP	D1
Manganese, Dissolved	0.016		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:37	MNP	Е
Potassium, Total	1.3		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:19	MNP	D1
Potassium, Dissolved	1.1		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:37	MNP	E
Sodium, Total	15.0		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:19	MNP	D1
Sodium, Dissolved	15.3		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:37	MNP	Е
FIELD PARAMETERS										
pH, Field (SM4500B)	6.36		pH_Units		Field			5/24/19 11:53	BGS	Ν
Specific Conductance, Field	203		umhos/cm	1	Field			5/24/19 11:53	BGS	Ν
Temperature	14.10		Deg. C		Field			5/24/19 11:53	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035952 2ND QTR 2019-3100 RIVER RD

PARAMETER QUALIFIER	IFIERS	AL	QU	ΓER	MET	Αľ	R	Α	P
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Lab ID	#	Sample ID	Analytical Method	Analyte
3035952001	1	3100 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
3035952001	2	3100 River Road, Conestoga, PA	S4500HB-11	рН

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.

3035952001 3 3100 River Road, Conestoga, PA S2540C-11 Total Dissolved Solids

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035952 2ND QTR 2019-3100 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method
3035952001	3100 River Road, Conestoga, PA	D6919-09	
3035952001	3100 River Road, Conestoga, PA	EPA 200.7	EPA ACID
3035952001	3100 River Road, Conestoga, PA	EPA 200.7	EPA TRMD
3035952001	3100 River Road, Conestoga, PA	EPA 300.0	
3035952001	3100 River Road, Conestoga, PA	EPA 410.4	
3035952001	3100 River Road, Conestoga, PA	EPA 420.4	420.4/9066
3035952001	3100 River Road, Conestoga, PA	Field	
3035952001	3100 River Road, Conestoga, PA	S2540C-11	
3035952001	3100 River Road, Conestoga, PA	S4500HB-11	
3035952001	3100 River Road, Conestoga, PA	SM2130B-2011	
3035952001	3100 River Road, Conestoga, PA	SM2320B-2011	
3035952001	3100 River Road, Conestoga, PA	SM2510B-2011	
3035952001	3100 River Road, Conestoga, PA	SM5310B-2011	
3035952001	3100 River Road, Conestoga, PA	SW846 8260B	
3035952001	3100 River Road, Conestoga, PA	SW846 9020B	

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Auto-State Control C	STRUCTIONS ON THE COMPLETED STRUCTIONS ON THE AGE AND VOCS HCI PROPERTY OF A COMPLETED STRUCTIONS ON THE COMPLETED STRUCTIONS ON THE COMPLETED STRUCTIONS OF A COMPLETED STRUCTION OF A	PL EBACK, SO MIN		Alkalinity, HCO3	Cooler Temp: 7-5 Therm ID: No. of Coolers: Custody Seals Present? (If present) Seals Infact? Received on tea? Cont. in Good Cand.? Contect Containers? Correct Praservation? Headspace/Volatiles? CourierfTracking #: SampleICOC Comments
### LCSWMA - Larry Kirchner	25 × × × × × × × × × × × × × × × × × × ×	A MH3-N, COD BESTED AND MA, COD THE K, NA		Alkalinily, HCO3	5 2 * 7-5 Therm 7-5 Therm dy Seals Present? Received on both mplotele/acurate? It in Good Cond.? Sample Volumes? rect Preservation? rest Preservation? Sample/COC Con
125 m Conestoga, PA 17516 Preservative HO H2SOM	MALYSES/METHOD REG	280 HN3-N, COD Metals: Ca, Fe, Mg, Mn, But RR R. COD Metals: Ca, Fe, Mg, Mn, Mark R. CoD Metals: Ca, Fe, Mg, Mn, Mg, Mark R. CoD Metals: Ca, Fe, Mg, Mn, Mark R. CoD Metals: Ca, Fe, Mg, Mg, Mg, Mg, Mg, Mg, Mg, Mg, Mg, Mg		Tb, SpC a S S S S S S S S S S S S S S S S S S	7.5. Therm ID: y N dy Seals Present? Received on Ico? In Good Cand.? Sample Volumes? Sample Volumes? Indspace Volatiles? Idspace Volatiles? Gample ICOC Comments
Conestoga, PA 17516 Larry Kirchner (717) S84-0030 Namelff: LCSWMA-Quarterly Lancaster County Solid Waste MA Approved By: Rush-Subject to ALS approved By: Rush-Subject to ALS approved By: Rush-Subject to ALS approved By: Approved By: Sample Approved By: Sample Description/Location Sample Date (8s liwft appear on the lab region) (8s liwft appear on the lab region) (8s liwft appear on the lab region) (9c)/24/19 (153 G DW 2 1	MALYSES/METHOD REC SW846-8260 VOCs The mater of Containers Per Sa SA The mater of Containers Per Sa The mater of Containers Per Sa SA The mater of Containers Per Sa The mater of Containers P	DDESTED HNOS MAIN AND AND AND AND AND AND AND AND AND AN		Tb, SpC = 8	dy Seals Present? Received on Ico? Received on Ico? In Good Cond.? Sample Volumes? Sample Volumes? Idspace/Volatiles? Sample/COC Comments Sample/COC Comments
Trip 584-0030 amelfi: LCSWMA - Quarterly ancaster County Solid Waste MA X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. Approved By: Approved By:	SW846-8260 VOCs SA × SA × SA ×	CESTED A COD A MAJAN, COD A BANAN AND A BA	Metals: Ca, Fe, Mg, Mn, K, Na	Tb, SpC - Alkalinity, HCO3	Custody Seals Present? Received on tea? Cont. in Good Cond.? Correct Containers? Correct Preservation? Headspace/Volatiles? Courier/Tracking #: Sample/COC Comments
ametit: LCSWMA - Quarterly anneaster County Solid Waste MA X Normal-Standard TAT is 10-12 business days, X Normal-Standard TAT is 10-12 business days, Rush-Subject to ALS approval and surcharges. Approved By: Y No.: Approved By: O G G Mple Description/Location Sample Sal wit appear on the lab report) NERRD O G5/24/19 1153 G DW 2 1 NERRD	The of Containers Per Sa Says of Containers Per Says of	- 를 NH3-N, COD	Metals: Ca, Fe, Mg, Mn, K, Na	Tb, SpC - Alkalinity, HCO3	COCCLabels CompletelAccurate? Cont. in Good Cand.? Correct Containers? Correct Praservation? Headspace/Volatiles? Courier/Tracking #: Sample/COC Comments
Nameff: LCSWMA-Quarterly Lancaster County Solid Waste MA Lancaster County Solid Waste MA Lancaster County Solid Waste MA Rush-Subject to ALS approval and surcharges. Approved By: Approved By: Approved By: Bush-Subject to ALS approval and surcharges. Approved By: Approved By: Approved By: Bush-Subject to ALS approval and surcharges. Approved By: Approved By: Bush-Subject to ALS approval and surcharges. Bush-Subject to ALS ap	The of Container France Sco vocs	는 를 NH3-N, COD	Metals: Ca, Fe, Mg, Mn, K, Na	Tb, SpC - Alkalinily, HCO3	COCALabeis Completel Accurate? Cont. In Good Cond.? Correct Containers? Correct Preservation? Headspace/Volatiles? Courier/Tracking #: Sample/COC Comments
Lancaster County Solid Waste MA X Normal-Standard TAT is 10-12 business days. X Normal-Standard TAT is 10-12 business days. Approved By: Appr	S A See of Containers Fr. X X X X X X X X X X X X X X X X X X X	는 를 NH3-N, COD	Metals: Ca, Fe, Mg, Mn, K, Na	Tb, SpC - Alkalinity, HCO3	COCA shets Complete Accurate? Cont. In Good Cond.? Correct Containers? Correct Praservation? Headspace/Volatiles? Courier/Tracking #: Sample/COC Comments
X Normal-Standard TAT is 10-12 business days. Approved By: Rush-Subject to ALS approved By: Approved By	S Containers Per S S S S S S S S S S S S S S S S S S S	는 를 NH3-N, COD	Metals: Ca, Fe, Mg, Mn, I	Tb, SpC - Alkalinily, HCO3	Cont. In Good Cond.? Correct Containers? Correct Preservation? Headspace/Volatiles? Counier/Tracking #: Sample/COC Comments
Sample Description/Location Sample Date (as it wit appear on the lab regord) DRIVERRD OS/24/19 1153 G DW 2 1	The of Containers Per Sa X X X X X X X X X X X X X X X X X X	HH3-N, COI	- Sulfs Metals: Ca,	Tb, SpC -	Correct Praservation? Headspace/Volatiles? Courier/Tracking #: Sample/COC Comments
Sample Description/Location Sample Time 'C ITX OC OCIVERRD 05/24/19 1153 G DW 2 1	The of Containers Per Sal	- mg NH3-	Selfs Meta	- Alkali	Headspace/volables? Couner/Tracking #: Sample/COC Comments
(35 if wife appear on the lab regon) Date Time ** : 1100RIVERRD 05/24/19 1153 G DW 2 1	Must of Containers Per Sa	mple or Field Re	esuits Below.		Sample/COC Comments
1100RIVERD 05/24/19 1153 G DW 2 1 2 5 1 ×		-	-		
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0					Dother.
Project Comments: LOGGEO BY(signature):	3)VG		341	Standard	lard Special Processing State Samples
REVIEWED BY (signature);	JIVO		Part .	ita Die CLP-like	USACE
Belinquished By / Company Name Date, Time Received By / Company Name . Date Time	/ Company Name	- Date			XE Navy N
4 60 Chang Par Shipped 2 - 5 Shipped 2 5 Shipped 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5		1	~		
		100		Reportable to PADEP?	ADEP? Sample Disposal X PA
9		1		Yes	Lab X
	1		λd	#QISMd	Special
10 EDDS: Format Type-				EDDS: Format Type-	-90



301 Fulling Mill Road Middletown, PA 17057

P: (717) 944-5541

F: (717) 944-1430

Condition of Sample Receipt Form

Client: Lancaster County Work Order #: 305952 Initials: A Date:	24/1	١
1. Were airbills / tracking numbers present and recorded?NONE	YES	NO
Tracking number.		100
2. Are Custody Seals on shipping containers intact?	YES	NO
3. Are Custody Seals on sample containers intact?	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?	VES	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?	FEB	NO
5d. Does the COC note the type(s) of preservation for all bottles?	000	NO
Se. Does the COC note the number of bottles submitted for each sample?	MES	NO
Sf. Does the COC note the type of sample, composite or grab?	TE	NO
5g. Does the COC note the matrix of the sample(s)?	(YES)	NO
6. Are all aqueous samples requiring preservation preserved correctly?	(YES)	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	(FED)	NO
8. Are all samples within holding times for the requested analyses?	ATS.	(NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)	(YES)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	YES	NO
11. Were the samples received on ice?	YES	NO
12. Were sample temperatures measured at 0.0-6.0°C.	YES	(NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below	CYES.	019
13a. Are the samples required for SDWA compliance reporting?	YES	NO
13b. Did the client provide a SDWA PWS ID#?	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	YES	NO
Cooler #1		
Temperature (°C): 7, 9		
Thermometer ID. THMO		
Radiological (µCi):		_

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

Tempor above o'c-6°c

Ph is expired, but with be analyzed with a qualifier

- co 5/21/19

Rev. 4/29/2019





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June 5, 2019

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

Certificate of Analysis

Project Name: CONTIGUOUS LANDOWNER-

3106 RIVER RD

Purchase Order: PO1000126

Workorder: 3035951

Workorder ID: 2ND QTR 2019-3106 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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

Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3035951 2ND QTR 2019-3106 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035951001	3106 River Road, Conestoga, PA	Water	5/24/2019 13:05	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035951 2ND QTR 2019-3106 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 3035951 2ND QTR 2019-3106 RIVER RD

Lab ID: 3035951001 Date Collected: 5/24/2019 13:05 Matrix: Water

Sample ID: 3106 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/3/19 13:50	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 13:50	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	117		%	62 - 133	SW846 8260B			6/3/19 13:50	DD	K
4-Bromofluorobenzene (S)	112		%	79 - 114	SW846 8260B			6/3/19 13:50	DD	K
Dibromofluoromethane (S)	113		%	78 - 116	SW846 8260B			6/3/19 13:50	DD	K
Toluene-d8 (S)	113		%	76 - 127	SW846 8260B			6/3/19 13:50	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	8		mg/L	5	SM2320B-2011			5/25/19 15:08	MBW	С
Alkalinity, Total	8	1	mg/L	5	SM2320B-2011			5/25/19 15:08	MBW	С
Ammonia-N	ND		mg/L	0.100	D6919-09			5/31/19 18:40	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	107		mg/L	2.0	EPA 300.0			5/25/19 09:17	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 09:17	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/5/19 12:02	PAG	1
Nitrate-N	13.4		mg/L	0.20	EPA 300.0			5/25/19 09:17	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 09:17	CHW	С
рН	6.28	2	pH_Units		S4500HB-11			5/25/19 15:08	MBW	С
Phenolics	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance	470		umhos/cm	1	SM2510B-2011		-	5/25/19 15:08	MBW	С

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ANALYTICAL RESULTS

Workorder: 3035951 2ND QTR 2019-3106 RIVER RD

Lab ID: 3035951001 Date Collected: 5/24/2019 13:05 Matrix: Water

Sample ID: 3106 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Sulfate	9.4		mg/L	2.0	EPA 300.0			5/25/19 09:17	CHW	С
Total Dissolved Solids	243	3	mg/L	5	S2540C-11			5/30/19 16:35	EXS	С
Total Organic Carbon (TOC)	0.80		mg/L	0.50	SM5310B-2011			5/29/19 04:00	PAG	F
Turbidity	0.30		NTU	0.10	SM2130B-2011			5/25/19 07:32	MBW	С
METALS										
Calcium, Total	16.6		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:09	MNP	D1
Calcium, Dissolved	20.2		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:34	MNP	E
Iron, Total	0.048		mg/L	0.030	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:09	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:34	MNP	E
Magnesium, Total	11.8		mg/L	0.050	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:09	MNP	D1
Magnesium, Dissolved	13.3		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:34	MNP	E
Manganese, Total	0.071		mg/L	0.0025	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:09	MNP	D1
Manganese, Dissolved	0.070		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:34	MNP	E
Potassium, Total	1.5		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:09	MNP	D1
Potassium, Dissolved	1.4		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:34	MNP	E
Sodium, Total	42.6		mg/L	0.25	EPA 200.7	5/31/19 10:05	AHI	6/3/19 12:09	MNP	D1
Sodium, Dissolved	43.9		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:34	MNP	Е
FIELD PARAMETERS										
pH, Field (SM4500B)	6.18		pH_Units		Field			5/24/19 13:05	BGS	N
Specific Conductance, Field	481		umhos/cm	1	Field			5/24/19 13:05	BGS	N
Temperature	13.60		Deg. C		Field			5/24/19 13:05	BGS	N

Ms. Susan J Scherer Project Coordinator

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

ANALYTICAL RESULTS

Workorder: 3035951 2ND QTR 2019-3106 RIVER RD

PARAMETER QUALIFIER	IFIERS	AL	QU	ΓER	MET	Αľ	R	Α	P
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Lab ID	#	Sample ID	Analytical Method	Analyte
3035951001	1	3106 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
3035951001	2	3106 River Road, Conestoga, PA	S4500HB-11	рН
The second contracts of the		hand the second to take the second sector. Decrease the	and the second control of the second control	as an day as a back and the AF action to a Af

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.

3035951001 3 3106 River Road, Conestoga, PA S2540C-11 Total Dissolved Solids

The method blank associated with the sample was recovered at 5 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035951 2ND QTR 2019-3106 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	
3035951001	3106 River Road, Conestoga, PA	D6919-09		
3035951001	3106 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3035951001	3106 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3035951001	3106 River Road, Conestoga, PA	EPA 300.0		
3035951001	3106 River Road, Conestoga, PA	EPA 410.4		
3035951001	3106 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3035951001	3106 River Road, Conestoga, PA	Field		
3035951001	3106 River Road, Conestoga, PA	S2540C-11		
3035951001	3106 River Road, Conestoga, PA	S4500HB-11		
3035951001	3106 River Road, Conestoga, PA	SM2130B-2011		
3035951001	3106 River Road, Conestoga, PA	SM2320B-2011		
3035951001	3106 River Road, Conestoga, PA	SM2510B-2011		
3035951001	3106 River Road, Conestoga, PA	SM5310B-2011		
3035951001	3106 River Road, Conestoga, PA	SW846 8260B		
3035951001	3106 River Road, Conestoga, PA	SW846 9020B		

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(ALS) Enulronmental Internation substance Aritics for a substance of the s	Far 717 942 1430		ALL SHAI	ADED A	REAS I	ED AREAS MUST BE COMPLETED BY SAMPLER. INSTRUCTIONS ON THE BA	COMPL	DED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER, INSTRUCTIONS ON THE BACK.	Y THE C	LIENT /		- (FA) - A	
Client Name: LCSWMA - Aaron Fry		Costanta	AG	AN	AN	ລັ	1	ቪ	4	ď	료	* 3	0 3 5 9 5 1 * 1 by Receiving Lab)
Address: 3106 River Road		Contame	40 mi	125 ml	1 250 ml	11 40 ml	1	250 ml	nl 125 m	125 ml	II 500 ml	i 500 mi	Cooler Temp: 6.4 Therm ID: 40)
Conestoga, PA 17516		Proservative	호	HZSO4	4 H2S04	A CH	1	H2SO4	M HNO3	3 HNO3	3 None	None	
Contact: Aaron Fry					1	NALYSE	SIMETHO	ANALYSES/METHOD REQUESTED	STED				Custody Seals Present?
Phone#: (717) 669-6831		-							4				(if present) Seals Infact?
Project Name/#: LCSWMA - Quarterly									W '6	E			Received on Ice?
Bill To: LCSWMA - Aaron Fry	, Li								W.	K' N			COCILabels Complete/Accurate?
TAT X Normal-Standard TAT is 10-12 business days. TAT Rush-Subject to ALS approval and surcharges. Approved By:	iness days. surcharges. d By:					\OC2		19	elals: Ca, Fe	i 'uw '6w 'ə,	S' NO3' CI'	503	Cont. In Good Cond.? Correct Containers? Correct Sample Volumes?
						9590		000	ed Me	1,60	ON 'S	ià' HC	Correct Preservation?
Fax? Y No.:				Н)	948	_	'N-E			-	_	Headspace/Volatiles?
Sample Description/Location Sample (as if will appear on the lab report) Date	ple Time	o oo o* chteM**	001	0.0	Enter N	mber of C	A. Ontainers	高	or Field R	Results B	'Hd	= .	CourierTracking #: Sample/COC Comments
1 3106RIVERRD 05/24/19	1305	G DW	2	7	2	3/1	×	*	•		Þ		
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Project Comments:	LOGGED BY(signature):	(signature)						alka		her.	,		Standard Special Processing State Samples
	REVIEWED BY(signature)	BY(signatur	्र					JIM3		3r/s	ele		CLP-like USACE Collected in
Relinquened By Company Name	ofeo Days	Time	,	Re	Seived B	ГСошр	Received By / Company Name	1	Date 17	e Time			USACE Navy NY
1 Comment	11/2	N.	1		1						₽	Reportable to PADEP?	PADEP? Sample Disposal X PA
5			9							12	_	Yes	Lab X NC
7			80								# QISMA	#0	Special
ď			9								000	EDDS: Format Type-	VDB-



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

Condition of Sample Receipt Form

Client: Lancaster County Work Order #: 302/9	
Solial Wade 1 2000 131	NO
. Were airplies / tracking notificers project and reconstruction	W. Z.
Tracking number:	10.2
2. Are Custody Seals on shipping containers intact?	NO
3. Are Custody Seals on sample containers intact?	NO
4. Is there a COC (Chain-of-Custody) present?	NO
5. Are the COC and bottle labels complete, legible and in agreement?	NO
Sa. Does the COC contain sample locations?	NO
5b. Does the COC contain date and time of sample collection for all samples?	NO
Sc. Does the COC contain sample collectors name?	NO
5d. Does the COC note the type(s) of preservation for all bottles?	NO
Se. Does the COC note the number of bottles submitted for each sample?	NO
5f. Does the COC note the type of sample, composite or grab?	NO
5g. Does the COC note the matrix of the sample(s)?	NO
6. Are all aqueous samples requiring preservation preserved correctly?	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	NO
8. Are all samples within holding times for the requested analyses?	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	NO
11. Were the samples received on ice?	NO
12. Were sample temperatures measured at 0.0-6.0°C	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below	NO
13a. Are the samples required for SDWA compliance reporting?	NO
13b. Did the client provide a SDWA PWS ID#? YES	NO
13c. Are all agueous unpreserved SDWA samples pH 5-9?	NO
13d. Did the client provide the SDWA sample location ID/Description?	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	NO
Cooler #:	
Temperature (°C): 6.4	
Thermometer ID. THAD	
Radiological (μCi):	

Samples temped above 0'2-6°c

Ph 1's expired, but will be analyzed with a qualifier

Rev. 4/29/2019





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June 10, 2019

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

Certificate of Analysis

Project Name: CONTIGUOUS LANDOWNER-

3125 RIVER RD

Purchase Order: PO1000126

Workorder: **3035958**

Workorder ID: 2ND QTR 2019-3125 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, May 24, 2019.

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

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

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

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

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: 3035958 2ND QTR 2019-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3035958001	3125 River Road, Conestoga, PA	Water	5/24/2019 12:54	5/24/2019 15:31	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 3035958 2ND QTR 2019-3125 RIVER RD

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 3035958 2ND QTR 2019-3125 RIVER RD

Lab ID: 3035958001 Date Collected: 5/24/2019 12:54 Matrix: Water

Sample ID: 3125 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Ethylbenzene	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Methylene Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Toluene	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Total Xylenes	ND		ug/L	3.0	SW846 8260B			6/3/19 17:20	DD	K
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Trichloroethene	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B			6/3/19 17:20	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichloroethane-d4 (S)	127		%	62 - 133	SW846 8260B			6/3/19 17:20	DD	K
4-Bromofluorobenzene (S)	111		%	79 - 114	SW846 8260B			6/3/19 17:20	DD	K
Dibromofluoromethane (S)	120	4	%	78 - 116	SW846 8260B			6/3/19 17:20	DD	K
Toluene-d8 (S)	115		%	76 - 127	SW846 8260B			6/3/19 17:20	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	171		mg/L	5	SM2320B-2011			5/25/19 16:26	MBW	С
Alkalinity, Total	171	1	mg/L	5	SM2320B-2011			5/25/19 16:26	MBW	С
Ammonia-N	ND		mg/L	0.100	D6919-09			5/31/19 20:44	AK	В
Chemical Oxygen Demand (COD)	ND		mg/L	15	EPA 410.4			5/29/19 12:45	AK	В
Chloride	107		mg/L	2.0	EPA 300.0			5/25/19 09:10	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			5/25/19 09:10	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			6/6/19 12:03	PAG	1
Nitrate-N	6.3		mg/L	0.20	EPA 300.0			5/25/19 09:10	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			5/25/19 09:10	CHW	С
рН	7.94	2	pH_Units		S4500HB-11			5/25/19 16:26	MBW	С
Phenolics	ND		mg/L	0.005	EPA 420.4	5/29/19 14:29	C_D	5/30/19 05:54	C_D	Н
Specific Conductance	785		umhos/cm	1	SM2510B-2011		_	5/25/19 16:26	MBW	С

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ANALYTICAL RESULTS

Workorder: 3035958 2ND QTR 2019-3125 RIVER RD

Lab ID: 3035958001 Date Collected: 5/24/2019 12:54 Matrix: Water

Sample ID: 3125 River Road, Conestoga, PA Date Received: 5/24/2019 15:31

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Sulfate	22.2		mg/L	2.0	EPA 300.0			5/25/19 09:10	CHW	С
Total Dissolved Solids	512	3	mg/L	5	S2540C-11			5/31/19 12:20	EXS	С
Total Organic Carbon (TOC)	1.3		mg/L	0.50	SM5310B-2011			5/29/19 12:34	PAG	F
Turbidity	ND		NTU	0.10	SM2130B-2011			5/25/19 08:36	R2B	С
METALS										
Calcium, Total	0.18		mg/L	0.050	EPA 200.7	6/3/19 08:45	AHI	6/4/19 17:17	MNP	D1
Calcium, Dissolved	0.71		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:54	MNP	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	6/3/19 08:45	AHI	6/4/19 17:17	MNP	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:54	MNP	E
Magnesium, Total	ND		mg/L	0.050	EPA 200.7	6/3/19 08:45	AHI	6/4/19 17:17	MNP	D1
Magnesium, Dissolved	0.14		mg/L	0.10	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:54	MNP	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	6/3/19 08:45	AHI	6/4/19 17:17	MNP	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:54	MNP	E
Potassium, Total	0.52		mg/L	0.25	EPA 200.7	6/3/19 08:45	AHI	6/4/19 17:17	MNP	D1
Potassium, Dissolved	ND		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:54	MNP	E
Sodium, Total	159		mg/L	0.25	EPA 200.7	6/3/19 08:45	AHI	6/4/19 17:17	MNP	D1
Sodium, Dissolved	169		mg/L	0.50	EPA 200.7	5/28/19 07:17	MNP	6/4/19 13:54	MNP	E
FIELD PARAMETERS										
pH, Field (SM4500B)	8.01		pH_Units		Field			5/24/19 12:54	BGS	N
Specific Conductance, Field	779		umhos/cm	1	Field			5/24/19 12:54	BGS	N
Temperature	14.20		Deg. C		Field			5/24/19 12:54	BGS	N

Ms. Susan J Scherer Project Coordinator

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ANALYTICAL RESULTS

Workorder: 3035958 2ND QTR 2019-3125 RIVER RD

PARAMETER QUALIFIER	IFIERS	AL	QU	ΓER	MET	Αľ	R	Α	P
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Lab ID	#	Sample ID	Analytical Method	Analyte
3035958001	1	3125 River Road, Conestoga, PA	SM2320B-2011	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
3035958001	2	3125 River Road, Conestoga, PA	S4500HB-11	рН

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.

3035958001 3 3125 River Road, Conestoga, PA S2540C-11 Total Dissolved Solids

The method blank associated with the sample was recovered at 9 mg/L. The method reporting limit for this analysis is <5 mg/L. A bias may exist with the result.

3035958001 4 3125 River Road, Conestoga, PA SW846 8260B Dibromofluoromethane

The surrogate Dibromofluoromethane for method SW846 8260B was outside of control limits. The % Recovery was reported as 120 and the control limits were 78 to 116. This result was reported at a dilution of 1.

ALS Environmental Laboratory Locations Across North America

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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

ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3035958 2ND QTR 2019-3125 RIVER RD

Lab ID	Sample ID	Analysis Method	Prep Method	
3035958001	3125 River Road, Conestoga, PA	D6919-09		
3035958001	3125 River Road, Conestoga, PA	EPA 200.7	EPA ACID	
3035958001	3125 River Road, Conestoga, PA	EPA 200.7	EPA TRMD	
3035958001	3125 River Road, Conestoga, PA	EPA 300.0		
3035958001	3125 River Road, Conestoga, PA	EPA 410.4		
3035958001	3125 River Road, Conestoga, PA	EPA 420.4	420.4/9066	
3035958001	3125 River Road, Conestoga, PA	Field		
3035958001	3125 River Road, Conestoga, PA	S2540C-11		
3035958001	3125 River Road, Conestoga, PA	S4500HB-11		
3035958001	3125 River Road, Conestoga, PA	SM2130B-2011		
3035958001	3125 River Road, Conestoga, PA	SM2320B-2011		
3035958001	3125 River Road, Conestoga, PA	SM2510B-2011		
3035958001	3125 River Road, Conestoga, PA	SM5310B-2011		
3035958001	3125 River Road, Conestoga, PA	SW846 8260B		
3035958001	3125 River Road, Conestoga, PA	SW846 9020B		

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ADOGRAFIA LAND - MEDDELOM, PA. 17057 - 717 944 554 + FBE. 717.944 1430	1 1		ALL SHAI	SAMPI	EAS ML ER. INS	IST BE C	OMPLET ONS ON	DED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.	HE CLIE X.	NT /	21	4		•
Client Name: LCSWMA - Christian C. Beck	-	Container	AG.	AN	AN	93	1	ы	Ы	Я	Я.	*]	* 8 5 6 5 6 0	deceiving Lab)
Address: 3125 River Road		Container	40 ml	125 ml	250 mi	40 mg	1	250 ml	125 ml	125 ml	500 ml	500 ml Coo	Cooler Temp: Q.3 Therm ID: 473	10
Conestoga, PA 17516	-	Preservative	HCI	H2SO4	H2SO4	FC	1	HZSO4	HNO3	HNO3	None	None No. o		N Initial
Contact: Christian C. Beck					AN	ALYSES!	METHOD	ANALYSES/METHOD REQUESTED	ED				Custody Seals Present?	
Phone#: (717) 871-0448									3				(if present) Seals Intact?	
Project Namer#: LCSWMA - Quarterly		_							M, (8)	eN	'H''b(- 5	Received on Ice?	
Bill To: Lancaster County Solid Waste MA	1								N 'E	' 'X	D\$	5	COC/Labela Complete/Accurate?	
	arges.					0 AOC2		O	lelals: Ca, Fe	Fe, Mg, Mn,	OS' NO3' C1'	003	Cont. in Good Cond.? Correct Canlainers? Correct Sample Volumes?	
Email? Y	T			- 1	ь	9Z8-9t		оэ 'и		s: Ca,		H ,VJin	Correct Preservation?	
Sampl	Ī	or C atrix	TOC	но-о	XOT	8MS	МЭ	I-EHN	K' Na Disso	Metal	T .Hq S ,dT		Headspace/Velatiles?	
(as it will appear on the lab report) Date	Time	_			enter Num	ber of Con	tainers Pe	Enter Number of Containers Per Sample or Field Results Below	r Field Res	ults Belov	ν.		Sample/COC Comments	
1 3125RIVERRD 05/24/19	1254	G DW	2	÷	2	3%	×	÷	+	Ä	7			
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Project Comments:	LOGGED BY(signature);	(gnature);				П		3140		∌mi.	Si	Standard	Special Processing S	State Samples
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KAGA	14.1	7	1	3		1	-	0/0	3	1531	Report	Reportable to PADEP?	Sample Disposal	× K
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								•				0411		



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

Condition of Sample Receipt Form

Client: Lancaster County Work Order #: 305958 Initials: D Date:	24/10	
I. Were airbills / tracking numbers present and recorded?	YES	NO
Tracking number:		J. 1
2. Are Custody Seals on shipping containers intact?	YES	NO
3. Are Custody Seals on sample containers intact?	YES	NO
4. Is there a COC (Chain-of-Custody) present?	VES	NO
5. Are the COC and bottle labels complete, legible and in agreement?	(YES)	NO
5a. Does the COC contain sample locations?	(SES)	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?		NO
5d. Does the COC note the type(s) of preservation for all bottles?	COES	NO
5e. Does the COC note the number of bottles submitted for each sample?	MES	NO
5f. Does the COC note the type of sample, composite or grab?	TES	NO
5g. Does the COC note the matrix of the sample(s)?	YES	NO
6. Are all aqueous samples requiring preservation preserved correctly?	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?	(F)	NO
8. Are all samples within holding times for the requested analyses?		NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	YES	NO
11. Were the samples received on ice?	YES	NO
12. Were sample temperatures measured at 0.0-6.0°C	(YES	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below	(YES)	NO
13a. Are the samples required for SDWA compliance reporting?	YES	NO
13b. Did the client provide a SDWA PWS ID#?	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	YES	NO
Cooler #:		
Temperature (°C): <u>03</u>	-	
Thermometer ID. THMo)	-	
Radiological (μCi):		

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

Phis expired, but will be availyzed with a greatise.

- Co 5/24/5

Rev. 4/29/2019

Lancaster County Solid Waste Management Authority Frey Farm Landfill

Exceedence Report

Parameter	Name	Units	Concentration	Criteria Conc	Qualifiers	Criteria
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3044RIVERR NITRATE-NIT	<i>3035954001</i> ROGEN	05/24/2019 mg/l	<i>WATER</i> 18.30	10.00		EPA-MCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3052RIVERR NITRATE-NIT	<i>3035957001</i> ROGEN	05/24/2019 mg/l	<i>WATER</i> 17.80	10.00		EPA-MCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3056RIVERR NITRATE-NIT	<i>3035925001</i> ROGEN	05/24/2019 mg/l	<i>WATER</i> 19.10	10.00		EPA-MCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3060RIVERR NITRATE-NIT	<i>3035926001</i> ROGEN	05/24/2019 mg/l	<i>WATER</i> 17.50	10.00		EPA-MCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3076RIVERR NITRATE-NIT	<i>3035955001</i> ROGEN	05/24/2019 mg/l	<i>WATER</i> 11.80	10.00		EPA-MCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3106RIVERR NITRATE-NIT	<i>3035951001</i> ROGEN	05/24/2019 mg/l	<i>WATER</i> 13.40	10.00		EPA-MCL

Monday, July 15, 2019 Page 1 of 1

Lancaster County Solid Waste Management Authority Frey Farm Landfill

Exceedence Report

Parameter Name		Units	Concentration	Criteria Conc	Qualifiers	Criteria
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3056RIVERR	3035925001	05/24/2019	WATER			
MANGANESE	, DISSOLVED	mg/l	0.14	0.05		EPA-SMCL
MANGANESE	, TOTAL	mg/l	0.12	0.05		EPA-SMCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3060RIVERR	3035926001	05/24/2019	WATER			
MANGANESE	, DISSOLVED	mg/l	0.12	0.05		EPA-SMCL
MANGANESE	, TOTAL	mg/l	0.12	0.05		EPA-SMCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3076RIVERR	3035955001	05/24/2019	WATER			
MANGANESE	, DISSOLVED	mg/l	0.26	0.05		EPA-SMCL
MANGANESE	, TOTAL	mg/l	0.25	0.05		EPA-SMCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3079RIVERR	3035947001	05/24/2019	WATER			
MANGANESE		mg/l	0.29	0.05		EPA-SMCL
MANGANESE	, TOTAL	mg/l	0.31	0.05		EPA-SMCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3088RIVERR	3035949001	05/24/2019	WATER			
CHLORIDE		mg/l	259.00	250.00		EPA-SMCL
TDS (TOT. DIS	SSOLVED SOLIDS)	mg/l	625.00	500.00		EPA-SMCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
3106RIVERR	3035951001	05/24/2019	WATER			
MANGANESE	, DISSOLVED	mg/l	0.07	0.05		EPA-SMCL
MANGANESE	, TOTAL	mg/l	0.07	0.05		EPA-SMCL
Location ID	Sample Number	Sample Date	Sample Type	Sample Depth		
Location ID 3125RIVERR	<i>Sample Number</i> 3035958001	Sample Date 05/24/2019	Sample Type WATER	Sample Depth		

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