

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

www.lcswma.org

April 3, 2017

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

1st 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:

- USEPA MCL's exceedance report; samples (3044RIVERRD, 3052RIVERRD, 3056 RIVERRD, 3060 RIVERRD, 3076RIVERRD and 3106RIVERRD) exceeded the limit for nitrate, samples are consistent with historic data the cause is attributed to agricultural impacts. No other MCL's were exceeded.
- 2. USEPA SMCL's exceedance report; samples 3052RIVERRD, 3056 RIVERRD, 3060 RIVERRD, 3076RIVERRD, 3079 RIVERRD and 3106RIVERRD exceeded the limit for manganese or iron which are 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

ml.012.1

Enclosures

Cc:

Bob Zorbaugh, Dan Brown, Bob Eshbach

Ed Rawski, Randy Weiss (PaDEP)

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section 1103			
SECTION A. SITE IDENTIFIER			
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name: F	rey Farm Landfill		
Facility ID (as issued by DEP):	101389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm L	andfill		
County: Lancaster C	County		
Township or Municipality: MANOR TO	OWNSHIP		
Landowner Name:SMITH			
Address: 3044 RIVER	ROAD		
Phone No.:			
Sampling Point: Latitude: 39 o	57 ' 30.58 " Longitude: 76 ° 26 ' 11.25 "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:			
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micro	on)?: X Yes No		
Sample Date:(mm/dd/yy) 02/2	8/2017 Sample Collection Time: 1:03 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	03/10/2017		
Were any holding times exceeded?: Yes X No If yes, please explain in comments field.			
Comments:			

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SMITH

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	18	SM20-2321
CALCIUM, TOTAL	18.5	EPA 200.7
CALCIUM, DISSOLVED	19.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	8	EPA 410.2
CHLORIDE	23.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	72	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	10.3	EPA 200.7
MAGNESIUM, DISSOLVED	10.8	EPA 200.7
MANGANESE, TOTAL (ug/l)	9.1	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	7.9	EPA 200.7
NITRATE-NITROGEN	24	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SMITH

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.58	FIELD
pH-LAB (SU)	6.4	SM4500B
POTASSIUM, TOTAL	1.6	EPA 200.7
POTASSIUM, DISSOLVED	1.7	EPA 200.7
SODIUM, TOTAL	9.9	EPA 200.7
SODIUM, DISSOLVED	10.7	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	273	FIELD
SPEC. COND., LAB (umhos/cm)	237	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	18	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	166	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	1.16	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number 101389

Monitoring Point I.D. No.

PS SMITH

Sample Date

02/28/2017

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

T Please indicate detection limit if analyte is not detected.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section 1103			
SECTION A. SITE IDENTIFIER			
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name:	rey Farm Landfill		
Facility ID (as issued by DEP):	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm I	andfill		
County: Lancaster C			
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name: MILLER			
Address: 3052 RIVE	RROAD		
Phone No.:			
30.6	57 ' 29.85 " Longitude: 76 ° 26 ' 11.45 "		
Sampling Point: Latitude:	Congitude:		
Casing Stick Up:	The state of the s		
Total Well Depth:	<u> </u>		
Sampling Depth:	ft. ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micr	on)?: X Yes No		
,	8/2017 Sample Collection Time: 1:39 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	03/10/2017		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number
101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	14	EPA 200.7
CALCIUM, DISSOLVED	14.2	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	22.2	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	10.6	EPA 200.7
MAGNESIUM, DISSOLVED	11	EPA 200.7
MANGANESE, TOTAL (ug/l)	55	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	56	EPA 200.7
NITRATE-NITROGEN	20	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	4.98	FIELD
pH-LAB (SU)	5.79	SM4500B
POTASSIUM, TOTAL	1.9	EPA 200.7
POTASSIUM, DISSOLVED	2.1	EPA 200.7
SODIUM, TOTAL	7	EPA 200.7
SODIUM, DISSOLVED	7.9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	252	FIELD
SPEC. COND., LAB (umhos/cm)	209	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	159	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.51	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.13	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS MILLER

Sample Date

02/28/2017

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

T Please indicate detection limit if analyte is not detected.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section 1103			
	SECTION A. SITE IDENTIFIER		
Applicant/permittee: La	ancaster County Solid Waste Manage		
Site Name: Fr	rey Farm Landfill		
Facility ID (as issued by DEP): 10	01389		
SECT	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGIT	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm La	andfill		
County: Lancaster Co			
Township or Municipality: MANOR TO	•		
Landowner Name: LCSWMA			
Address: 3056 RIVER	ROAD		
Phone No.:	760 26 ' 1042 "		
Sampling Point: Latitude: 39 °	57 <u>28.44</u> Longitude: <u>76</u> <u>26</u> <u>10.43</u> "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:	ft.		
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micro	on)?: X Yes No		
Sample Date:(mm/dd/yy) 02/28	8/2017 Sample Collection Time: 1:10 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	03/10/2017		
Were any holding times exceeded?: Yes X No If yes, please explain in comments field.			
Comments:			

Facility I.D. Number

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	5 ND	SM20-2321
CALCIUM, TOTAL	13.9	EPA 200.7
CALCIUM, DISSOLVED	14.9	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	26.2	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	12	EPA 200.7
MAGNESIUM, DISSOLVED	12.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	50	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	52	EPA 200.7
NITRATE-NITROGEN	26.4	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.2	FIELD
pH-LAB (SU)	5.78	SM4500B
POTASSIUM, TOTAL	2.1	EPA 200.7
POTASSIUM, DISSOLVED	2.2	EPA 200.7
SODIUM, TOTAL	8.1	EPA 200.7
SODIUM, DISSOLVED	8.9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	283	FIELD
SPEC. COND., LAB (umhos/cm)	234	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	141	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.6	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

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

T Please indicate detection limit if analyte is not detected.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017	
DEP USE ONLY	
	Date Received

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

General Reference: Act 101 Section	1103		
SECTION A. SITE IDENTIFIER			
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name:	rey Farm Landfill		
Facility ID (as issued by DEP):	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm I	andfill		
County: Lancaster C	county		
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name:LCSWMA			
Address: 3060 RIVE	R ROAD		
Phone No.:			
Sampling Point: Latitude: 39 c	57 ' 27.63 " Longitude:		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:			
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micr	on)?: X Yes No		
Sample Date:(mm/dd/yy) 02/2	8/2017 Sample Collection Time: 12:10 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	03/10/2017		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number 101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	5	SM20-2321
CALCIUM, TOTAL	9.5	EPA 200.7
CALCIUM, DISSOLVED	9.7	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7	EPA 410.2
CHLORIDE	21.9	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	11.3	EPA 200.7
MAGNESIUM, DISSOLVED	11.6	EPA 200.7
MANGANESE, TOTAL (ug/l)	56	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	60	EPA 200.7
NITRATE-NITROGEN	18.6	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.2	FIELD
pH-LAB (SU)	5.78	SM4500B
POTASSIUM, TOTAL	2.8	EPA 200.7
POTASSIUM, DISSOLVED	2.9	EPA 200.7
SODIUM, TOTAL	8.9	EPA 200.7
SODIUM, DISSOLVED	9.1	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	255	FIELD
SPEC. COND., LAB (umhos/cm)	200	EPA 120.1
SULFATE	12.5	EPA 300
ALKALINITY	5	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	131	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

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

T Please indicate detection limit if analyte is not detected.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017	
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General Reference: Act 101 Section	1103		
SECTION A. SITE IDENTIFIER			
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name:	rey Farm Landfill		
Facility ID (as issued by DEP):	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm L	andfill		
County: Lancaster C	County		
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name: SENSENIC	Н		
Address: 3076 RIVER	ROAD		
Phone No.:			
Sampling Point: Latitude: 39 o	57 28.2 Longitude: 76 ° 26 ' 11.1 "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:	ft.		
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micro			
Sample Date:(mm/dd/yy) 02/2	8/2017 Sample Collection Time: 1:16 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	03/10/2017		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number 101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	7	SM20-2321
CALCIUM, TOTAL	14.5	EPA 200.7
CALCIUM, DISSOLVED	14.5	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	51	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	8.6	EPA 200.7
MANGANESE, TOTAL (ug/l)	140	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	150	EPA 200.7
NITRATE-NITROGEN	13.5	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.12	FIELD
pH-LAB (SU)	5.94	SM4500B
POTASSIUM, TOTAL	2.9	EPA 200.7
POTASSIUM, DISSOLVED	3.1	EPA 200.7
SODIUM, TOTAL	21.5	EPA 200.7
SODIUM, DISSOLVED	21.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	300	FIELD
SPEC. COND., LAB (umhos/cm)	259	EPA 120.1
SULFATE	11.6	EPA 300
ALKALINITY	7	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	159	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS SENSENICH

Sample Date

02/28/2017

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

T Please indicate detection limit if analyte is not detected.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section	1103	
SECTION A. SITE IDENTIFIER		
Applicant/permittee:	ancaster County Solid Waste Manage	
Site Name:	rey Farm Landfill	
Facility ID (as issued by DEP):	01389	
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION	
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")	
Facility Name: Frey Farm I	andfill	
County: Lancaster C	county	
Township or Municipality: MANOR TO	WNSHIP	
Landowner Name:LCSWMA		
Address: 3079 RIVE	ROAD	
Phone No.:		
Sampling Point: Latitude: 39 c	57 ' 21.99 " Longitude: 76 ° 26 ' 10.58 "	
Depth to Water Level:	ft. Measured from: X Land Surface TOC	
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL	
Total Well Depth:	ft.	
Sampling Depth:	ft. Sampling Method: Pumped Bailed	
Well Purged: Yes	X No Well Volumes Purged:	
Sample Field Filtered (must be 0.45 micr	on)?: X Yes No	
Sample Date:(mm/dd/yy) 02/2	8/2017 Sample Collection Time: 12:30 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	03/10/2017	
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.	
Comments:		

Facility I.D. Number

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	6	SM20-2321
CALCIUM, TOTAL	10.2	EPA 200.7
CALCIUM, DISSOLVED	10.4	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	33.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	30 ND	EPA 200.7
IRON, DISSOLVED (ug/l)	60 ND	EPA 200.7
MAGNESIUM, TOTAL	5.1	EPA 200.7
MAGNESIUM, DISSOLVED	5.1	EPA 200.7
MANGANESE, TOTAL (ug/l)	150	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	150	EPA 200.7
NITRATE-NITROGEN	0.2 ND	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.3	FIELD
pH-LAB (SU)	5.8	SM4500B
POTASSIUM, TOTAL	1.8	EPA 200.7
POTASSIUM, DISSOLVED	1.9	EPA 200.7
SODIUM, TOTAL	10.5	EPA 200.7
SODIUM, DISSOLVED	10.9	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	195	FIELD
SPEC. COND., LAB (umhos/cm)	161	EPA 120.1
SULFATE	27.7	EPA 300
ALKALINITY	6	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	104	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

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

T Please indicate detection limit if analyte is not detected.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section	1103		
SECTION A. SITE IDENTIFIER			
Applicant/permittee:	ancaster County Solid Waste Manage		
Site Name:	rey Farm Landfill		
Facility ID (as issued by DEP):	01389		
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION		
INDICATE THE LATITUDE AND LONGI	FUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")		
Facility Name: Frey Farm I	andfill		
County: Lancaster C	county		
Township or Municipality: MANOR TO	WNSHIP		
Landowner Name:WEBER			
Address: 3088 RIVE	R ROAD		
Phone No.:			
Sampling Point: Latitude: 39 c	57 ' 21 " Longitude: 76 ° 26 ' 7.1 "		
Depth to Water Level:	ft. Measured from: X Land Surface TOC		
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL		
Total Well Depth:	ft.		
Sampling Depth:	ft. Sampling Method: Pumped Bailed		
Well Purged: Yes	X No Well Volumes Purged:		
Sample Field Filtered (must be 0.45 micr			
Sample Date:(mm/dd/yy) 03/0	1/2017 Sample Collection Time: 1:39 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	03/11/2017		
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.		
Comments:			

Facility I.D. Number
101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

03/01/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	135	SM20-2321
CALCIUM, TOTAL	0.053	EPA 200.7
CALCIUM, DISSOLVED	0.13	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	192	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	8.5	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

03/01/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.67	FIELD
pH-LAB (SU)	7.09	SM4500B
POTASSIUM, TOTAL	0.76	EPA 200.7
POTASSIUM, DISSOLVED	0.84	EPA 200.7
SODIUM, TOTAL	176	EPA 200.7
SODIUM, DISSOLVED	191	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	885	FIELD
SPEC. COND., LAB (umhos/cm)	889	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	135	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	474	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS WEBER

Sample Date

03/01/2017

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

T Please indicate detection limit if analyte is not detected.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017
DEP USE ONLY
Date Received

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

General Reference: Act 101 Section 1103		
	SECTION A. SITE IDENTIFIER	
Applicant/permittee:	ancaster County Solid Waste Manage	
Site Name:	rey Farm Landfill	
Facility ID (as issued by DEP):	01389	
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION	
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")	
Facility Name: Frey Farm I	andfill	
County: Lancaster C	county	
Township or Municipality: MANOR TO	WNSHIP	
Landowner Name: KIRCHNER		
Address: 3100 RIVE	R ROAD	
Phone No.:		
Sampling Point: Latitude: 39 c	57 ' 17.9 " Longitude: 76 ° 26 ' 6.28 "	
Depth to Water Level:	ft. Measured from: X Land Surface TOC	
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL	
Total Well Depth:		
Sampling Depth:	ft. Sampling Method: Pumped Bailed	
Well Purged: Yes	X No Well Volumes Purged:	
Sample Field Filtered (must be 0.45 micr	on)?: X Yes No	
Sample Date:(mm/dd/yy) 02/2	8/2017 Sample Collection Time: 3:43 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	03/10/2017	
Were any holding times exceeded?: Yes X No If yes, please explain in comments field.		
Comments:		

Facility I.D. Number 101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	15	SM20-2321
CALCIUM, TOTAL	17.5	EPA 200.7
CALCIUM, DISSOLVED	18	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	69	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	8.5	EPA 200.7
MAGNESIUM, DISSOLVED	8.9	EPA 200.7
MANGANESE, TOTAL (ug/l)	8	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	8.6	EPA 200.7
NITRATE-NITROGEN	5.9	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.6	FIELD
pH-LAB (SU)	6.29	SM4500B
POTASSIUM, TOTAL	1.6	EPA 200.7
POTASSIUM, DISSOLVED	1.7	EPA 200.7
SODIUM, TOTAL	15.8	EPA 200.7
SODIUM, DISSOLVED	16.2	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	290	FIELD
SPEC. COND., LAB (umhos/cm)	426	EPA 120.1
SULFATE	8.4	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)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS KIRCHNER

Sample Date

02/28/2017

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

T Please indicate detection limit if analyte is not detected.

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

	Date Prepared/Revised 03/22/2017	
DEP USE ONLY		
	Date Received	

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

General Reference: Act 101 Section 1103				
	SECTION A. SITE IDENTIFIER			
Applicant/permittee: La	ancaster County Solid Waste Manage			
Site Name: F	Frey Farm Landfill			
Facility ID (as issued by DEP): 1	101389			
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION			
INDICATE THE LATITUDE AND LONGIT	INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")			
Facility Name: Frey Farm L	andfill			
County: Lancaster C				
Township or Municipality: MANOR TO	·			
Landowner Name: LCSWMA	· · · · · · · · · · · · · · · · · · ·			
Address: 3106 RIVER	R ROAD			
Phone No.:				
Sampling Point: Latitude: 39 °	9 57 ' 17.27 " Longitude: 76 ° 26 ' <u>5.6</u> "			
Depth to Water Level:	ft. Measured from: X Land Surface TOC			
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL			
Total Well Depth:				
Sampling Depth:	ft. Sampling Method: Pumped Bailed			
Well Purged: Yes	X No Well Volumes Purged:			
Sample Field Filtered (must be 0.45 micro	on)?: X Yes No			
Sample Date:(mm/dd/yy) 02/28	28/2017 Sample Collection Time: 1:14 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	03/10/2017			
Were any holding times exceeded?: Yes X No If yes, please explain in comments field.				
Comments:				
· · · · · · · · · · · · · · · · · · ·				

Facility I.D. Number 101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	13	SM20-2321
CALCIUM, TOTAL	12.8	EPA 200.7
CALCIUM, DISSOLVED	12.9	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	7 ND	EPA 410.2
CHLORIDE	60.1	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	400	EPA 200.7
IRON, DISSOLVED (ug/l)	65	EPA 200.7
MAGNESIUM, TOTAL	8.1	EPA 200.7
MAGNESIUM, DISSOLVED	8.1	EPA 200.7
MANGANESE, TOTAL (ug/l)	31	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	33	EPA 200.7
NITRATE-NITROGEN	11.7	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
NITRITE - NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	5.51	FIELD
pH-LAB (SU)	6.37	SM4500B
POTASSIUM, TOTAL	1.5	EPA 200.7
POTASSIUM, DISSOLVED	1.6	EPA 200.7
SODIUM, TOTAL	26.3	EPA 200.7
SODIUM, DISSOLVED	26.4	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	291	FIELD
SPEC. COND., LAB (umhos/cm)	261	EPA 120.1
SULFATE	4.3	EPA 300
ALKALINITY	13	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	167	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	5.41	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS LCSWMA

Sample Date

02/28/2017

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.

2540-FM-BWM0060 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 03/22/2017	
DEP USE ONLY	
Date Received	

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

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

General Reference: Act 101 Section	1103
	SECTION A. SITE IDENTIFIER
Applicant/permittee:	ancaster County Solid Waste Manage
Site Name:	rey Farm Landfill
Facility ID (as issued by DEP):	01389
SEC	TION B. PRIVATE WATER SUPPLY INFORMATION
INDICATE THE LATITUDE AND LONGI	TUDE TO THE NEAREST ONE TENTH OF A SECOND (DE° MM' SS.S")
Facility Name: Frey Farm I	andfill
County: Lancaster C	county
Township or Municipality: MANOR TO	WNSHIP
Landowner Name:BECK	
Address: 3125 RIVE	R ROAD
Phone No.:	
Sampling Point: Latitude: 39 c	57 ' 11.6 " Longitude: 76 ° 26 ' 5.4 "
Depth to Water Level:	ft. Measured from: X Land Surface TOC
Casing Stick Up:	ft. Elevation of Water Level: ft./MSL
Total Well Depth:	
Sampling Depth:	ft. Sampling Method: Pumped Bailed
Well Purged: Yes	X No Well Volumes Purged:
Sample Field Filtered (must be 0.45 micr	on)?: X Yes No
Sample Date:(mm/dd/yy) 02/2	8/2017 Sample Collection Time: 1:54 PM
Laboratory(ies) Performing Analysis	ALS Environmental
(include address and phone number)	34 Dogwood Lane
	Middletown, PA 17057 (717) 944-5541
Lab Accreditation Number(s)	22-293
Lab Analysis Date	03/10/2017
Were any holding times exceeded?:	Yes X No If yes, please explain in comments field.
Comments:	

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

02/28/2017

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

PARAMETER	VALUE	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM4500D
BICARBONATE ALKALINITY	38	SM20-2321
CALCIUM, TOTAL	0.15	EPA 200.7
CALCIUM, DISSOLVED	0.36	EPA 200.7
COD (CHEMICAL OXYGEN DEMAND)	9	EPA 410.2
CHLORIDE	77.8	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	0.083	EPA 200.7
MAGNESIUM, DISSOLVED	0.23	EPA 200.7
MANGANESE, TOTAL (ug/l)	2.5 ND	EPA 200.7
MANGANESE, DISSOLVED (ug/l)	5 ND	EPA 200.7
NITRATE-NITROGEN	9.7	EPA 300

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number 101389

Monitoring Point I.D. No.

BECK

PS

Sample Date 02/28/2017

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)	5.85	FIELD
pH-LAB (SU)	6.6	SM4500B
POTASSIUM, TOTAL	1.6	EPA 200.7
POTASSIUM, DISSOLVED	1.7	EPA 200.7
SODIUM, TOTAL	78.3	EPA 200.7
SODIUM, DISSOLVED	84.5	EPA 200.7
SPEC. COND., FIELD (umhos/cm)	417	FIELD
SPEC. COND., LAB (umhos/cm)	403	EPA 120.1
SULFATE	7	EPA 300
ALKALINITY	38	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	199	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.69	SM20-5310B
TOTAL PHENOLICS (ug/l)	5 ND	EPA 420.4
TURBIDITY (NTU)	0.1 ND	SM 2130B

T Please indicate detection limit if analyte is not detected.

Facility I.D. Number

101389

Monitoring Point I.D. No.

PS BECK

Sample Date

02/28/2017

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)	0.98	EPA 524.2

T Please indicate detection limit if analyte is not detected.





NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

March 20, 2017

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

Certificate of Analysis

Revised Report - 3/20/2017 2:48:57 PM - See workorder comment section for explanation

Project Name: CONTIGUOUS LANDOWNER-3044 Workorder: 2211411

Purchase Order: Workorder ID: 1ST QTR 2017-3044 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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: 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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Report ID: 2211411 - 3/20/2017 Page 1 of 8





NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211411 1ST QTR 2017-3044 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211411001	3044 River Road, Conestoga, PA	Water	2/28/2017 13:03	2/28/2017 16:49	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2211411 1ST 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 preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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: 2211411 1ST QTR 2017-3044 RIVER RD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

This certificate of analysis was modified to include the laboratory analysis data on the report. Originally, it was issued with only the cover page and chain of custody. SJS 03/20/17

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ANALYTICAL RESULTS

Workorder: 2211411 1ST QTR 2017-3044 RIVER RD

Lab ID: 2211411001 Date Collected: 2/28/2017 13:03 Matrix: Water

Sample ID: 3044 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	18		mg/L	5	S2320B-97			3/1/17 10:00	MSA	С
Alkalinity, Total	18	1	mg/L	5	S2320B-97			3/1/17 10:00	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/8/17 22:33	CMM	В
Chemical Oxygen Demand (COD)	8		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	23.7		mg/L	2.0	EPA 300.0			3/1/17 16:53	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 16:53	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/2/17 11:41	PAG	I
Nitrate-N	24.0		mg/L	1.0	EPA 300.0			3/1/17 17:07	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 16:53	CHW	С
рН	6.40	2	pH_Units		S4500HB-00			3/1/17 10:00	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	237		umhos/cm	1	S2510B-97			3/1/17 10:00	MSA	С
Sulfate	ND		mg/L	2.0	EPA 300.0			3/1/17 16:53	CHW	С
Total Dissolved Solids	166		mg/L	5	S2540C-11			3/2/17 12:53	JAS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	1.16		NTU	0.10	S2130B-01			3/1/17 09:52	CHW	С
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 16:01	DD	J
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr

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ANALYTICAL RESULTS

Workorder: 2211411 1ST QTR 2017-3044 RIVER RD

Lab ID: 2211411001 Date Collected: 2/28/2017 13:03 Matrix: Water

Sample ID: 3044 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters										
	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	89.2		%	70 - 130	EPA 524.2			3/1/17 16:01	DD	J
4-Bromofluorobenzene (S)	87.9		%	70 - 130	EPA 524.2			3/1/17 16:01	DD	J
METALS										
Calcium, Total	18.5		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:44	TSS	D1
Calcium, Dissolved	19.2		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:53	TSS	Е
Iron, Total	0.072		mg/L	0.030	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:44	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:53	TSS	Е
Magnesium, Total	10.3		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:44	TSS	D1
Magnesium, Dissolved	10.8		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:53	TSS	Е
Manganese, Total	0.0091		mg/L	0.0025	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:44	TSS	D1
Manganese, Dissolved	0.0079		mg/L	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:53	TSS	Е
Potassium, Total	1.6		mg/L	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:44	TSS	D1
Potassium, Dissolved	1.7		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:53	TSS	E
Sodium, Total	9.9		mg/L	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:44	TSS	D1
Sodium, Dissolved	10.7		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:53	TSS	Е
FIELD PARAMETERS										
pH, Field (SM4500B)	5.580		pH_Units		Field			2/28/17 13:03	BGS	M
Specific Conductance, Field	273		umhos/cm	1	Field			2/28/17 13:03	BGS	M
Temperature	15.30		Deg. C		Field			2/28/17 13:03	BGS	M

Ms. Susan J Scherer Project Coordinator

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Lab ID	#	Sample ID	Analytical Method	Analyte
2211411001	1	3044 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is	s titrate	d to a pH of 4.5 and reported as mg (CaCO3/L.	
2211411001	2	3044 River Road, Conestoga, PA	S4500HB-00	рН
The pH analysis is a	n "anal	vze immediately" analysis. Paramete	rs identified as "analyze immediately"	require analysis within 15 minutes of

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 • HRIChetonn, PA 17057 • 717.944,5541 • Faz: 777.944,1430	• Fax: 717.944,1430		A. O. I.O.	SAMPLE	ER. INS	SAMPLER. INSTRUCTIONS ON THE BACK.	NS ON		.X.	· N		ALS Quote	ruote i i i i i i i i i i i i i i i i i i i
Client Name: LCSWMA - Nelson L. Smith		Container	9V	AN	AN	ຶ່	1	చ	ద	Я	료	చ	Receipt
Address: 3044 River Road		Container	40 ml	250 ml	500 mi	40 ml	1	500 ml	500 ml	500 ml	21	500 ml	Cooler Temp: 3C Therm ID: 357
Conestoga, PA 17516		Preservative	÷	H2SO4	H2SO4	호	1	H2S04	HNO3	HNO3	None	None	
Contact: Nelson L. Smith					ANA	ANALYSES/METHOD REQUESTED	ETHOD	EQUEST	8				Custody Seals Present?
Phone#: (717) 872-2888					٠				1		Γ		(if present) Seals Intact?
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. G≖Grab; C=Composite	ALS	ALS ENVIRONMENTAL	r, DW=Dr NTAL SI	nking Wat	er. GW=G ADDRES	oundwater S: 34 DC	O-OIL O	Laner I	iquid; SL= MIDDLE	Sludge; S	0=Soil; W	P=Wipe;	"Matrix - Al-Air, DW=Brinking Water, GW=Groundwater, Ol=Oil: OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057





NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

March 20, 2017

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

Certificate of Analysis

Revised Report - 3/20/2017 2:50:47 PM - See workorder comment section for explanation

Project Name: CONTIGUOUS LANDOWNER-3052 Workorder: 2211415

Purchase Order: Workorder ID: 1ST QTR 2017-3052 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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.

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

CC: 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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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211415 1ST QTR 2017-3052 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211415001	3052 River Road, Conestoga, PA	Water	2/28/2017 13:39	2/28/2017 16:49	Mr. Brian G Shade

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211415 1ST 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 preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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
- LOQ DoD Limit of Quantit
 DL DoD Detection Limit
- Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
- (S) Surrogate Compound
- NC Not Calculated
- * Result outside of QC limits

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2211415 1ST QTR 2017-3052 RIVER RD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

This certificate of analysis was modified to include the laboratory analysis data on the report. Originally, it was issued with only the cover page and chain of custody. SJS 03/20/17

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211415 1ST QTR 2017-3052 RIVER RD

Lab ID: 2211415001 Date Collected: 2/28/2017 13:39 Matrix: Water

Sample ID: 3052 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS				_						
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 17:14	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	84.7		%	70 - 130	EPA 524.2			3/1/17 17:14	DD	K
4-Bromofluorobenzene (S)	88.2		%	70 - 130	EPA 524.2			3/1/17 17:14	DD	K
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND		mg/L	5	S2320B-97			3/1/17 10:28	MSA	С
Alkalinity, Total	ND	1	mg/L	5	S2320B-97			3/1/17 10:28	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/8/17 23:30	CMM	В
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	22.2		mg/L	2.0	EPA 300.0			3/1/17 17:49	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 17:49	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/2/17 13:21	PAG	1
Nitrate-N	20.0		mg/L	0.20	EPA 300.0			3/1/17 17:49	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 17:49	CHW	С
рН	5.79	2	pH_Units		S4500HB-00			3/1/17 10:28	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	209		umhos/cm	1	S2510B-97			3/1/17 10:28	MSA	С
Sulfate	ND		mg/L	2.0	EPA 300.0			3/1/17 17:49	CHW	С
Total Dissolved Solids	159		mg/L	5	S2540C-11			3/2/17 12:53	JAS	C

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211415 1ST QTR 2017-3052 RIVER RD

Lab ID: 2211415001 Date Collected: 2/28/2017 13:39 Matrix: Water

Sample ID: 3052 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Total Organic Carbon (TOC)	0.51		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	0.13		NTU	0.10	S2130B-01			3/1/17 20:58	MSA	С
METALS										
Calcium, Total	14.0		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:55	TSS	D1
Calcium, Dissolved	14.2		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:20	TSS	Ε
Iron, Total	ND		mg/L	0.030	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:55	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:20	TSS	Ε
Magnesium, Total	10.6		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:55	TSS	D1
Magnesium, Dissolved	11.0		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:20	TSS	Ε
Manganese, Total	0.055		mg/L	0.0025	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:55	TSS	D1
Manganese, Dissolved	0.056		mg/L	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:20	TSS	Ε
Potassium, Total	1.9		mg/L	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:55	TSS	D1
Potassium, Dissolved	2.1		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:20	TSS	Ε
Sodium, Total	7.0		mg/L	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:55	TSS	D1
Sodium, Dissolved	7.9		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:20	TSS	Ε
FIELD PARAMETERS										
pH, Field (SM4500B)	4.980		pH_Units		Field			2/28/17 13:39	BGS	Ν
Specific Conductance, Field	252		umhos/cm	1	Field			2/28/17 13:39	BGS	Ν
Temperature	16.60		Deg. C		Field			2/28/17 13:39	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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Lab ID	#	Sample ID	Analytical Method	Analyte
2211415001	1	3052 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is	s titrate	d to a pH of 4.5 and reported as mg (CaCO3/L.	
2211415001	2	3052 River Road, Conestoga, PA	S4500HB-00	рН
The nH analysis is a	n "anal	vze immediately" analysis. Paramete	rs identified as "analyze immediately" i	require analysis within 15 minutes of

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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Report ID: 2211415 - 3/20/2017 Page 7 of 8

☐Rental_Equipment State Samples Receipt Information (completed by Receiving Lab) □Pickup □Labor 500 No.5 Sample/COC Comments Carros Must rap × 11/20/20 Therm ID: Special Processing Sample Disposal Naw USACE Special The prespoints Correct Sample Volumes? Headspace/Volatiles? (if present) Seals Intact? Cont. in Good Cond.? Cornect Containers? Correct Preservation? **Custody Seals Present?** Received on Ice? COC/Labels Complete/Accurate? Composite_Sampling atte ALS Field Services: Courier/Tracking #: brounded "Matrix - Al-Air, DW-Drinking Water; GW-Groundwater; Ol-Oil, OL-Other Liquid; SL-Studge; SO-Soil; WP-Wije; WW-Wastewater Cooler Temp: No. of Coolers: -Other: Reportable to PADEP? CLP-like Standard USACE EDDS: Format Type-500 ml None 겁 Alkalinity, HCO3 PWSID# Yes Tb, SpC Deliverables None 21 컶 Data pH, TDS, NO2, NO3, CI, SO4, F, Generated by ALS 500 ml HN03 or Field Results Belo Time Metals: Ca, Fe, Mg, Mn, K, Na ಷ ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT 500 ml HN03 K' Ng Date ನ Dissolved Metals: Ca, Fe, Mg, Mn, ANALYSES/METHOD REQUESTED SAMPLER. INSTRUCTIONS ON THE BACK H2S04 500 ml REQUEST FOR ANALYSIS Enter Number of Containers Per Sample 宀 NH3-N' COD CHAIN OF CUSTODY/ Received By / Corppany Name 1 I ĿΜ 40 m 8 잪 NOC H2S04 500 ml ¥ HO-O 250 ml H2S04 Ā XOT N 40 mg 오 PG BG LOC N 2 (EVIEWED BY(signature): M OGGED BY(signature): Container Container Sine Preservative wintsM* Time J 10 D. G 787 Date 34 Dogwood Lane + Middletown, PA 17057 + 717,944,5541 + Fax: 717,944,1430 338 Time Rush-Subject to ALS approval and surcharges. X Normal-Standard TAT is 10-12 business days. G=Grab; C=Composite こったか Approved By: Sample a Deposed Lare a subdefered Fig. 1755 a. Paper, 717-444 5541 a. Esc. 717-444 100 a. ware Lindbook for Date elinguished By & Company Name Client Name: LCSWMA - Gerald E. Miller, Sr. Bill To: Lancaster County Solid Waste MA Project Name/#: LCSWMA - Quarterly Sample Description/Location 3 (hodar del edi no readde link ii se) Conestoga, PA 17516 Gerald E. Miller, Sr. ALS) Environmental Address: 3052 River Road Phone#: (717) 872-5117 Y No. I 3052RIVERRD <u>خ</u> Project Comments: Date Required: Contact: ΤĀ Email? Fax?

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

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March 20, 2017

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

Certificate of Analysis

Revised Report - 3/20/2017 2:47:22 PM - See workorder comment section for explanation

Project Name: 2017-FREY FARM Workorder: 2211407

Purchase Order: Workorder ID: 1ST QTR 2017 3056 RIVER ROAD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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: 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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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211407 1ST QTR 2017 3056 RIVER ROAD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211407001	3056RIVERRD	Water	2/28/2017 13:10	2/28/2017 16:49	Mr. Jeff Musser

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SAMPLE SUMMARY

Workorder: 2211407 1ST QTR 2017 3056 RIVER ROAD

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.
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- U Indicates that the analyte was Not Detected (ND)
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- 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: 2211407 1ST QTR 2017 3056 RIVER ROAD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211407 1ST QTR 2017 3056 RIVER ROAD

Lab ID: 2211407001 Date Collected: 2/28/2017 13:10 Matrix: Water

Sample ID: 3056RIVERRD Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	ND		mg/L	5	S2320B-97			3/1/17 08:48	MSA	С
Alkalinity, Total	ND	1	mg/L	5	S2320B-97			3/1/17 08:48	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/8/17 21:16	CMM	В
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	26.2		mg/L	2.0	EPA 300.0			3/1/17 15:57	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 15:57	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/1/17 14:50	PAG	I
Nitrate-N	26.4		mg/L	1.0	EPA 300.0			3/1/17 16:11	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 15:57	CHW	С
рН	5.78	2	pH_Units		S4500HB-00			3/1/17 08:48	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	234		umhos/cm	1	S2510B-97			3/1/17 08:48	MSA	С
Sulfate	ND		mg/L	2.0	EPA 300.0			3/1/17 15:57	CHW	С
Total Dissolved Solids	141	3	mg/L	5	S2540C-11			3/2/17 12:53	JAS	С
Total Organic Carbon (TOC)	0.60		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			3/1/17 09:52	CHW	С
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 14:23	DD	J
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211407 1ST QTR 2017 3056 RIVER ROAD

Lab ID: 2211407001 Date Collected: 2/28/2017 13:10 Matrix: Water

Sample ID: 3056RIVERRD Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	81.7		%	70 - 130	EPA 524.2			3/1/17 14:23	DD	J
4-Bromofluorobenzene (S)	89.5		% %	70 - 130	EPA 524.2			3/1/17 14:23	DD	J
METALS	09.5		70	70 - 130	LI A 324.2			3/1/17 14.23	טט	J
_	12.0		a/I	0.050	EDA 200.7	2/4/47 07:20	TDD	2/2/17 00:22	TCC	D4
Calcium, Total	13.9		mg/L	0.050	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:22	TSS	D1
Calcium, Dissolved	14.9		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:38	TSS	Е
ron, Total	ND		mg/L	0.030	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:22	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:38	TSS	Е
Magnesium, Total	12.0		mg/L	0.050	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:22	TSS	D1
Magnesium, Dissolved	12.9		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:38	TSS	Е
Manganese, Total	0.050		mg/L	0.0025	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:22	TSS	D1
Manganese, Dissolved	0.052		mg/L	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:38	TSS	Е
Potassium, Total	2.1		mg/L	0.25	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:22	TSS	D1
Potassium, Dissolved	2.2		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:38	TSS	Е
Sodium, Total	8.1		mg/L	0.25	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:22	TSS	D1
Sodium, Dissolved	8.9		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:38	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.200		pH_Units		SM4500B			2/28/17 13:10	CLT	М
Specific Conductance, Field	283		umhos/cm	1	S2510B-97			2/28/17 13:10	CLT	М

Ms. Susan J Scherer Project Coordinator

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Lab ID	#	Sample ID	Analytical Method	Analyte
2211407001	1	3056RIVERRD	S2320B-97	Alkalinity, Total
The Total Alkalinity	/ is titrate	ed to a pH of 4.5 and repor	ted as mg CaCO3/L.	
2211407001	2	3056RIVERRD	S4500HB-00	рН
The pH analysis is	an "ana	alvze immediately" analysis	. Parameters identified as "analyze imme	diately" require analysis within 15 minutes of

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

2211407001 3 3056RIVERRD S2540C-11 Total Dissolved Solids

The RPD associated with this sample was recovered at 18.6%. The RPD is outside method acceptance limits of 0-5%. The results used to calculate the RPD were 141 and 170.

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Rev 10/14 State Samples Collected In Rental Equipment Initial _Pickup _Labor A 2 3 Cooler Temp: 32 Them ID: 35.2 Sample/COC Comments Special Processing Sample Disposal B Special USACE Navy Headspace/Volatiles? (if present) Seals Intact? Received on Ite? COC/Labels Complete/Accurate? Cont. In Good Cond.? Correct Containers? Correct Sample Volumes? Correct Preservation? **Custody Seals Present?** Composite Sampling ALS Field Services: Courier/Tracking #: No. of Coolers: Other: SpC=283 pH = 5.2Reportable to PADEP? Rece ALS Quot Standard CLP-like USACE EDDS: Format Type-COC#: # QISMA Yes Deliverables ဗ္ဗ 오 3 유 S24.2-Form 52 Data Sample or Field Results Below Time 호 100 ₹ \$ ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT 2-28-5 Date 242 H2S04 ¥ 32 XOT ANALYSES/METHOD REQUESTED SAMPLER. INSTRUCTIONS ON THE BACK. HN03 REQUEST FOR ANALYSIS 200 Dissolved:Ca-Fe-Mg-Mn-K-Na Ч £55 CHAIN OF CUSTODY/ Enter Number of Containers Per HN03 Received By / Company Name 88 Total: Ca-Fe-Mg-Mn-K-Na ᅺ H2SO4 8 Ž HQ-O H2S04 200 ИНЗ/И-СОБ 굽 None 8 చ VIK-HCO3 SpC None ዺ ನ 2 ph-t0s-n02-n03-ci-s04-F-tb-REVIEWED BY(signature): からごめた 2-18-17 1649 OGGED BY(signature): ã Time Preservative winteM* Container J 10 9' G Date Time 13:10 Rush-Subject to ALS approval and surcharges. Normal-Standard TAT is 10-12 business days. 34 Dogwood Lane Middletown, PA 17057 P. 717-944-5541 F.717-944-1430 * G=Grab; C=Composite Approved By: 2/28/2017 Date Relinquished By / Company Name Grand Project Name/#: LCSWMA - Form 52 Sample Description/Location Jm 12 (as it will appear on the lab report) Environmental Client Name: LCSWMA .v Contact: Mark Reider 524435 Project Comments: Date Required: 3056RiverRD Address: Email? ΙĀΙ Phone#: Bill To: Fax?





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March 20, 2017

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

Certificate of Analysis

Revised Report - 3/20/2017 2:48:20 PM - See workorder comment section for explanation

Project Name: 2017-FREY FARM Workorder: 2211408

Purchase Order: Workorder ID: 1ST QTR 2017 3060 RIVER ROAD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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: 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: 2211408 1ST QTR 2017 3060 RIVER ROAD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211408001	3060RIVERRD	Water	2/28/2017 12:10	2/28/2017 16:49	Mr. Jeff Musser

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SAMPLE SUMMARY

Workorder: 2211408 1ST QTR 2017 3060 RIVER ROAD

Notes

- -- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 Field Services Sampling Plan).
- -- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- -- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- -- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- -- The Chain of Custody document is included as part of this report.
- -- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- -- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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: 2211408 1ST QTR 2017 3060 RIVER ROAD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

This certificate of analysis was modified to include the laboratory analysis data on the report. Originally, it was issued with only the cover page and chain of custody. SJS 03/20/17

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ANALYTICAL RESULTS

Workorder: 2211408 1ST QTR 2017 3060 RIVER ROAD

Lab ID: 2211408001 Date Collected: 2/28/2017 12:10 Matrix: Water

Sample ID: 3060RIVERRD Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	5		mg/L	5	S2320B-97			3/1/17 08:57	MSA	С
Alkalinity, Total	5	1	mg/L	5	S2320B-97			3/1/17 08:57	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/8/17 21:36	CMM	В
Chemical Oxygen Demand (COD)	7		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	21.9		mg/L	2.0	EPA 300.0			3/1/17 14:33	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 14:33	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/1/17 15:17	PAG	1
Nitrate-N	18.6		mg/L	0.20	EPA 300.0			3/1/17 14:33	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 14:33	CHW	С
рН	5.78	2	pH_Units		S4500HB-00			3/1/17 08:57	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	200		umhos/cm	1	S2510B-97			3/1/17 08:57	MSA	С
Sulfate	12.5		mg/L	2.0	EPA 300.0			3/1/17 14:33	CHW	С
Total Dissolved Solids	131		mg/L	5	S2540C-11			3/2/17 12:53	JAS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			3/1/17 09:52	CHW	С
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 14:48	DD	J
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr

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ANALYTICAL RESULTS

Workorder: 2211408 1ST QTR 2017 3060 RIVER ROAD

Lab ID: 2211408001 Date Collected: 2/28/2017 12:10 Matrix: Water

Sample ID: 3060RIVERRD Date Received: 2/28/2017 16:49

							_		_	
Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	79.2		%	70 - 130	EPA 524.2			3/1/17 14:48	DD	J
4-Bromofluorobenzene (S)	87		%	70 - 130	EPA 524.2			3/1/17 14:48	DD	J
METALS										
Calcium, Total	9.5		mg/L	0.050	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:34	TSS	D1
Calcium, Dissolved	9.7		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:42	TSS	Ε
Iron, Total	ND		mg/L	0.030	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:34	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:42	TSS	Ε
Magnesium, Total	11.3		mg/L	0.050	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:34	TSS	D1
Magnesium, Dissolved	11.6		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:42	TSS	Ε
Manganese, Total	0.056		mg/L	0.0025	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:34	TSS	D1
Manganese, Dissolved	0.060		mg/L	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:42	TSS	Ε
Potassium, Total	2.8		mg/L	0.25	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:34	TSS	D1
Potassium, Dissolved	2.9		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:42	TSS	Е
Sodium, Total	8.9		mg/L	0.25	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:34	TSS	D1
Sodium, Dissolved	9.1		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:42	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.200		pH_Units		SM4500B			2/28/17 12:10	CLT	M
Specific Conductance, Field	255		umhos/cm	1	S2510B-97			2/28/17 12:10	CLT	M

Ms. Susan J Scherer Project Coordinator

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Lab ID	#	Sample ID	Analytical Method	Analyte				
2211408001	1	3060RIVERRD	S2320B-97	Alkalinity, Total				
The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.								
2211408001	2	3060RIVERRD	S4500HB-00	рН				

The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.

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Middletown, PA 17057 P. 717-944-554 F.717-944-1430	, PA 17057 541 430		AL	ALL SHAD	KECO ED ARE	REQUEST FOR AWALTSIS DED AREAS MUST BE COMPLETED BY THE CLIENT!	DE CO	MPLETE	DBYII	IE CLIEI	111	لعا	ALS Quote	
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Address:		0	Container	25	200	200	200	200	200	250	9	8	8	Cooler Temp: SC Therm ID: SSC
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Contact: Mark Reider						ANAL	YSESIM	ANALYSES/METHOD REQUESTED	EQUEST	8	Ī	t	T	Custody Seals Present?
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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

March 20, 2017

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

Certificate of Analysis

Revised Report - 3/20/2017 2:49:52 PM - See workorder comment section for explanation

Project Name: CONTIGUOUS LANDOWNER-3076 Workorder: 2211413

Purchase Order: Workorder ID: 1ST QTR 2017-3076 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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: 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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Report ID: 2211413 - 3/20/2017 Page 1 of 8





NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211413 1ST QTR 2017-3076 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211413001	3076 River Road, Conestoga, PA	Water	2/28/2017 13:16	2/28/2017 16:49	Mr. Brian G Shade

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

Report ID: 2211413 - 3/20/2017 Page 2 of 8





NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211413 1ST 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 preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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: 2211413 1ST QTR 2017-3076 RIVER RD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

This certificate of analysis was modified to include the laboratory analysis data on the report. Originally, it was issued with only the cover page and chain of custody. SJS 03/20/17

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Report ID: 2211413 - 3/20/2017 Page 4 of 8





NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211413 1ST QTR 2017-3076 RIVER RD

Lab ID: 2211413001 Date Collected: 2/28/2017 13:16 Matrix: Water

Sample ID: 3076 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	7		mg/L	5	S2320B-97			3/1/17 10:19	MSA	С
Alkalinity, Total	7	1	mg/L	5	S2320B-97			3/1/17 10:19	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/8/17 23:11	CMM	В
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	51.0		mg/L	2.0	EPA 300.0			3/1/17 17:35	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 17:35	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/2/17 12:57	PAG	1
Nitrate-N	13.5		mg/L	0.20	EPA 300.0			3/1/17 17:35	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 17:35	CHW	С
рН	5.94	2	pH_Units		S4500HB-00			3/1/17 10:19	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	259		umhos/cm	1	S2510B-97			3/1/17 10:19	MSA	С
Sulfate	11.6		mg/L	2.0	EPA 300.0			3/1/17 17:35	CHW	С
Total Dissolved Solids	159		mg/L	5	S2540C-11			3/2/17 12:53	JAS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			3/1/17 09:52	CHW	С
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 16:50	DD	K
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr

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ANALYTICAL RESULTS

Workorder: 2211413 1ST QTR 2017-3076 RIVER RD

Lab ID: 2211413001 Date Collected: 2/28/2017 13:16 Matrix: Water

Sample ID: 3076 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

	,	- 3 ,								
Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	83.2		%	70 - 130	EPA 524.2			3/1/17 16:50	DD	K
4-Bromofluorobenzene (S)	87		%	70 - 130	EPA 524.2			3/1/17 16:50	DD	K
METALS										
Calcium, Total	14.5		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:51	TSS	D1
Calcium, Dissolved	14.5		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:01	TSS	Е
Iron, Total	ND		mg/L	0.030	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:51	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:01	TSS	Е
Magnesium, Total	8.7		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:51	TSS	D1
Magnesium, Dissolved	8.6		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:01	TSS	Е
Manganese, Total	0.14		mg/L	0.0025	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:51	TSS	D1
Manganese, Dissolved	0.15		mg/L	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:01	TSS	Е
Potassium, Total	2.9		mg/L	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:51	TSS	D1
Potassium, Dissolved	3.1		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:01	TSS	Е
Sodium, Total	21.5		mg/L	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:51	TSS	D1
Sodium, Dissolved	21.4		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:01	TSS	Е
FIELD PARAMETERS										
pH, Field (SM4500B)	5.120		pH_Units		Field			2/28/17 13:16	BGS	Ν
Specific Conductance, Field	300		umhos/cm	1	Field			2/28/17 13:16	BGS	Ν
Temperature	15.20		Deg. C		Field			2/28/17 13:16	BGS	Ν

Ms. Susan J Scherer Project Coordinator

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

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Lab ID	#	Sample ID	Analytical Method	Analyte
2211413001	1	3076 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity is	s titrate	d to a pH of 4.5 and reported as mg (CaCO3/L.	
2211413001	2	3076 River Road, Conestoga, PA	S4500HB-00	рН
The nH analysis is a	n "anal	vze immediately" analysis. Paramete	rs identified as "analyze immediately"	require analysis within 15 minutes of

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Report ID: 2211413 - 3/20/2017 Page 7 of 8

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34 Dogwood Lane - Micdelann, PA 17057 - 717.944,5541 - Fax: 717.944,1430	• Fax: 717,944,1430		L	SAMPL	SAMPLER. INSTRUCTIONS ON THE BACK	AUC.	NS ON	HE DA				Ī	* 2 2 7 1 4 7 3 *	ſ
Client Name: LCSWMA - Esther A. Schopf		Type	AG	A	AN	8	1	۲,	Ч	ገ	చ	ጉ	Recent	ē
Address: 3076 Rover Road		Container Star	40 ml	250 ml	500 ml	40 ml	ı	500 ml	500 ml	500 ml	21	500 ml	Cooler Temp: 3.C Therm ID: 352	1
Conestoga, PA 17516		Preservative	오	H2SO4	H2S04	모	ı	H2SO4	HNO3	HN03	None	None	- -	Initial
Contact: Esther A. Schopf					ANA	ANALYSES/METHOD REQUESTED	ETHOOF	EQUEST	8				Custody Seals Present?	(
Phone#: (717) 872-2559			L						1				(if present) Seals Intact?	
Project Name/#: LCSWMA - Quarterly		_							nM ,	E	,F,		Received on Ice?	
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Sample Description/Location San (ss it will appear on the lab report) Dg	Sample Date Time	o o o o'	ют	(OT	Enter Number of Containers Per Sample or Fleid Results Below	OV Son	MH Iners Per	Sample or	Ed K, N	iew ses	'Hd'	-	CounterTracking #: Sample/COC Comments	\prod
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March 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: 2211409

Purchase Order: Workorder ID: 1ST QTR 2017 LCSWMA OWNED

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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.

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

CC: 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: 2211409 1ST QTR 2017 LCSWMA OWNED

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211409001	3079RIVERRD	Water	2/28/2017 12:30	2/28/2017 16:49	Mr. Jeff Musser

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211409 1ST QTR 2017 LCSWMA OWNED

Notes

- -- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 Field Services Sampling Plan).
- -- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- -- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- -- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- -- The Chain of Custody document is included as part of this report.
- -- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- -- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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
- 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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Report ID: 2211409 - 3/13/2017 Page 3 of 8





NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2211409 1ST QTR 2017 LCSWMA OWNED

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211409 1ST QTR 2017 LCSWMA OWNED

Lab ID: 2211409001 Date Collected: 2/28/2017 12:30 Matrix: Water

Sample ID: 3079RIVERRD Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 15:12	DD	J
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	84		%	70 - 130	EPA 524.2			3/1/17 15:12	DD	J
4-Bromofluorobenzene (S)	87.6		%	70 - 130	EPA 524.2			3/1/17 15:12	DD	J
WET CHEMISTRY										
Alkalinity, Bicarbonate	6		mg/L	5	S2320B-97			3/1/17 09:06	MSA	С
Alkalinity, Total	6	1	mg/L	5	S2320B-97			3/1/17 09:06	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/8/17 21:55	CMM	В
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	33.5		mg/L	2.0	EPA 300.0			3/1/17 16:25	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 16:25	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/2/17 10:20	PAG	1
Nitrate-N	ND		mg/L	0.20	EPA 300.0			3/1/17 16:25	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 16:25	CHW	С
рН	5.80	2	pH_Units		S4500HB-00			3/1/17 09:06	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	161		umhos/cm	1	S2510B-97			3/1/17 09:06	MSA	С
Sulfate	27.7		mg/L	2.0	EPA 300.0			3/1/17 16:25	CHW	С
Total Dissolved Solids	104		mg/L	5	S2540C-11			3/2/17 12:53	JAS	С

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211409 1ST QTR 2017 LCSWMA OWNED

Lab ID: 2211409001 Date Collected: 2/28/2017 12:30 Matrix: Water

Sample ID: 3079RIVERRD Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			3/1/17 09:52	CHW	С
METALS										
Calcium, Total	10.2		mg/L	0.050	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:38	TSS	D1
Calcium, Dissolved	10.4		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:45	TSS	Е
ron, Total	ND		mg/L	0.030	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:38	TSS	D1
ron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:45	TSS	Ε
Magnesium, Total	5.1		mg/L	0.050	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:38	TSS	D1
Magnesium, Dissolved	5.1		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:45	TSS	Ε
Manganese, Total	0.15		mg/L	0.0025	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:38	TSS	D1
Manganese, Dissolved	0.15		mg/L	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:45	TSS	Ε
Potassium, Total	1.8		mg/L	0.25	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:38	TSS	D1
Potassium, Dissolved	1.9		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:45	TSS	Ε
Sodium, Total	10.5		mg/L	0.25	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:38	TSS	D1
Sodium, Dissolved	10.9		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:45	TSS	Ε
FIELD PARAMETERS										
H, Field (SM4500B)	5.300		pH_Units		SM4500B			2/28/17 12:30	CLT	М
Specific Conductance, Field	195		umhos/cm	1	S2510B-97			2/28/17 12:30	CLT	М

Ms. Susan J Scherer Project Coordinator

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

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PARAMETER OI	IVITEDE

Lab ID	#	Sample ID	Analytical Method	Analyte	
2211409001	1	3079RIVERRD	S2320B-97	Alkalinity, Total	
The Total Alkalinity	y is titrate	ed to a pH of 4.5 and re	ported as mg CaCO3/L.		
2211409001	2	3079RIVERRD	S4500HB-00	рН	
The pH analysis is	s an "ana	llyze immediately" anal	ysis. Parameters identified as "analyze immediat	rely" require analysis within 15 minutes of	

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March 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: CONTIGUOUS LANDOWNER-3088 Workorder: 2211646

Purchase Order: Workorder ID: 1ST QTR 2017-3088 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Wednesday, March 1, 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: 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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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211646 1ST QTR 2017-3088 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211646001	3088 River Road, Conestoga PA	Water	3/1/2017 13:39	3/1/2017 15:12	Mr. Brian G Shade

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211646 1ST 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 preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2211646 1ST QTR 2017-3088 RIVER RD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211646 1ST QTR 2017-3088 RIVER RD

Lab ID: 2211646001 Date Collected: 3/1/2017 13:39 Matrix: Water

Sample ID: 3088 River Road, Conestoga PA Date Received: 3/1/2017 15:12

		Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
ND		ug/L	0.50	EPA 524.2			3/2/17 02:51	CJG	K
Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
87.9			70 - 130	EPA 524.2			3/2/17 02:51	CJG	K
109		%	70 - 130	EPA 524.2			3/2/17 02:51	CJG	K
0.053		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 11:57	TSS	D1
0.13		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:23	TSS	E
ND		mg/L	0.030	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 11:57	TSS	D1
ND		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:23	TSS	E
ND		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 11:57	TSS	D1
ND		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:23	TSS	E
ND		_	0.0025	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 11:57	TSS	D1
ND		_	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:23	TSS	E
0.76		_	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 11:57	TSS	D1
		_							Е
		_							_ D1
191		_	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 07:23	TSS	E
		J.				-			
135		ma/l	5	S2320B-97			3/1/17 22:53	MSA	С
	1	•	5						A
	ND N	ND N	ND ug/L Results Flag Units 87.9 % 109 % 0.053 mg/L ND mg/L 176 mg/L 191 mg/L 135 mg/L	ND ug/L 0.50 Results Flag Units Limits 87.9 % 70 - 130 109 % 70 - 130 0.053 mg/L 0.050 ND mg/L 0.030 ND mg/L 0.060 ND mg/L 0.0050 ND mg/L 0.0025 ND mg/L 0.0025 ND mg/L 0.0050<	ND ug/L 0.50 EPA 524.2 ND mg/L 0.050 EPA 524.2 ND mg/L	ND	ND	ND	ND

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211646 1ST QTR 2017-3088 RIVER RD

Lab ID: 2211646001 Date Collected: 3/1/2017 13:39 Matrix: Water

Sample ID: 3088 River Road, Conestoga PA Date Received: 3/1/2017 15:12

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
Ammonia-N	ND		mg/L	0.100	D6919-09			3/11/17 14:56	СММ	В
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	192		mg/L	2.0	EPA 300.0			3/2/17 06:19	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/2/17 06:19	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/2/17 14:07	PAG	I
Nitrate-N	8.5		mg/L	0.20	EPA 300.0			3/2/17 06:19	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/2/17 06:19	CHW	С
рН	7.09	2	pH_Units		S4500HB-00			3/1/17 22:53	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	889		umhos/cm	1	S2510B-97			3/1/17 22:53	MSA	С
Sulfate	ND		mg/L	2.0	EPA 300.0			3/2/17 06:19	CHW	С
Total Dissolved Solids	474		mg/L	5	S2540C-11			3/2/17 16:01	JAS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			3/2/17 10:22	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			3/1/17 20:58	MSA	С
FIELD PARAMETERS										
pH, Field (SM4500B)	6.670		pH_Units		Field			3/1/17 13:39	BGS	M
Specific Conductance, Field	885		umhos/cm	1	Field			3/1/17 13:39	BGS	M
Temperature	15.80		Deg. C		Field			3/1/17 13:39	BGS	М

Ms. Susan J Scherer Project Coordinator

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Lab ID	#	Sample ID	Analytical Method	Analyte
2211646001	1	3088 River Road, Conestoga PA	S2320B-97	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
2211646001	2	3088 River Road, Conestoga PA	S4500HB-00	pH
The nH analysis is	an "ana	llyze immediately" analysis. Paramete	ers identified as "analyze immediately"	require analysis within 15 minutes of

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 - Hans Weber and Deb Kalbach	ach	Container	AG	AN	AN	8		P.	ዝ _	Ы	. P.		* 2 2	1 1 6 4 6 *	sceiving Lab)
Address: 3088 River Road		Container	40 ml	d 250 ml	III 500 ml	ml 40 ml	 -	. 500 ml	nl 500 ml	m 500 ml	17. Im	L 500rm	Cooler Temp:	ip: 6 CTherm ID:	3636
Conestoga, PA 17516		Preservative	로	H2SO4	H2SO4	크		H2S04	HN03	3 HNO3	O3 None	None	No. of Coolers:		N Initial 9
Contact: Hans Weber and Deb Kalbach						NALYS	S/METH	ANALYSES/METHOD REQUESTED	ESTED				3	Custody Seals Present?	Z
Phone#: (717) 419-7982		L	L	_	_	L	_		'(L	L	_	Ē	(if present) Seals Intact?	7
Project Name/#: LCSWMA - Quarterly	3.								M.					Received on Ice?	,
Bill To: LCSWMA - Hans Weber and Deb Kalbach				_		_	•		6у (K N			COCALabels	COC/Labels Complete/Accurate?	
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<u>J</u> L						11		N' C	pavio		' SO.	pC,	_	Correct Preservation?	
Sample Description/Location S	⊩	or C	эот	XOT	10-0	ΛOC	MR	NH3	ossiQ	K, Na	r ,Hq	Tb, 9	Courier/Tracking #:	king #:	
(as it will appear on the lab report) Date	e Time		1		Enter N	Enter Number of Containers Per	ontainer	Per Samp	Sample or Field Results Below	Results	Selow.			Sample/COC Comments	ıts
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• G=Grab; C=Composite	ALS EN	"Matrix - Al=Air, DW=D ENVIRONMENTAL S	Air DW	SHIPPI	Water, GV	V=Ground RESS: 3	water, Ol=	"Matrix - AFAir, DW-Drinking Water, GW-Groundwater, OI=Oit, OL=Other Liquid, SL=Sludge; SO=Soit; WALS ENVIRONMENTAL SHIPPING ADDRESS; 34 DOGWOOD LANE MIDDLETOWN PA 17067	her Liquid	SL=Slud	ge: SO=S	oil; WP=Wig	ninking Water, GW=Groundwater, Ol≑Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater SHIPPING ADDRESS: 34 DOGWOOD LANE. MIDDLETOWN. PA 17067	vater	Rev 8/04
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March 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: CONTIGUOUS LANDOWNER-3100 Workorder: 2211405

Purchase Order: Workorder ID: 1ST QTR 2017-3100 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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: 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: 2211405 1ST QTR 2017-3100 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211405001	3100 River Road, Conestoga, PA	Water	2/28/2017 15:43	2/28/2017 16:49	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2211405 1ST 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 preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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: 2211405 1ST QTR 2017-3100 RIVER RD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

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ANALYTICAL RESULTS

Workorder: 2211405 1ST QTR 2017-3100 RIVER RD

Lab ID: 2211405001 Date Collected: 2/28/2017 15:43 Matrix: Water

Sample ID: 3100 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	15		mg/L	5	S2320B-97			3/1/17 08:38	MSA	С
Alkalinity, Total	15	1	mg/L	5	S2320B-97			3/1/17 08:38	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/10/17 08:43	CMM	В
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	69.0		mg/L	2.0	EPA 300.0			3/1/17 14:19	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 14:19	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/1/17 13:56	PAG	1
Nitrate-N	5.9		mg/L	0.20	EPA 300.0			3/1/17 14:19	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 14:19	CHW	С
рН	6.29	2	pH_Units		S4500HB-00			3/1/17 08:38	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	426		umhos/cm	1	S2510B-97			3/1/17 08:38	MSA	С
Sulfate	8.4		mg/L	2.0	EPA 300.0			3/1/17 14:19	CHW	С
Total Dissolved Solids	153		mg/L	5	S2540C-11			3/1/17 18:20	JAS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			3/1/17 09:52	CHW	С
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 13:59	DD	J
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr

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ANALYTICAL RESULTS

Workorder: 2211405 1ST QTR 2017-3100 RIVER RD

Lab ID: 2211405001 Date Collected: 2/28/2017 15:43 Matrix: Water

Sample ID: 3100 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	79		%	70 - 130	EPA 524.2			3/1/17 13:59	DD	J
4-Bromofluorobenzene (S)	87.2		%	70 - 130	EPA 524.2			3/1/17 13:59	DD	J
METALS										
Calcium, Total	17.5		mg/L	0.050	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:19	TSS	D1
Calcium, Dissolved	18.0		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:34	TSS	Е
Iron, Total	ND		mg/L	0.030	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:19	TSS	D1
Iron, Dissolved	ND		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:34	TSS	E
Magnesium, Total	8.5		mg/L	0.050	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:19	TSS	D1
Magnesium, Dissolved	8.9		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:34	TSS	Е
Manganese, Total	0.0080		mg/L	0.0025	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:19	TSS	D1
Manganese, Dissolved	0.0086		mg/L	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:34	TSS	Е
Potassium, Total	1.6		mg/L	0.25	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:19	TSS	D1
Potassium, Dissolved	1.7		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:34	TSS	Е
Sodium, Total	15.8		mg/L	0.25	EPA 200.7	3/1/17 07:29	TRR	3/2/17 09:19	TSS	D1
Sodium, Dissolved	16.2		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:34	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.600		pH_Units		Field			2/28/17 15:43	BGS	М
Specific Conductance, Field	290		umhos/cm	1	Field			2/28/17 15:43	BGS	M
Temperature	16.20		Deg. C		Field			2/28/17 15:43	BGS	M

Ms. Susan J Scherer Project Coordinator

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DVD	AMETER	ILIEDG

Lab ID	#	Sample ID	Analytical Method	Analyte		
2211405001	1	3100 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total		
The Total Alkalinity is	s titrate	d to a pH of 4.5 and reported as mg C	CaCO3/L.			
2211405001	2	3100 River Road, Conestoga, PA	S4500HB-00	рН		
The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of						

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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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

March 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: CONTIGUOUS LANDOWNER-3106 Workorder: 2211412

Purchase Order: Workorder ID: 1ST QTR 2017-3106 RIVER ROAD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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: 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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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211412 1ST QTR 2017-3106 RIVER ROAD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211412001	3106 River Road, Conestoga, PA	Water	2/28/2017 13:14	2/28/2017 16:49	Mr. Brian G Shade

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211412 1ST QTR 2017-3106 RIVER ROAD

Notes

- -- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 Field Services Sampling Plan).
- -- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
- -- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
- -- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
- -- The Chain of Custody document is included as part of this report.
- -- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- -- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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
- 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: 2211412 1ST QTR 2017-3106 RIVER ROAD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

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ANALYTICAL RESULTS

Workorder: 2211412 1ST QTR 2017-3106 RIVER ROAD

Lab ID: 2211412001 Date Collected: 2/28/2017 13:14 Matrix: Water

Sample ID: 3106 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
WET CHEMISTRY		_					_			
Alkalinity, Bicarbonate	13		mg/L	5	S2320B-97			3/1/17 10:10	MSA	С
Alkalinity, Total	13	1	mg/L	5	S2320B-97			3/1/17 10:10	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/8/17 22:52	CMM	В
Chemical Oxygen Demand (COD)	ND		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	60.1		mg/L	2.0	EPA 300.0			3/1/17 17:21	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 17:21	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/2/17 12:02	PAG	I
Nitrate-N	11.7		mg/L	0.20	EPA 300.0			3/1/17 17:21	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 17:21	CHW	С
рН	6.37	2	pH_Units		S4500HB-00			3/1/17 10:10	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	261		umhos/cm	1	S2510B-97			3/1/17 10:10	MSA	С
Sulfate	4.3		mg/L	2.0	EPA 300.0			3/1/17 17:21	CHW	С
Total Dissolved Solids	167		mg/L	5	S2540C-11			3/2/17 12:53	JAS	С
Total Organic Carbon (TOC)	ND		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	5.41		NTU	0.10	S2130B-01			3/1/17 09:52	CHW	С
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 16:25	DD	J
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211412 1ST QTR 2017-3106 RIVER ROAD

Lab ID: 2211412001 Date Collected: 2/28/2017 13:14 Matrix: Water

Sample ID: 3106 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	86.7		%	70 - 130	EPA 524.2			3/1/17 16:25	DD	J
4-Bromofluorobenzene (S)	91.4		%	70 - 130	EPA 524.2			3/1/17 16:25	DD	J
METALS										
Calcium, Total	12.8		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:48	TSS	D1
Calcium, Dissolved	12.9		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:57	TSS	Ε
Iron, Total	0.40		mg/L	0.030	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:48	TSS	D1
Iron, Dissolved	0.065		mg/L	0.060	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:57	TSS	E
Magnesium, Total	8.1		mg/L	0.050	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:48	TSS	D1
Magnesium, Dissolved	8.1		mg/L	0.10	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:57	TSS	Ε
Manganese, Total	0.031		mg/L	0.0025	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:48	TSS	D1
Manganese, Dissolved	0.033		mg/L	0.0050	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:57	TSS	Ε
Potassium, Total	1.5		mg/L	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:48	TSS	D1
Potassium, Dissolved	1.6		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:57	TSS	Ε
Sodium, Total	26.3		mg/L	0.25	EPA 200.7	3/2/17 00:00	ZMC	3/2/17 10:48	TSS	D1
Sodium, Dissolved	26.4		mg/L	0.50	EPA 200.7	3/2/17 02:53	TSS	3/2/17 06:57	TSS	E
FIELD PARAMETERS										
pH, Field (SM4500B)	5.510		pH_Units		Field			2/28/13 14:00	BGS	M
Specific Conductance, Field	291		umhos/cm		Field			2/28/13 14:00	BGS	M
Temperature	16.10		Deg. C		Field			2/28/13 14:00	BGS	M

Ms. Susan J Scherer Project Coordinator

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PARAMETER QUAI	IEIEDO

Lab ID	#	Sample ID	Analytical Method	Analyte
2211412001	1	3106 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
2211412001	2	3106 River Road, Conestoga, PA	S4500HB-00	рН
The nH analysis is	an "ana	lyze immediately" analysis. Paramete	rs identified as "analyze immediately"	require analysis within 15 minutes of

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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State Samples ☐Rental_Equipment Collected In DPickup OLabor × 3 8 È 38 Sample/COC Comments 3C Them ID: × Special Processing Sample Disposal e e USACE Navy Custody Seals Present? (if present) Seals Intact? Received on Ice? COCitabels Complete/Accurate? Cont. In Good Cond.? Correct Containers? Correct Sample Volumes? Correct Preservation? Headspace/Yolatiles? Special Composite_Sampling ALS Field Services: Courier/Tracking #: No. of Coolers: "Matrix - Al=Air, DW=Drinking Water, GW=Groundwater, Ol=Oit, OL=Other Liquid; SL=Studge; SO=Soit, WP=Wipe, WW+Wastewater Cooler Temp: -Other: Reportable to PADEP? ALS Que Standard **CLP-like** USACE EDDS: Format Type-500 ml None 宀 Alkalinity, HCO3 # QISMA Xes. Deliverables None DOS GI 21 പ pH, TDS, NO2, NO3, CI, SO4, F, Data 500 ml HN03 F Field Results Bel Time ፈ Metals; Ca, Fe, Mg, Mn, K, Na ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT 500 ml HNO3 eΝ, λ Date 占 Dissolved Metals: Ca, Fe, Mg, Mn, ANALYSES/METHOD REQUESTED SAMPLER. INSTRUCTIONS ON THE BACK 8 500 ml H2SQ4 REQUEST FOR ANALYSIS of Containers Per Sample ዺ NH3-N' COD h 34 Received By / Company Name МH 775 40 m ප NOC H2SO4 500 ml ¥ HO-O 250 ml H2S04 ¥ ·XOT 40 m AG. 오 201 2 REVIEWED BY(signature): Preservative M 1649 Container Type Container Stre Matrix, .OGGED BY(signature): Time J 10 9. G 252 34 Dogwood Lans + Middletown, PA 17057 + 717,944,5541 + Fax 717,944,1430 Time 는 Date Rush-Subject to ALS approval and surcharges. X Normal-Standard TAT is 10-12 business days. G=Grab; C=Composite Approved By: 11-80-€ H. Depresed Lane . Middletons, PA 17553 . Plane, 717-944 5543 . Say 717-444-5190 . www.ahybiolicipes Date **₹** Relinquished By (Company Name Lancaster County Solid Waste MA Client Name: LCSWMA - Patricia S. Hill roject Name#: LCSWMA - Quarterly Sample Description/Location (as it will appear on the tab report) VONOV Conestoga, PA 17516 ALS Environmental Address: 3106 River Road (717) 872-4587 Patricia S. Hill≻. 1 3106RIVERRD ₹ roject Comments: Date Required: Contact: Phone#: Bill To: ¥ Email? Fax?

Rev 8/04

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

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March 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: CONTIGUOUS LANDOWNER-3125 Workorder: 2211410

Purchase Order: Workorder ID: 1ST QTR 2017-3125 RIVER RD

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, February 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.

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

CC: 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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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211410 1ST QTR 2017-3125 RIVER RD

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2211410001	3125 River Road, Conestoga, PA	Water	2/28/2017 13:54	2/28/2017 16:49	Mr. Brian G Shade
2211410002	Trip Blank	Water	2/28/2017 16:49	2/28/2017 16:49	Mr. Brian G Shade
2211410003	Field Blank	Water	2/28/2017 15:13	2/28/2017 16:49	Mr. Brian G Shade

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

SAMPLE SUMMARY

Workorder: 2211410 1ST 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 preformed in the laboratory and are therefore analyzed out of hold time.
- -- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- -- For microbiological analyses, the "Prepared" value is the date/time into the incurbator 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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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

PROJECT SUMMARY

Workorder: 2211410 1ST QTR 2017-3125 RIVER RD

Workorder Comments

Results reported for Ammonia are associated with samples that were stored at temperatures exceeding the method criterion of 0-6 degrees C due to a sample storage equipment malfunction over the weekend of March 4, 2017.

Please note that reported results did not change in this revised report. Additional detailed information will be communicated by your customer service representative.

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211410 1ST QTR 2017-3125 RIVER RD

Lab ID: 2211410001 Date Collected: 2/28/2017 13:54 Matrix: Water

Sample ID: 3125 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
WET CHEMISTRY										
Alkalinity, Bicarbonate	38		mg/L	5	S2320B-97			3/1/17 09:51	MSA	С
Alkalinity, Total	38	1	mg/L	5	S2320B-97			3/1/17 09:51	MSA	С
Ammonia-N	ND		mg/L	0.100	D6919-09			3/8/17 22:14	CMM	В
Chemical Oxygen Demand (COD)	9		mg/L	7	EPA 410.4			3/2/17 13:30	AK	В
Chloride	77.8		mg/L	2.0	EPA 300.0			3/1/17 16:39	CHW	С
Fluoride	ND		mg/L	0.20	EPA 300.0			3/1/17 16:39	CHW	С
Halogen, Total Organic (TOX)	ND		ug/L	20.0	SW846 9020B			3/2/17 11:07	PAG	I
Nitrate-N	9.7		mg/L	0.20	EPA 300.0			3/1/17 16:39	CHW	С
Nitrite-N	ND		mg/L	0.20	EPA 300.0			3/1/17 16:39	CHW	С
рН	6.60	2	pH_Units		S4500HB-00			3/1/17 09:51	MSA	С
Phenolics	ND		mg/L	0.005	EPA 420.4	3/10/17 00:00	JLG	3/10/17 07:28	JLG	Н
Specific Conductance	403		umhos/cm	1	S2510B-97			3/1/17 09:51	MSA	С
Sulfate	7.0		mg/L	2.0	EPA 300.0			3/1/17 16:39	CHW	С
Total Dissolved Solids	199		mg/L	5	S2540C-11			3/2/17 12:53	JAS	С
Total Organic Carbon (TOC)	0.69		mg/L	0.50	S5310B-00			3/1/17 11:44	PAG	F
Turbidity	ND		NTU	0.10	S2130B-01			3/1/17 09:52	CHW	С
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Total Xylenes	0.98		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 15:36	DD	J
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr

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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: A2LA 0818.01 State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

ANALYTICAL RESULTS

Workorder: 2211410 1ST QTR 2017-3125 RIVER RD

Lab ID: 2211410001 Date Collected: 2/28/2017 13:54 Matrix: Water

Sample ID: 3125 River Road, Conestoga, PA Date Received: 2/28/2017 16:49

Parameters Results Flag Units RDL Method Prepared By Analyze 1,2-Dichlorobenzene-d4 (S) 84.4 % 70 - 130 EPA 524.2 3/1/17 15 4-Bromofluorobenzene (S) 92.4 % 70 - 130 EPA 524.2 3/1/17 15 METALS Calcium, Total 0.15 mg/L 0.050 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10 Calcium, Dissolved 0.36 mg/L 0.10 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10 Iron, Total ND mg/L 0.030 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	
4-Bromofluorobenzene (S) 92.4 % 70 - 130 EPA 524.2 3/1/17 15 METALS Calcium, Total 0.15 mg/L 0.050 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10 Calcium, Dissolved 0.36 mg/L 0.10 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06 Iron, Total ND mg/L 0.030 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	d By <i>Cntr</i>
METALS Calcium, Total 0.15 mg/L 0.050 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10 Calcium, Dissolved 0.36 mg/L 0.10 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06 Iron, Total ND mg/L 0.030 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	36 DD J
Calcium, Total 0.15 mg/L 0.050 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10 Calcium, Dissolved 0.36 mg/L 0.10 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06 Iron, Total ND mg/L 0.030 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	36 DD J
Calcium, Dissolved 0.36 mg/L 0.10 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06 Iron, Total ND mg/L 0.030 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	
Iron, Total ND mg/L 0.030 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	40 TSS D1
· ·	49 TSS E
D' ND	40 TSS D1
Iron, Dissolved ND mg/L 0.060 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06	49 TSS E
Magnesium, Total 0.083 mg/L 0.050 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	40 TSS D1
Magnesium, Dissolved 0.23 mg/L 0.10 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06	49 TSS E
Manganese, Total ND mg/L 0.0025 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	40 TSS D1
Manganese, Dissolved ND mg/L 0.0050 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06	49 TSS E
Potassium, Total 1.6 mg/L 0.25 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	40 TSS D1
Potassium, Dissolved 1.7 mg/L 0.50 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06	49 TSS E
Sodium, Total 78.3 mg/L 0.25 EPA 200.7 3/2/17 00:00 ZMC 3/2/17 10	40 TSS D1
Sodium, Dissolved 84.5 mg/L 0.50 EPA 200.7 3/2/17 02:53 TSS 3/2/17 06	49 TSS E
FIELD PARAMETERS	
pH, Field (SM4500B) 5.850 pH_Units Field 2/28/17 13	:54 BGS M
Specific Conductance, Field 417 umhos/cm 1 Field 2/28/17 13	:54 BGS M
Temperature 17.00 Deg. C Field 2/28/17 13	:54 BGS M

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ANALYTICAL RESULTS

Workorder: 2211410 1ST QTR 2017-3125 RIVER RD

Lab ID: 2211410002 Date Collected: 2/28/2017 16:49 Matrix: Water

Sample ID: Trip Blank Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 11:58	DD	Α
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	80.1		%	70 - 130	EPA 524.2			3/1/17 11:58	DD	Α
4-Bromofluorobenzene (S)	87.5		%	70 - 130	EPA 524.2			3/1/17 11:58	DD	Α

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ANALYTICAL RESULTS

Workorder: 2211410 1ST QTR 2017-3125 RIVER RD

Lab ID: 2211410003 Date Collected: 2/28/2017 15:13 Matrix: Water

Sample ID: Field Blank Date Received: 2/28/2017 16:49

Parameters	Results	Flag	Units	RDL	Method	Prepared	Ву	Analyzed	Ву	Cntr
VOLATILE ORGANICS										
Benzene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
1,2-Dibromoethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
1,1-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
1,2-Dichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
1,1-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
cis-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
trans-1,2-Dichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Ethylbenzene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Methylene Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Tetrachloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Toluene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Total Xylenes	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
1,1,1-Trichloroethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Trichloroethene	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Trichlorofluoromethane	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Vinyl Chloride	ND		ug/L	0.50	EPA 524.2			3/1/17 11:33	DD	Α
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared	Ву	Analyzed	Ву	Cntr
1,2-Dichlorobenzene-d4 (S)	84.4		%	70 - 130	EPA 524.2			3/1/17 11:33	DD	Α
4-Bromofluorobenzene (S)	88.5		%	70 - 130	EPA 524.2			3/1/17 11:33	DD	Α

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Lab ID	#	Sample ID	Analytical Method	Analyte
2211410001	1	3125 River Road, Conestoga, PA	S2320B-97	Alkalinity, Total
The Total Alkalinity	is titrate	ed to a pH of 4.5 and reported as mg (CaCO3/L.	
2211410001	2	3125 River Road, Conestoga, PA	S4500HB-00	pH
The nH analysis is	an "ana	lyze immediately" analysis. Paramete	rs identified as "analyze immediately"	require analysis within 15 minutes of

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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lient Name: LCSWMA - Christian C. Beck		Container	AG		AN	8	1	4	Я	겁	료	ದ	Rei	* 2 2 1 1 4 1	, ∗
Address: 3125 River Road		Container	40 ml	250 ml	1 500 ml	d 40 mi	-	500 ml	1 500 ml	1 500 ml	1 2 L	500 ml	Cooler Temp:	mp: 3,6 Them 10:35	32
Conestoga, PA 17516		Preservative	a HC!	H2S04	4 H2SO4	HCI	1	H2SO4	4 HN03	HNO3	3 None	None	No. of Coolers:		N Initial
ontact: Christian C. Beck				1	٩	ANALYSES/METHOD REQUESTED	SIMETHO	D REQUE	STED					Custody Seals Present?	
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