

January 30, 2018

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

www.lcswma.org

Charlene Sauls PG; Licensed Professional Geologist
Pennsylvania Department of Environmental Protection
Bureau of Waste Management
909 Elmerton Avenue
Harrisburg, PA 17110-8200

REF: Private Water Supply
4thd Quarter 2017 Form 52 Water Quality Analysis
Frey Farm Landfill; BWM Permit #101389

Dear Ms. Sauls:

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

1. USEPA MCL's exceedance report; samples (3044RIVERRD, 3052RIVERRD, 3056 RIVERRD, 3060 RIVERRD, 3076RIVERRD) exceeded the limit for nitrate, samples are consistent with historic data the cause is attributed to agricultural impacts. No other MCL's were exceeded.
2. USEPA SMCL's exceedance report; samples 3052RIVERRD, 3056RIVERRD, 3076RIVERRD, and 3079RIVERRD 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 mreider@lcswma.org.

Respectfully submitted,



Mark D Reider
Director of Environmental Compliance

Enclosures

Cc: Bob Zorbaugh, Dan Brown, Bob Eshbach
Ed Rawski, Randy Weiss (PADEP)

January 18, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3125 RIVER RD	Workorder:	2285299
Purchase Order:		Workorder ID:	4TH QTR 2017-3125 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, December 27, 2017.

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

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

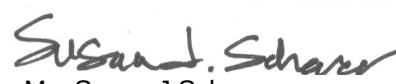
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2285299 4TH QTR 2017-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2285299001	3125 River Road, Conestoga, PA	Water	12/27/2017 14:24	12/27/2017 17:23	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2285299 4TH QTR 2017-3125 RIVER RD

Notes

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

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: 2285299 4TH QTR 2017-3125 RIVER RD

Lab ID: **2285299001** Date Collected: 12/27/2017 14:24 Matrix: Water
Sample ID: **3125 River Road, Conestoga, PA** Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
Toluene	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/30/17 06:01	CJG	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	99.5		%	70 - 130	EPA 524.2			12/30/17 06:01	CJG	J
4-Bromofluorobenzene (S)	107		%	70 - 130	EPA 524.2			12/30/17 06:01	CJG	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	33		mg/L	5	S2320B-97			12/29/17 15:41	MSA	C
Alkalinity, Total	33	1	mg/L	5	S2320B-97			12/29/17 15:41	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			1/6/18 07:21	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			1/10/18 17:18	AK	B
Chloride	81.2		mg/L	2.0	EPA 300.0			12/28/17 16:25	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/28/17 16:25	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/17/18 12:22	PAG	I
Nitrate-N	9.1		mg/L	0.20	EPA 300.0			12/28/17 16:25	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/28/17 16:25	CHW	C
pH	6.52	2	pH_Units		S4500HB-11			12/29/17 15:41	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	1/2/18 00:00	JLG	1/2/18 09:29	JLG	H
Specific Conductance	360		umhos/cm	1	S2510B-97			12/29/17 15:41	MSA	C
Sulfate	6.8		mg/L	2.0	EPA 300.0			12/28/17 16:25	CHW	C
Total Dissolved Solids	215		mg/L	5	S2540C-11			1/2/18 12:45	BMK	C

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ANALYTICAL RESULTS

Workorder: 2285299 4TH QTR 2017-3125 RIVER RD

Lab ID: **2285299001**

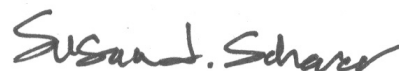
Date Collected: 12/27/2017 14:24

Matrix: Water

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

Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/28/17 11:33	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/29/17 03:14	MSA	C
METALS										
Calcium, Total	0.12		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:18	DAG	D1
Calcium, Dissolved	ND		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:12	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:18	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:12	DAG	E
Magnesium, Total	ND		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:18	DAG	D1
Magnesium, Dissolved	ND		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:12	DAG	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:18	DAG	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:12	DAG	E
Potassium, Total	0.87		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:18	DAG	D1
Potassium, Dissolved	0.71		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:12	DAG	E
Sodium, Total	75.9		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:18	DAG	D1
Sodium, Dissolved	78.3		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:12	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.490		pH_Units		Field			12/27/17 14:34	BGS	M
Specific Conductance, Field	369		umhos/cm	1	Field			12/27/17 14:34	BGS	M
Temperature	17.10		Deg. C		Field			12/27/17 14:34	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2285299 4TH QTR 2017-3125 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2285299001	1	3125 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2285299001	2	3125 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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34 Dogwood Lane • Middletown, PA 17057 • Phone: 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS

ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /

SAMPLER. INSTRUCTIONS ON THE BACK.

Generated by ALS

1 of 1



by Receiving Lab)

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Therm ID: 107

No. of Coolers: Y N Initial

Custody Seals Present?

(If present) Seals Intact?

Received on Ice?

COC Labels Completed/Accurate?

Cont. in Good Cond.?

Correct Containers?

Correct Sample Volumes?

Correct Preservation?

Headspace/Volatiles?

Courier/Tracking #:

Sample/COC Comments

Alkalinity, HCO3

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

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

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

NH3-N, COD

FM

TOC

TOX

O-OH

VOC

FM

NH3-N, COD

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

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

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

Alkalinity, HCO3

Courier/Tracking #:

Sample/COC Comments

Enter Number of Containers Per Sample or Field Results Below.

Matrix

G or C

DW

Time

Sample Date

Sample Location

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January 18, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3106 RIVER RD	Workorder:	2285297
Purchase Order:		Workorder ID:	4TH QTR 2017-3106 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, December 27, 2017.

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

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

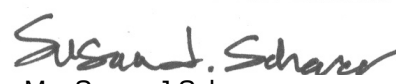
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , Landowner , Mr. Jeff Musser

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SAMPLE SUMMARY

Workorder: 2285297 4TH QTR 2017-3106 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2285297001	3106 River Road, Conestoga, PA	Water	12/27/2017 14:43	12/27/2017 17:23	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2285297 4TH QTR 2017-3106 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.
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- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
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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
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ANALYTICAL RESULTS

Workorder: 2285297 4TH QTR 2017-3106 RIVER RD

Lab ID: **2285297001** Date Collected: 12/27/2017 14:43 Matrix: Water
Sample ID: **3106 River Road, Conestoga, PA** Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
Toluene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/30/17 05:14	CJG	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	82.3		%	70 - 130	EPA 524.2			12/30/17 05:14	CJG	J
4-Bromofluorobenzene (S)	105		%	70 - 130	EPA 524.2			12/30/17 05:14	CJG	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	15		mg/L	5	S2320B-97			12/29/17 14:47	MSA	C
Alkalinity, Total	15	1	mg/L	5	S2320B-97			12/29/17 14:47	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			1/6/18 06:48	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			1/10/18 17:18	AK	B
Chloride	47.5		mg/L	2.0	EPA 300.0			12/28/17 15:53	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/28/17 15:53	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/17/18 11:20	PAG	I
Nitrate-N	9.5		mg/L	0.20	EPA 300.0			12/28/17 15:53	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/28/17 15:53	CHW	C
pH	6.20	2	pH_Units		S4500HB-11			12/29/17 14:47	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	1/2/18 00:00	JLG	1/2/18 09:29	JLG	H
Specific Conductance	247		umhos/cm	1	S2510B-97			12/29/17 14:47	MSA	C
Sulfate	3.9		mg/L	2.0	EPA 300.0			12/28/17 15:53	CHW	C
Total Dissolved Solids	153		mg/L	5	S2540C-11			1/2/18 12:45	BMK	C

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ANALYTICAL RESULTS

Workorder: 2285297 4TH QTR 2017-3106 RIVER RD

Lab ID: **2285297001**

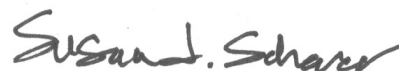
Date Collected: 12/27/2017 14:43

Matrix: Water

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

Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/28/17 11:33	PAG	F
Turbidity	0.35		NTU	0.10	S2130B-01			12/29/17 03:14	MSA	C
METALS										
Calcium, Total	13.1		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:11	DAG	D1
Calcium, Dissolved	12.1		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:05	DAG	E
Iron, Total	0.079		mg/L	0.030	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:11	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:05	DAG	E
Magnesium, Total	7.5		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:11	DAG	D1
Magnesium, Dissolved	7.4		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:05	DAG	E
Manganese, Total	0.023		mg/L	0.0025	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:11	DAG	D1
Manganese, Dissolved	0.022		mg/L	0.0050	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:05	DAG	E
Potassium, Total	1.4		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:11	DAG	D1
Potassium, Dissolved	1.3		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:05	DAG	E
Sodium, Total	25.2		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:11	DAG	D1
Sodium, Dissolved	25.3		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:05	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.150		pH_Units		Field			12/27/17 14:43	BGS	M
Specific Conductance, Field	250		umhos/cm	1	Field			12/27/17 14:43	BGS	M
Temperature	13.10		Deg. C		Field			12/27/17 14:43	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2285297 4TH QTR 2017-3106 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2285297001	1	3106 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2285297001	2	3106 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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

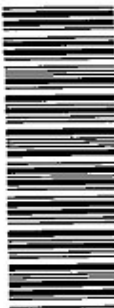


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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

Generated by ALS



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1 of 1

Client Name: LCSWMA - Aaron Fry		Container Type: 40 ml	AG	AN	AN	CG	PL	PL	PL	PL	PL																																																																																																																																															
Address: 3106 River Road		Container Size: 40 ml	40 ml	250 ml	500 ml	40 ml	500 ml	500 ml	500 ml	500 ml	500 ml																																																																																																																																															
Contact: Aaron Fry		Preservative: HCl	HCl	H2SO4	H2SO4	HCl	H2SO4	HNO3	HNO3	HNO3	None																																																																																																																																															
Phone#: (717) 669-6831		ANALYSES/METHOD REQUESTED																																																																																																																																																								
Project Name#: LCSWMA - Quarterly		Enter Number of Containers Per Sample or Field Results Below.																																																																																																																																																								
Bill To: LCSWMA - Aaron Fry		<table border="1"> <tr> <th>Sample Description/Location (as it will appear on the lab report)</th> <th>Sample Date</th> <th>Time</th> <th>TOC</th> <th>TOX</th> <th>O-H</th> <th>VOC</th> <th>FM</th> <th>NH3-N, COD</th> <th>Dissolved Metals: Ca, Fe, Mg, Mn, K, Na</th> <th>Metals: Ca, Fe, Mg, Mn, K, Na</th> <th>PH, TDS, NO2, NO3, Cl, SO4, F, Pb, Spc</th> <th>Alkalinity, HCO3</th> </tr> <tr> <td>1 3106RIVERRD</td> <td>12/21/12</td> <td>1442</td> <td>2</td> <td>1</td> <td>1</td> <td>3</td> <td>X</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr><td>2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>3</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>5</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>6</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>7</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	TOC	TOX	O-H	VOC	FM	NH3-N, COD	Dissolved Metals: Ca, Fe, Mg, Mn, K, Na	Metals: Ca, Fe, Mg, Mn, K, Na	PH, TDS, NO2, NO3, Cl, SO4, F, Pb, Spc	Alkalinity, HCO3	1 3106RIVERRD	12/21/12	1442	2	1	1	3	X	1	1	1	1	1	2													3													4													5													6													7													8													9													10												
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TAT ☒ Normal-Standard TAT is 10-12 business days.		<table border="1"> <tr> <th>Container Type</th> <th>AG</th> <th>AN</th> <th>AN</th> <th>CG</th> <th>PL</th> <th>PL</th> <th>PL</th> <th>PL</th> <th>PL</th> <th>PL</th> <th>PL</th> </tr> <tr> <td>40 ml</td> <td>40 ml</td> <td>250 ml</td> <td>500 ml</td> <td>40 ml</td> <td>500 ml</td> <td>500 ml</td> <td>500 ml</td> <td>500 ml</td> <td>500 ml</td> <td>500 ml</td> <td>500 ml</td> </tr> <tr> <td>Preservative</td> <td>HCl</td> <td>H2SO4</td> <td>H2SO4</td> <td>HCl</td> <td>H2SO4</td> <td>HNO3</td> <td>HNO3</td> <td>HNO3</td> <td>HNO3</td> <td>HNO3</td> <td>None</td> </tr> </table>											Container Type	AG	AN	AN	CG	PL	PL	PL	PL	PL	PL	PL	40 ml	40 ml	250 ml	500 ml	40 ml	500 ml	500 ml	500 ml	500 ml	500 ml	500 ml	500 ml	Preservative	HCl	H2SO4	H2SO4	HCl	H2SO4	HNO3	HNO3	HNO3	HNO3	HNO3	None																																																																																																										
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January 17, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3100 RIVER RD	Workorder:	2285291
Purchase Order:		Workorder ID:	4TH QTR 2017-3100 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, December 27, 2017.

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

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

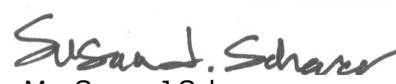
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , 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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Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

SAMPLE SUMMARY

Workorder: 2285291 4TH QTR 2017-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2285291001	3100 River Road, Conestoga, PA	Water	12/27/2017 11:56	12/27/2017 17:23	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2285291 4TH QTR 2017-3100 RIVER RD

Notes

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

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: 2285291 4TH QTR 2017-3100 RIVER RD

Lab ID: **2285291001** Date Collected: 12/27/2017 11:56 Matrix: Water
Sample ID: **3100 River Road, Conestoga, PA** Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
Toluene	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			1/2/18 13:45	DD	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	92.7		%	70 - 130	EPA 524.2			1/2/18 13:45	DD	J
4-Bromofluorobenzene (S)	111		%	70 - 130	EPA 524.2			1/2/18 13:45	DD	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	16		mg/L	5	S2320B-97			12/29/17 14:11	MSA	C
Alkalinity, Total	16	1	mg/L	5	S2320B-97			12/29/17 14:11	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			1/6/18 05:24	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			1/10/18 17:18	AK	B
Chloride	56.9		mg/L	2.0	EPA 300.0			12/28/17 13:14	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/28/17 13:14	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/16/18 11:15	PAG	I
Nitrate-N	4.2		mg/L	0.20	EPA 300.0			12/28/17 13:14	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/28/17 13:14	CHW	C
pH	6.18	2	pH_Units		S4500HB-11			12/29/17 14:11	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	1/2/18 00:00	JLG	1/2/18 09:29	JLG	H
Specific Conductance	236		umhos/cm	1	S2510B-97			12/29/17 14:11	MSA	C
Sulfate	6.4		mg/L	2.0	EPA 300.0			12/28/17 13:14	CHW	C
Total Dissolved Solids	150		mg/L	5	S2540C-11			1/2/18 12:45	BMK	C

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ANALYTICAL RESULTS

Workorder: 2285291 4TH QTR 2017-3100 RIVER RD

Lab ID: **2285291001**

Date Collected: 12/27/2017 11:56

Matrix: Water

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

Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/28/17 11:33	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/29/17 03:14	MSA	C
METALS										
Calcium, Total	16.5		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 12:58	DAG	D1
Calcium, Dissolved	16.7		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 08:46	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	1/3/18 01:40	LXC	1/4/18 12:58	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/28/17 00:28	DAG	12/28/17 08:46	DAG	E
Magnesium, Total	7.6		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 12:58	DAG	D1
Magnesium, Dissolved	8.2		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 08:46	DAG	E
Manganese, Total	0.0079		mg/L	0.0025	EPA 200.7	1/3/18 01:40	LXC	1/4/18 12:58	DAG	D1
Manganese, Dissolved	0.0092		mg/L	0.0050	EPA 200.7	12/28/17 00:28	DAG	12/28/17 08:46	DAG	E
Potassium, Total	1.4		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 12:58	DAG	D1
Potassium, Dissolved	1.4		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 08:46	DAG	E
Sodium, Total	14.2		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 12:58	DAG	D1
Sodium, Dissolved	15.5		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 08:46	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	6.250		pH_Units		Field			12/27/17 11:56	BGS	M
Specific Conductance, Field	161		umhos/cm	1	Field			12/27/17 11:56	BGS	M
Temperature	13.20		Deg. C		Field			12/27/17 11:56	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2285291 4TH QTR 2017-3100 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2285291001	1	3100 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2285291001	2	3100 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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34 Dogwood Lane
Middletown, PA 17057
P. 717-944-5541
F. 717-944-1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

Environmetal

Co. Name: LCSW/MAH

Contact (Report to): Mark Reider

Address:

Phone:

Lancaster, PA

Bill to (if different than Report to):

PO#:

Project Name/ID: Quarterly Heavywater ALS Quote #:

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

Email?

Fax?

Y No:

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

COC Comments

Sample Date

Military Time

**Matrix

G.C.

1 3100 REVER RD

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January 18, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3088 RIVER RD	Workorder:	2285806
Purchase Order:		Workorder ID:	4TH QTR 2017-3088 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, December 29, 2017.

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

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

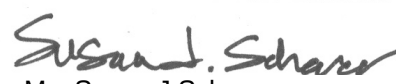
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2285806 4TH QTR 2017-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2285806001	3088 River Road, Conestoga PA	Water	12/29/2017 08:17	12/29/2017 09:16	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2285806 4TH QTR 2017-3088 RIVER RD

Notes

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

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: 2285806 4TH QTR 2017-3088 RIVER RD

Lab ID: **2285806001**

Date Collected: 12/29/2017 08:17

Matrix: Water

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

Date Received: 12/29/2017 09:16

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
Toluene	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			1/4/18 01:27	TMP	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	86.8		%	70 - 130	EPA 524.2			1/4/18 01:27	TMP	J
4-Bromofluorobenzene (S)	100		%	70 - 130	EPA 524.2			1/4/18 01:27	TMP	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	82		mg/L	5	S2320B-97			1/1/18 22:20	MSA	C
Alkalinity, Total	82	1	mg/L	5	S2320B-97			1/1/18 22:20	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			1/8/18 17:22	TES	B
Chemical Oxygen Demand (COD)	9		mg/L	7	EPA 410.4			1/11/18 12:43	AK	B
Chloride	237		mg/L	10.0	EPA 300.0			12/30/17 09:37	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/30/17 09:21	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/17/18 15:23	PAG	I
Nitrate-N	9.1		mg/L	0.20	EPA 300.0			12/30/17 09:21	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/30/17 09:21	CHW	C
pH	7.08	2	pH_Units		S4500HB-11			1/1/18 22:20	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	1/3/18 00:00	JLG	1/3/18 09:19	JLG	H
Specific Conductance	917		umhos/cm	1	S2510B-97			1/1/18 22:20	MSA	C
Sulfate	3.6		mg/L	2.0	EPA 300.0			12/30/17 09:21	CHW	C
Total Dissolved Solids	487		mg/L	5	S2540C-11			1/3/18 13:00	BMK	C

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ANALYTICAL RESULTS

Workorder: 2285806 4TH QTR 2017-3088 RIVER RD

Lab ID: **2285806001**

Date Collected: 12/29/2017 08:17

Matrix: Water

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

Date Received: 12/29/2017 09:16

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			1/2/18 12:36	PAG	F
Turbidity	0.10		NTU	0.10	S2130B-01			12/30/17 02:21	MSA	C
METALS										
Calcium, Total	0.099		mg/L	0.050	EPA 200.7	1/5/18 01:45	LXC	1/8/18 08:40	DAG	D1
Calcium, Dissolved	ND		mg/L	0.10	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:33	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	1/5/18 01:45	LXC	1/8/18 08:40	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:33	DAG	E
Magnesium, Total	0.062		mg/L	0.050	EPA 200.7	1/5/18 01:45	LXC	1/8/18 08:40	DAG	D1
Magnesium, Dissolved	ND		mg/L	0.10	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:33	DAG	E
Manganese, Total	ND		mg/L	0.0025	EPA 200.7	1/5/18 01:45	LXC	1/8/18 08:40	DAG	D1
Manganese, Dissolved	ND		mg/L	0.0050	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:33	DAG	E
Potassium, Total	1.4		mg/L	0.25	EPA 200.7	1/5/18 01:45	LXC	1/8/18 08:40	DAG	D1
Potassium, Dissolved	1.1		mg/L	0.50	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:33	DAG	E
Sodium, Total	187		mg/L	0.25	EPA 200.7	1/5/18 01:45	LXC	1/8/18 08:40	DAG	D1
Sodium, Dissolved	190		mg/L	0.50	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:33	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.110		pH_Units		Field			12/27/17 08:17	BGS	M
Specific Conductance, Field	893		umhos/cm	1	Field			12/27/17 08:17	BGS	M
Temperature	15.50		Deg. C		Field			12/27/17 08:17	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2285806 4TH QTR 2017-3088 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2285806001	1	3088 River Road, Conestoga PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2285806001	2	3088 River Road, Conestoga PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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January 17, 2018

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

Certificate of Analysis

Project Name:	2017-FREY FARM	Workorder:	2285296
Purchase Order:		Workorder ID:	4TH QTR 2017 3079 RIVERRD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, December 27, 2017.

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

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

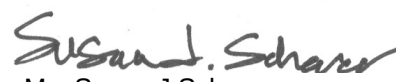
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , Mr. Jeff Musser

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Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2285296 4TH QTR 2017 3079 RIVERRD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2285296001	3079RIVERRD	Water	12/27/2017 15:50	12/27/2017 17:23	Mr. Jeff Musser

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SAMPLE SUMMARY

Workorder: 2285296 4TH QTR 2017 3079 RIVERRD

Notes

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

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: 2285296 4TH QTR 2017 3079 RIVERRD

Lab ID: **2285296001**
Sample ID: **3079RIVERRD**

Date Collected: 12/27/2017 15:50 Matrix: Water
Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/29/17 06:46	CJG	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	72.2		%	70 - 130	EPA 524.2			12/29/17 06:46	CJG	K
4-Bromofluorobenzene (S)	87.3		%	70 - 130	EPA 524.2			12/29/17 06:46	CJG	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	12		mg/L	5	S2320B-97			12/29/17 14:38	MSA	C
Alkalinity, Total	12	1	mg/L	5	S2320B-97			12/29/17 14:38	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			1/6/18 06:31	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			1/10/18 17:18	AK	B
Chloride	33.3		mg/L	2.0	EPA 300.0			12/28/17 15:37	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/28/17 15:37	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/16/18 12:49	PAG	I
Nitrate-N	ND		mg/L	0.20	EPA 300.0			12/28/17 15:37	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/28/17 15:37	CHW	C
pH	6.14	2	pH_Units		S4500HB-11			12/29/17 14:38	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	1/2/18 00:00	JLG	1/2/18 09:29	JLG	H
Specific Conductance	166		umhos/cm	1	S2510B-97			12/29/17 14:38	MSA	C
Sulfate	28.0		mg/L	2.0	EPA 300.0			12/28/17 15:37	CHW	C
Total Dissolved Solids	114		mg/L	5	S2540C-11			1/2/18 12:45	BMK	C

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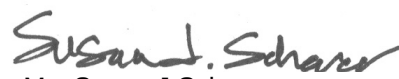
ANALYTICAL RESULTS

Workorder: 2285296 4TH QTR 2017 3079 RIVERRD

Lab ID: **2285296001**
Sample ID: **3079RIVERRD**

Date Collected: 12/27/2017 15:50 Matrix: Water
Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/28/17 11:33	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/29/17 03:14	MSA	C
METALS										
Calcium, Total	10.1		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:08	DAG	D1
Calcium, Dissolved	10.2		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:02	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:08	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:02	DAG	E
Magnesium, Total	5.0		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:08	DAG	D1
Magnesium, Dissolved	5.3		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:02	DAG	E
Manganese, Total	0.18		mg/L	0.0025	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:08	DAG	D1
Manganese, Dissolved	0.18		mg/L	0.0050	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:02	DAG	E
Potassium, Total	1.6		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:08	DAG	D1
Potassium, Dissolved	1.5		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:02	DAG	E
Sodium, Total	10.6		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:08	DAG	D1
Sodium, Dissolved	11.2		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:02	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.100		pH_Units		S4500HB-11			12/27/17 15:30	CLT	N
Specific Conductance, Field	177		umhos/cm	1	S2510B-97			12/27/14 15:50	CLT	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2285296 4TH QTR 2017 3079 RIVERRD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2285296001	1	3079RIVERRD	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2285296001	2	3079RIVERRD	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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January 18, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3076 RIVER RD	Workorder:	2285298
Purchase Order:		Workorder ID:	4TH QTR 2017-3076 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, December 27, 2017.

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

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

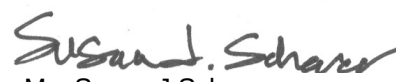
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2285298 4TH QTR 2017-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2285298001	3076 River Road, Conestoga, PA	Water	12/27/2017 14:44	12/27/2017 17:23	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2285298 4TH QTR 2017-3076 RIVER RD

Notes

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

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: 2285298 4TH QTR 2017-3076 RIVER RD

Lab ID: **2285298001** Date Collected: 12/27/2017 14:44 Matrix: Water
Sample ID: **3076 River Road, Conestoga, PA** Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
Toluene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/30/17 05:37	CJG	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	106		%	70 - 130	EPA 524.2			12/30/17 05:37	CJG	J
4-Bromofluorobenzene (S)	109		%	70 - 130	EPA 524.2			12/30/17 05:37	CJG	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	8		mg/L	5	S2320B-97			12/29/17 14:55	MSA	C
Alkalinity, Total	8	1	mg/L	5	S2320B-97			12/29/17 14:55	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			1/6/18 07:04	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			1/10/18 17:18	AK	B
Chloride	53.3		mg/L	2.0	EPA 300.0			12/28/17 16:09	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/28/17 16:09	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/17/18 11:43	PAG	I
Nitrate-N	11.6		mg/L	0.20	EPA 300.0			12/28/17 16:09	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/28/17 16:09	CHW	C
pH	5.72	2	pH_Units		S4500HB-11			12/29/17 14:55	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	1/2/18 00:00	JLG	1/2/18 09:29	JLG	H
Specific Conductance	275		umhos/cm	1	S2510B-97			12/29/17 14:55	MSA	C
Sulfate	9.9		mg/L	2.0	EPA 300.0			12/28/17 16:09	CHW	C
Total Dissolved Solids	164		mg/L	5	S2540C-11			1/2/18 12:45	BMK	C

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ANALYTICAL RESULTS

Workorder: 2285298 4TH QTR 2017-3076 RIVER RD

Lab ID: **2285298001**

Date Collected: 12/27/2017 14:44

Matrix: Water

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

Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/28/17 11:33	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/29/17 03:14	MSA	C
METALS										
Calcium, Total	15.7		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:14	DAG	D1
Calcium, Dissolved	15.1		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:09	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:14	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:09	DAG	E
Magnesium, Total	8.7		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:14	DAG	D1
Magnesium, Dissolved	9.0		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:09	DAG	E
Manganese, Total	0.14		mg/L	0.0025	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:14	DAG	D1
Manganese, Dissolved	0.14		mg/L	0.0050	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:09	DAG	E
Potassium, Total	2.9		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:14	DAG	D1
Potassium, Dissolved	2.9		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:09	DAG	E
Sodium, Total	21.5		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:14	DAG	D1
Sodium, Dissolved	22.6		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:09	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.810		pH_Units		Field			12/27/17 14:44	BGS	M
Specific Conductance, Field	269		umhos/cm	1	Field			12/27/17 14:44	BGS	M
Temperature	10.20		Deg. C		Field			12/27/17 14:44	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2285298 4TH QTR 2017-3076 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2285298001	1	3076 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2285298001	2	3076 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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



1 of 1

Client Name: LCSWMA - Esther A. Schopf

Address: 3076 Rover Road

Conestoga, PA 17516

Contact: Esther A. Schopf

Phone#: (717) 872-2559

Project Name#: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

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

Date Required: _____ Approved By: _____

Email? ☐ -Y

Fax? ☐ -Y No.:

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

Sample Date Time

1 3076RIVERRD 1/22/12 11:44

2

3

4

5

6

7

8

9

10

Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):

Relinquished By / Company Name

Date Time

1 1/22/12 12:28 2 Rover Road PA

3

4

5

6

7

8

9

10

Container Type

Container Size

Preservative

AG 40 ml HCl

AN 250 ml H2SO4

AN 500 ml H2SO4

PL 500 ml HNO3

PL 500 ml HNO3

PL 500 ml HNO3

PL 500 ml HNO3

PL 500 ml HNO3

PL 500 ml HNO3

PL 500 ml HNO3

PL 500 ml HNO3

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Container Type

Container Size

Preservative

AG 40 ml HCl

AN 250 ml H2SO4

January 26, 2018

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

Certificate of Analysis

Revised Report - 1/26/2018 3:24:30 PM - See workorder comment section for explanation

Project Name:	2017-FREY FARM	Workorder:	2284049
Purchase Order:		Workorder ID:	4TH QTR 2017-3060 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, December 19, 2017.

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

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

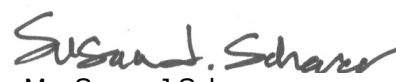
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2284049 4TH QTR 2017-3060 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2284049001	3060RIVERRD	Water	12/19/2017 10:45	12/19/2017 17:05	Ms. Jordan Gallagher

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SAMPLE SUMMARY

Workorder: 2284049 4TH QTR 2017-3060 RIVER RD

Notes

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

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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PROJECT SUMMARY

Workorder: 2284049 4TH QTR 2017-3060 RIVER RD

Workorder Comments

This certificate of analysis was modified to include nitrite-nitrogen in the anions EPA 300.0 analysis based on project requirements and the email from Jordan Gallagher on 01/26/18. SJS 01/26/18

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ANALYTICAL RESULTS

Workorder: 2284049 4TH QTR 2017-3060 RIVER RD

Lab ID: **2284049001**
Sample ID: **3060RIVERRD**

Date Collected: 12/19/2017 10:45 Matrix: Water
Date Received: 12/19/2017 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	7		mg/L	5	S2320B-97			12/21/17 10:55	MSA	B
Alkalinity, Total	7	2	mg/L	5	S2320B-97			12/21/17 10:55	MSA	B
Ammonia-N	ND		mg/L	0.100	D6919-09			12/30/17 14:04	TES	C
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			12/22/17 23:26	AK	C
Chloride	14.8		mg/L	2.0	EPA 300.0			12/20/17 10:11	CHW	A
Fluoride	ND		mg/L	0.20	EPA 300.0			12/20/17 10:11	CHW	A
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/8/18 11:25	PAG	G
Nitrate-N	13.3		mg/L	0.20	EPA 300.0			12/20/17 10:11	CHW	A
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/20/17 10:11	CHW	A
pH	6.22	1	pH_Units		S4500HB-11			12/21/17 10:55	MSA	B
Phenolics	ND		mg/L	0.005	EPA 420.4	12/31/17 00:00	JLG	1/1/17 10:50	JLG	D
Specific Conductance	181		umhos/cm	1	S2510B-97			12/21/17 10:55	MSA	B
Sulfate	10.3		mg/L	2.0	EPA 300.0			12/20/17 10:11	CHW	A
Total Dissolved Solids	87		mg/L	5	S2540C-11			12/21/17 15:00	BMK	A
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/22/17 17:59	PAG	I
Turbidity	ND		NTU	0.10	S2130B-01			12/21/17 01:51	MSA	A
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/20/17 17:58	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	By	Analyzed	By	Cntr

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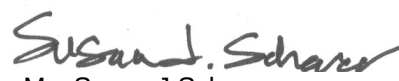
ANALYTICAL RESULTS

Workorder: 2284049 4TH QTR 2017-3060 RIVER RD

Lab ID: **2284049001**
Sample ID: **3060RIVERRD**

Date Collected: 12/19/2017 10:45 Matrix: Water
Date Received: 12/19/2017 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
1,2-Dichlorobenzene-d4 (S)	75.1		%	70 - 130	EPA 524.2			12/20/17 17:58	DD	K
4-Bromofluorobenzene (S)	77		%	70 - 130	EPA 524.2			12/20/17 17:58	DD	K
METALS										
Calcium, Total	8.3		mg/L	0.050	EPA 200.7	12/21/17 00:55	LXC	12/22/17 07:00	DAG	E1
Calcium, Dissolved	8.5		mg/L	0.10	EPA 200.7	12/21/17 02:48	DAG	12/22/17 12:38	DAG	F
Iron, Total	ND		mg/L	0.030	EPA 200.7	12/21/17 00:55	LXC	12/22/17 07:00	DAG	E1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/21/17 02:48	DAG	12/22/17 12:38	DAG	F
Magnesium, Total	10.2		mg/L	0.050	EPA 200.7	12/21/17 00:55	LXC	12/22/17 07:00	DAG	E1
Magnesium, Dissolved	10.2		mg/L	0.10	EPA 200.7	12/21/17 02:48	DAG	12/22/17 12:38	DAG	F
Manganese, Total	0.046		mg/L	0.0025	EPA 200.7	12/21/17 00:55	LXC	12/22/17 07:00	DAG	E1
Manganese, Dissolved	0.049		mg/L	0.0050	EPA 200.7	12/21/17 02:48	DAG	12/22/17 12:38	DAG	F
Potassium, Total	3.0		mg/L	0.25	EPA 200.7	12/21/17 00:55	LXC	12/27/17 07:44	DAG	E1
Potassium, Dissolved	2.7		mg/L	0.50	EPA 200.7	12/21/17 02:48	DAG	12/27/17 08:29	DAG	F
Sodium, Total	8.7		mg/L	0.25	EPA 200.7	12/21/17 00:55	LXC	12/27/17 07:44	DAG	E1
Sodium, Dissolved	8.7		mg/L	0.50	EPA 200.7	12/21/17 02:48	DAG	12/27/17 08:29	DAG	F
FIELD PARAMETERS										
pH, Field (SM4500B)	4.900		pH_Units		S4500HB-11			12/19/17 10:45	CLT	N
Specific Conductance, Field	218		umhos/cm	1	S2510B-97			12/19/17 10:45	CLT	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2284049 4TH QTR 2017-3060 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2284049001	1	3060RIVERRD	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				
2284049001	2	3060RIVERRD	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				

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December 13, 2017

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

Certificate of Analysis

Project Name: 2017-FREY FARM	Workorder: 2278561
Purchase Order:	Workorder ID: 4TH QTR 2017 3056 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, November 22, 2017.

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

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

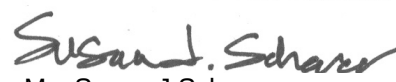
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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CC: Ms. Jordan Gallagher , Mr. Mark Reider , Mr. Jeff Musser

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Ms. Susan J Scherer
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2278561 4TH QTR 2017 3056 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2278561001	3056RIVERRD	Water	11/22/2017 12:15	11/22/2017 16:49	Ms. Jordan Gallagher

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SAMPLE SUMMARY

Workorder: 2278561 4TH QTR 2017 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 performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.

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: 2278561 4TH QTR 2017 3056 RIVER RD

Lab ID: **2278561001**
Sample ID: **3056RIVERRD**

Date Collected: 11/22/2017 12:15 Matrix: Water
Date Received: 11/22/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
Toluene	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/5/17 05:26	CJG	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	85.9		%	70 - 130	EPA 524.2			12/5/17 05:26	CJG	K
4-Bromofluorobenzene (S)	101		%	70 - 130	EPA 524.2			12/5/17 05:26	CJG	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND		mg/L	5	S2320B-97			11/29/17 13:34	MSA	C
Alkalinity, Total	ND	1	mg/L	5	S2320B-97			11/29/17 13:34	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			12/6/17 23:28	NJA	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			12/4/17 21:49	AK	B
Chloride	26.8		mg/L	2.0	EPA 300.0			11/23/17 13:03	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			11/23/17 13:03	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			12/12/17 10:51	PAG	I
Nitrate-N	21.9	3	mg/L	0.50	EPA 300.0			11/29/17 13:54	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			11/23/17 13:03	CHW	C
pH	5.90	2	pH_Units		S4500HB-11			11/29/17 13:34	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	12/6/17 00:00	JLG	12/6/17 09:40	JLG	H
Specific Conductance	231		umhos/cm	1	S2510B-97			11/29/17 13:34	MSA	C
Sulfate	ND		mg/L	2.0	EPA 300.0			11/23/17 13:03	CHW	C
Total Dissolved Solids	168		mg/L	5	S2540C-11			11/28/17 11:30	BMK	C

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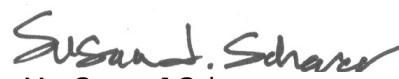
ANALYTICAL RESULTS

Workorder: 2278561 4TH QTR 2017 3056 RIVER RD

Lab ID: **2278561001**
Sample ID: **3056RIVERRD**

Date Collected: 11/22/2017 12:15 Matrix: Water
Date Received: 11/22/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/4/17 10:52	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			11/22/17 22:57	MSA	C
METALS										
Calcium, Total	14.9		mg/L	0.050	EPA 200.7	11/28/17 22:50	LXC	11/30/17 15:17	DAG	D1
Calcium, Dissolved	16.4		mg/L	0.10	EPA 200.7	11/27/17 07:59	DAG	12/6/17 21:13	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	11/28/17 22:50	LXC	11/30/17 15:17	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	11/27/17 07:59	DAG	12/6/17 21:13	DAG	E
Magnesium, Total	11.8		mg/L	0.050	EPA 200.7	11/28/17 22:50	LXC	11/30/17 15:17	DAG	D1
Magnesium, Dissolved	12.9		mg/L	0.10	EPA 200.7	11/27/17 07:59	DAG	12/6/17 21:13	DAG	E
Manganese, Total	0.046		mg/L	0.0025	EPA 200.7	11/28/17 22:50	LXC	11/30/17 15:17	DAG	D1
Manganese, Dissolved	0.052		mg/L	0.0050	EPA 200.7	11/27/17 07:59	DAG	12/6/17 21:13	DAG	E
Potassium, Total	2.1		mg/L	0.25	EPA 200.7	11/28/17 22:50	LXC	11/30/17 15:17	DAG	D1
Potassium, Dissolved	2.2		mg/L	0.50	EPA 200.7	11/27/17 07:59	DAG	12/6/17 21:13	DAG	E
Sodium, Total	9.2		mg/L	0.25	EPA 200.7	11/28/17 22:50	LXC	11/30/17 15:17	DAG	D1
Sodium, Dissolved	9.2		mg/L	0.50	EPA 200.7	11/27/17 07:59	DAG	12/6/17 21:13	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	4.800		pH_Units		S4500HB-11			11/22/17 12:15	CLT	N
Specific Conductance, Field	255		umhos/cm	1	S2510B-97			11/22/17 12:15	CLT	N


Ms. Susan J Scherer
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2278561 4TH QTR 2017 3056 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2278561001	1	3056RIVERRD	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2278561001	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.				
2278561001	3	3056RIVERRD	EPA 300.0	Nitrate-N
The sample was originally run within hold time, but required further analysis that exceeded hold time.				

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January 18, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3052 RIVER RD	Workorder:	2285301
Purchase Order:		Workorder ID:	4TH QTR 2017-3052 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, December 27, 2017.

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

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

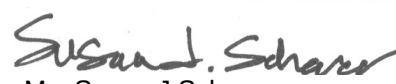
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2285301 4TH QTR 2017-3052 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2285301001	3052 River Road, Conestoga, PA	Water	12/27/2017 15:10	12/27/2017 17:23	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2285301 4TH QTR 2017-3052 RIVER RD

Notes

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

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: 2285301 4TH QTR 2017-3052 RIVER RD

Lab ID: **2285301001** Date Collected: 12/27/2017 15:10 Matrix: Water
Sample ID: **3052 River Road, Conestoga, PA** Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
Toluene	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			12/30/17 07:37	CJG	J
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	89.4		%	70 - 130	EPA 524.2			12/30/17 07:37	CJG	J
4-Bromofluorobenzene (S)	101		%	70 - 130	EPA 524.2			12/30/17 07:37	CJG	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	6		mg/L	5	S2320B-97			12/29/17 15:59	MSA	C
Alkalinity, Total	6	1	mg/L	5	S2320B-97			12/29/17 15:59	MSA	C
Ammonia-N	0.898		mg/L	0.100	D6919-09			1/6/18 08:28	TES	B
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			1/10/18 17:18	AK	B
Chloride	21.4		mg/L	2.0	EPA 300.0			12/28/17 16:57	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/28/17 16:57	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/17/18 14:02	PAG	I
Nitrate-N	18.3		mg/L	0.20	EPA 300.0			12/28/17 16:57	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/28/17 16:57	CHW	C
pH	5.94	2	pH_Units		S4500HB-11			12/29/17 15:59	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	1/2/18 00:00	JLG	1/2/18 09:29	JLG	H
Specific Conductance	206		umhos/cm	1	S2510B-97			12/29/17 15:59	MSA	C
Sulfate	ND		mg/L	2.0	EPA 300.0			12/28/17 16:57	CHW	C
Total Dissolved Solids	144		mg/L	5	S2540C-11			1/2/18 12:45	BMK	C

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ANALYTICAL RESULTS

Workorder: 2285301 4TH QTR 2017-3052 RIVER RD

Lab ID: **2285301001**

Date Collected: 12/27/2017 15:10

Matrix: Water

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

Date Received: 12/27/2017 17:23

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			12/28/17 11:33	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			12/29/17 03:14	MSA	C
METALS										
Calcium, Total	14.6		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:24	DAG	D1
Calcium, Dissolved	14.2		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:18	DAG	E
Iron, Total	ND		mg/L	0.030	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:24	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:18	DAG	E
Magnesium, Total	10.2		mg/L	0.050	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:24	DAG	D1
Magnesium, Dissolved	10.3		mg/L	0.10	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:18	DAG	E
Manganese, Total	0.056		mg/L	0.0025	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:24	DAG	D1
Manganese, Dissolved	0.057		mg/L	0.0050	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:18	DAG	E
Potassium, Total	1.9		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:24	DAG	D1
Potassium, Dissolved	1.8		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:18	DAG	E
Sodium, Total	7.0		mg/L	0.25	EPA 200.7	1/3/18 01:40	LXC	1/4/18 13:24	DAG	D1
Sodium, Dissolved	7.4		mg/L	0.50	EPA 200.7	12/28/17 00:28	DAG	12/28/17 09:18	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.890		pH_Units		Field			12/27/17 15:10	BGS	M
Specific Conductance, Field	153		umhos/cm	1	Field			12/27/17 15:10	BGS	M
Temperature	16.50		Deg. C		Field			12/27/17 15:10	BGS	M



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2285301 4TH QTR 2017-3052 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2285301001	1	3052 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2285301001	2	3052 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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

Address: 3052 River Road

Conestoga, PA 17516

Contact: Gerald E. Miller, Sr.

Phone#: (717) 872-5117

Project Name/ID: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

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

Date Required: _____ **Approved By:** _____

Email? ☐ -Y

Fax? ☐ -Y No.: ☐

Sample Description

[illegible]

(as it will appear on the lab report)

13052RIVER RD	12/27/17	6570
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Parent Comments:

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REVIEW

Relinquished By / Company Name	Date
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21-2811057

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* G=Grab; C=Composite

ELSE

Thursday, January 18, 2018 7:34:37 AM

Page 7 of 7

ALS

Rev 8/04

January 18, 2018

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

Certificate of Analysis

Project Name:	CONTIGUOUS LANDOWNER- 3044 RIVER RD	Workorder:	2285648
Purchase Order:		Workorder ID:	4TH QTR 2017-3044 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, December 28, 2017.

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

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

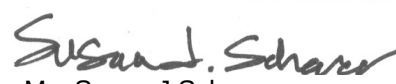
Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications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

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

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

CC: Ms. Jordan Gallagher , Mr. Mark Reider , 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: 2285648 4TH QTR 2017-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2285648001	3044 River Road, Conestoga, PA	Water	12/28/2017 14:55	12/28/2017 17:14	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2285648 4TH QTR 2017-3044 RIVER RD

Notes

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

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: 2285648 4TH QTR 2017-3044 RIVER RD

Lab ID: **2285648001** Date Collected: 12/28/2017 14:55 Matrix: Water
Sample ID: **3044 River Road, Conestoga, PA** Date Received: 12/28/2017 17:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
Toluene	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			1/2/18 16:57	DD	K
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared</i>	<i>By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichlorobenzene-d4 (S)	88.7		%	70 - 130	EPA 524.2			1/2/18 16:57	DD	K
4-Bromofluorobenzene (S)	106		%	70 - 130	EPA 524.2			1/2/18 16:57	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	15		mg/L	5	S2320B-97			1/3/18 04:18	MSA	C
Alkalinity, Total	15	1	mg/L	5	S2320B-97			1/3/18 04:18	MSA	C
Ammonia-N	ND		mg/L	0.100	D6919-09			1/8/18 06:13	TES	B
Chemical Oxygen Demand (COD)	11		mg/L	7	EPA 410.4			1/11/18 12:43	AK	B
Chloride	21.9		mg/L	2.0	EPA 300.0			12/29/17 15:33	CHW	C
Fluoride	ND		mg/L	0.20	EPA 300.0			12/29/17 15:33	CHW	C
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			1/17/18 14:34	PAG	I
Nitrate-N	22.2		mg/L	1.0	EPA 300.0			12/29/17 15:46	CHW	C
Nitrite-N	ND		mg/L	0.20	EPA 300.0			12/29/17 15:33	CHW	C
pH	6.92	2	pH_Units		S4500HB-11			12/30/17 08:44	MSA	C
Phenolics	ND		mg/L	0.005	EPA 420.4	1/3/18 00:00	JLG	1/3/18 09:19	JLG	H
Specific Conductance	247		umhos/cm	1	S2510B-97			12/30/17 08:44	MSA	C
Sulfate	ND		mg/L	2.0	EPA 300.0			12/29/17 15:33	CHW	C
Total Dissolved Solids	145		mg/L	5	S2540C-11			1/3/18 12:00	BMK	C

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ANALYTICAL RESULTS

Workorder: 2285648 4TH QTR 2017-3044 RIVER RD

Lab ID: **2285648001**

Date Collected: 12/28/2017 14:55

Matrix: Water

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

Date Received: 12/28/2017 17:14

Parameters	Results	Flag	Units	RDL	Method	Prepared	By	Analyzed	By	Cntr
Total Organic Carbon (TOC)	0.81		mg/L	0.50	S5310B-00			12/29/17 11:07	PAG	F
Turbidity	4.71		NTU	0.10	S2130B-01			12/29/17 03:44	MSA	C
METALS										
Calcium, Total	19.5		mg/L	0.050	EPA 200.7	1/4/18 07:25	DXC	1/5/18 10:09	DAG	D1
Calcium, Dissolved	18.2		mg/L	0.10	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:20	DAG	E
Iron, Total	0.26		mg/L	0.030	EPA 200.7	1/4/18 07:25	DXC	1/5/18 10:09	DAG	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:20	DAG	E
Magnesium, Total	11.5		mg/L	0.050	EPA 200.7	1/4/18 07:25	DXC	1/5/18 10:09	DAG	D1
Magnesium, Dissolved	10.4		mg/L	0.10	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:20	DAG	E
Manganese, Total	0.034		mg/L	0.0025	EPA 200.7	1/4/18 07:25	DXC	1/5/18 10:09	DAG	D1
Manganese, Dissolved	0.016		mg/L	0.0050	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:20	DAG	E
Potassium, Total	1.6		mg/L	0.25	EPA 200.7	1/4/18 07:25	DXC	1/5/18 10:09	DAG	D1
Potassium, Dissolved	1.5		mg/L	0.50	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:20	DAG	E
Sodium, Total	10.8		mg/L	0.25	EPA 200.7	1/4/18 07:25	DXC	1/5/18 10:09	DAG	D1
Sodium, Dissolved	10.0		mg/L	0.50	EPA 200.7	1/2/18 10:01	MNP	1/3/18 10:20	DAG	E
FIELD PARAMETERS										
pH, Field (SM4500B)	7.050		pH_Units		Field			12/27/17 15:10	BGS	N
Specific Conductance, Field	239		umhos/cm	1	Field			12/27/17 15:10	BGS	N
Temperature	10.40		Deg. C		Field			12/27/17 15:10	BGS	N



Ms. Susan J Scherer

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2285648 4TH QTR 2017-3044 RIVER RD

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2285648001	1	3044 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /L.				
2285648001	2	3044 River Road, Conestoga, PA	S4500HB-11	pH
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.				

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

Generated by ALS

1 of 1



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Client Name: LCSWMA - Nelson L. Smith

Address: 3044 River Road

Conestoga, PA 17516

Contact: Nelson L. Smith

Phone#: (717) 872-2888

Project Name/ID: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

TAT ☒ Normal-Standard TAT is 10-12 business days.
☐ Rush-Subject to ALS approval and surcharges.
Date Required: _____ Approved By: _____
Email? ☐ -Y ☐ -N
Fax? ☐ -Y ☐ -N

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

1 3044RIVERRD 12/30/17 14:55

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Project Comments:

Relinquished By / Company Name

1 3044RIVERRD 12/30/17 14:55

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Date Time

12/30/17 14:55

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Received By / Company Name

12/30/17 14:55

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LOGGED BY (signature):

REVIEWED BY (signature):

DATE TIME

12/30/17 14:55

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Container Type

Container Size

Preservative

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Therm ID: 402

No. of Coolers: Y N Initial

Custody Seals Present?

(If present) Seals Intact?

Received on Ice?

COCLabels Complete/Accurate?

Cont. in Good Cond.?

Correct Containers?

Correct Sample Volumes?

Correct Preservation?

Headspace/Volatiles?

Courier/Tracking #:

Sample/COC Comments

Enter Number of Containers Per Sample or Field Results Below.

Alkalinity, HCO3

pH, TDS, NO2, NO3, Cl, SO4, F,

Tb, SpC

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

Dissolved Metals: Ca, Fe, Mg, Mn,

K, Na

NH3-N, COD

FM

VOC

O-H

TOX

TOC

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Client Name: LCSWMA - Nelson L. Smith

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Conestoga, PA 17516

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

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

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Project Comments:

Relinquished By / Company Name

12/30/17 14:55

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Date Time

12/30/17 14:55

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Received By / Company Name

12/30/17 14:55

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LOGGED BY (signature):

REVIEWED BY (signature):

DATE TIME

12/30/17 14:55

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Container Type

Container Size

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Therm ID: 402

No. of Coolers: Y N Initial

Custody Seals Present?

(If present) Seals Intact?

Received on Ice?

COCLabels Complete/Accurate?

Cont. in Good Cond.?

Correct Containers?

Correct Sample Volumes?

Correct Preservation?

Headspace/Volatiles?

Courier/Tracking #:

Sample/COC Comments

Enter Number of Containers Per Sample or Field Results Below.

Alkalinity, HCO3

pH, TDS, NO2, NO3, Cl, SO4, F,

Tb, SpC

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

Dissolved Metals: Ca, Fe, Mg, Mn,

K, Na

NH3-N, COD

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**Matrix

G or C

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ALS Environmental

34 Dogwood Lane • Middletown, PA 17057 • Phone: 717.944.1100 • Fax: 717.944.1430

Client Name: LCSWMA - Nelson L. Smith

Address: 3044 River Road

Conestoga, PA 17516

Contact: Nelson L. Smith

Phone#: (717) 872-2888

Project Name/ID: LCSWMA - Quarterly

Bill To: Lancaster County Solid Waste MA

TAT ☒ Normal-Standard TAT is 10-12 business days.
☐ Rush-Subject to ALS approval and surcharges.
Date Required: _____ Approved By: _____
Email? ☐ -Y ☐ -N
Fax? ☐ -Y ☐ -N

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

1 3044RIVERRD 12/30/17 14:55

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Project Comments:

Relinquished By / Company Name

12/30/17 14:55

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Lancaster County Solid Waste Management Authority
Frey Farm Landfill

Exceedence Report

<i>Parameter Name</i>	<i>Units</i>	<i>Concentration</i>	<i>Criteria Conc</i>	<i>Qualifiers</i>	<i>Criteria</i>
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3052RIVERR	2285301001	12/27/2017	WATER		
MANGANESE, DISSOLVED		mg/l	0.06	0.05	EPA-SMCL
MANGANESE, TOTAL		mg/l	0.06	0.05	EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3056RIVERR	2278561001	11/22/2017	WATER		
MANGANESE, DISSOLVED		mg/l	0.05	0.05	EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3076RIVERR	2285298001	12/27/2017	WATER		
MANGANESE, DISSOLVED		mg/l	0.14	0.05	EPA-SMCL
MANGANESE, TOTAL		mg/l	0.14	0.05	EPA-SMCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3079RIVERR	2285296001	12/27/2017	WATER		
MANGANESE, DISSOLVED		mg/l	0.18	0.05	EPA-SMCL
MANGANESE, TOTAL		mg/l	0.18	0.05	EPA-SMCL

Lancaster County Solid Waste Management Authority
Frey Farm Landfill

Exceedence Report

<i>Parameter Name</i>	<i>Units</i>	<i>Concentration</i>	<i>Criteria Conc</i>	<i>Qualifiers</i>	<i>Criteria</i>
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3044RIVERR	2285648001	12/28/2017	WATER		
NITRATE-NITROGEN		mg/l	22.20	10.00	EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3052RIVERR	2285301001	12/27/2017	WATER		
NITRATE-NITROGEN		mg/l	18.30	10.00	EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3056RIVERR	2278561001	11/22/2017	WATER		
NITRATE-NITROGEN		mg/l	21.90	10.00	EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3060RIVERR	2284049001	12/19/2017	WATER		
NITRATE-NITROGEN		mg/l	13.30	10.00	EPA-MCL
<i>Location ID</i>	<i>Sample Number</i>	<i>Sample Date</i>	<i>Sample Type</i>	<i>Sample Depth</i>	
3076RIVERR	2285298001	12/27/2017	WATER		
NITRATE-NITROGEN		mg/l	11.60	10.00	EPA-MCL



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3044 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/28/2017

Sample Collection Time: 2:55 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

01/17/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/28/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	15	SM20-2321
CALCIUM, TOTAL	19.5	EPA 200.7
CALCIUM, DISSOLVED	18.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	11	EPA 410.2
CHLORIDE	21.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	260	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	11.5	EPA 200.7
MAGNESIUM, DISSOLVED	10.4	EPA 200.7
MANGANESE, TOTAL (ug/l)	34	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	16	EPA 200.7
NITRATE-NITROGEN	22.2	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/28/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	7.05	FIELD
pH-LAB (SU)	6.92	SM4500B
POTASSIUM, TOTAL	1.6	EPA 200.7
POTASSIUM, DISSOLVED	1.5	EPA 200.7
SODIUM, TOTAL	10.8	EPA 200.7
SODIUM, DISSOLVED	10	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	239	FIELD
SPEC. COND., LAB (umhos/cm)	247	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	15	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	145	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.81	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	4.71	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/28/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: MILLER

Address: 3052 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/27/2017

Sample Collection Time: 3:10 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

01/17/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

12/27/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.898	SM4500D
BICARBONATE ALKALINITY	6	SM20-2321
CALCIUM, TOTAL	14.6	EPA 200.7
CALCIUM, DISSOLVED	14.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	21.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	10.2	EPA 200.7
MAGNESIUM, DISSOLVED	10.3	EPA 200.7
MANGANESE, TOTAL (ug/l)	56	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	57	EPA 200.7
NITRATE-NITROGEN	18.3	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

12/27/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.89	FIELD
pH-LAB (SU)	5.94	SM4500B
POTASSIUM, TOTAL	1.9	EPA 200.7
POTASSIUM, DISSOLVED	1.8	EPA 200.7
SODIUM, TOTAL	7	EPA 200.7
SODIUM, DISSOLVED	7.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	153	FIELD
SPEC. COND., LAB (umhos/cm)	206	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	6	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	144	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

12/27/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3056 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 11/22/2017

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

12/12/2017

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/22/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	14.9	EPA 200.7
CALCIUM, DISSOLVED	16.4	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	26.8	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	11.8	EPA 200.7
MAGNESIUM, DISSOLVED	12.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	46	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	52	EPA 200.7
NITRATE-NITROGEN	21.9	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/22/2017

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)	4.8	FIELD
pH-LAB (SU)	5.9	SM4500B
POTASSIUM, TOTAL	2.1	EPA 200.7
POTASSIUM, DISSOLVED	2.2	EPA 200.7
SODIUM, TOTAL	9.2	EPA 200.7
SODIUM, DISSOLVED	9.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	255	FIELD
SPEC. COND., LAB (umhos/cm)	231	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	168	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

11/22/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
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FORM 52
MUNICIPAL WASTE LANDFILL
PRIVATE WATER SUPPLY
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3060 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/19/2017

Sample Collection Time: 10:45 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 01/08/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/19/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	7	SM20-2321
CALCIUM, TOTAL	8.3	EPA 200.7
CALCIUM, DISSOLVED	8.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	14.8	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	10.2	EPA 200.7
MAGNESIUM, DISSOLVED	10.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	46	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	49	EPA 200.7
NITRATE-NITROGEN	13.3	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/19/2017

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)	4.9	FIELD
pH-LAB (SU)	6.22	SM4500B
POTASSIUM, TOTAL	3	EPA 200.7
POTASSIUM, DISSOLVED	2.7	EPA 200.7
SODIUM, TOTAL	8.7	EPA 200.7
SODIUM, DISSOLVED	8.7	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	218	FIELD
SPEC. COND., LAB (umhos/cm)	181	EPA 120.1
SULFATE	10.3	EPA 300
ALKALINITY	7	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	87	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/19/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: SENSENICH

Address: 3076 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/27/2017

Sample Collection Time: 2:44 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

01/17/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

12/27/2017

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	15.7	EPA 200.7
CALCIUM, DISSOLVED	15.1	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	53.3	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	8.7	EPA 200.7
MAGNESIUM, DISSOLVED	9	EPA 200.7
MANGANESE, TOTAL (ug/l)	140	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	140	EPA 200.7
NITRATE-NITROGEN	11.6	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

12/27/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.81	FIELD
pH-LAB (SU)	5.72	SM4500B
POTASSIUM, TOTAL	2.9	EPA 200.7
POTASSIUM, DISSOLVED	2.9	EPA 200.7
SODIUM, TOTAL	21.5	EPA 200.7
SODIUM, DISSOLVED	22.6	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	269	FIELD
SPEC. COND., LAB (umhos/cm)	275	EPA 120.1
SULFATE	9.9	EPA 300
ALKALINITY	8	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	164	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

12/27/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: LCSWMA

Address: 3079 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/27/2017

Sample Collection Time: 3:50 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 01/16/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/27/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	12	SM20-2321
CALCIUM, TOTAL	10.1	EPA 200.7
CALCIUM, DISSOLVED	10.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	33.3	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	5	EPA 200.7
MAGNESIUM, DISSOLVED	5.3	EPA 200.7
MANGANESE, TOTAL (ug/l)	180	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	180	EPA 200.7
NITRATE-NITROGEN	0.2 ND	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/27/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.1	FIELD
pH-LAB (SU)	6.14	SM4500B
POTASSIUM, TOTAL	1.6	EPA 200.7
POTASSIUM, DISSOLVED	1.5	EPA 200.7
SODIUM, TOTAL	10.6	EPA 200.7
SODIUM, DISSOLVED	11.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	177	FIELD
SPEC. COND., LAB (umhos/cm)	166	EPA 120.1
SULFATE	28	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	114	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

12/27/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: WEBER

Address: 3088 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/29/2017

Sample Collection Time: 8:17 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

01/17/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

12/29/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	82	SM20-2321
CALCIUM, TOTAL	0.099	EPA 200.7
CALCIUM, DISSOLVED	0.1 ND	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	9	EPA 410.2
CHLORIDE	237	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	0.062	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	9.1	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

12/29/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	7.11	FIELD
pH-LAB (SU)	7.08	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	1.1	EPA 200.7
SODIUM, TOTAL	187	EPA 200.7
SODIUM, DISSOLVED	190	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	893	FIELD
SPEC. COND., LAB (umhos/cm)	917	EPA 120.1
SULFATE	3.6	EPA 300
ALKALINITY	82	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	487	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

12/29/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: KIRCHNER

Address: 3100 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/27/2017

Sample Collection Time: 11:56 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 01/16/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

12/27/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	16	SM20-2321
CALCIUM, TOTAL	16.5	EPA 200.7
CALCIUM, DISSOLVED	16.7	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	56.9	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	7.6	EPA 200.7
MAGNESIUM, DISSOLVED	8.2	EPA 200.7
MANGANESE, TOTAL (ug/l)	7.9	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	9.2	EPA 200.7
NITRATE-NITROGEN	4.2	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

12/27/2017

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)	6.25	FIELD
pH-LAB (SU)	6.18	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	1.4	EPA 200.7
SODIUM, TOTAL	14.2	EPA 200.7
SODIUM, DISSOLVED	15.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	161	FIELD
SPEC. COND., LAB (umhos/cm)	236	EPA 120.1
SULFATE	6.4	EPA 300
ALKALINITY	16	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	150	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

12/27/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: FRY

Address: 3106 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/27/2017

Sample Collection Time: 2:43 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 01/17/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS FRY

Sample Date

12/27/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	15	SM20-2321
CALCIUM, TOTAL	13.1	EPA 200.7
CALCIUM, DISSOLVED	12.1	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	47.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	79	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	7.5	EPA 200.7
MAGNESIUM, DISSOLVED	7.4	EPA 200.7
MANGANESE, TOTAL (ug/l)	23	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	22	EPA 200.7
NITRATE-NITROGEN	9.5	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

FRY

Sample Date

12/27/2017

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)	6.15	FIELD
pH-LAB (SU)	6.2	SM4500B
POTASSIUM, TOTAL	1.4	EPA 200.7
POTASSIUM, DISSOLVED	1.3	EPA 200.7
SODIUM, TOTAL	25.2	EPA 200.7
SODIUM, DISSOLVED	25.3	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	250	FIELD
SPEC. COND., LAB (umhos/cm)	247	EPA 120.1
SULFATE	3.9	EPA 300
ALKALINITY	15	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	153	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.35	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

FRY

Sample Date

12/27/2017

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

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

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF LAND RECYCLING AND WASTE

Date Prepared/Revised
01/26/2018

DEP USE ONLY

Date Received

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

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

General Reference: Act 101 Section 1103

SECTION A. SITE IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Manage

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. PRIVATE WATER SUPPLY INFORMATION

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

Facility Name: Frey Farm Landfill

County: Lancaster County

Township or Municipality: MANOR TOWNSHIP

Landowner Name: BECK

Address: 3125 RIVER ROAD

Phone No.:

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

Depth to Water Level: ft.

Measured from: ☒ Land Surface ☐ TOC

Casing Stick Up: ft.

Elevation of Water Level: ft./MSL

Total Well Depth: ft.

Sampling Depth: ft.

Sampling Method: ☐ Pumped ☐ Bailed

Well Purged: ☐ Yes ☒ No

Well Volumes Purged:

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

Sample Date:(mm/dd/yy) 12/27/2017

Sample Collection Time: 2:24 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

01/17/2018

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

Comments:

2540-FM-LRWM0060 Rev. 3/2006

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

12/27/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	33	SM20-2321
CALCIUM, TOTAL	0.12	EPA 200.7
CALCIUM, DISSOLVED	0.1 ND	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	81.2	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	0.05 ND	EPA 200.7
MAGNESIUM, DISSOLVED	0.1 ND	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	9.1	EPA 300

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

BECK

Sample Date

12/27/2017

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)	6.49	FIELD
pH-LAB (SU)	6.52	SM4500B
POTASSIUM, TOTAL	0.87	EPA 200.7
POTASSIUM, DISSOLVED	0.71	EPA 200.7
SODIUM, TOTAL	75.9	EPA 200.7
SODIUM, DISSOLVED	78.3	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	369	FIELD
SPEC. COND., LAB (umhos/cm)	360	EPA 120.1
SULFATE	6.8	EPA 300
ALKALINITY	33	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	215	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

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

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS

BECK

Sample Date

12/27/2017

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

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

T Please indicate detection limit if analyte is not detected.