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www.lcswma.org

October 2, 2015

Ms. Charlene Sauls; Regional Hydrogeologist
Pennsylvania Department of Environmental Protection
Bureau of Waste Management
909 Elmerton Avenue
Harrisburg, PA 17110-8200

RE: Frey Farm Landfill (BWM Permit #101389)
Groundwater Monitoring; Forms 19 Submittal

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. Per your request we have attached is a copy of the pumping records for FFMP016W.

Please do not hesitate in contacting me if you have any questions or concerns at MREIDER@LCSWMA.ORG.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "M. D. Reider".

Mark D. Reider
Environmental Manager
Enclosures:

cc: Bob Zorbaugh, Dan Brown, Bob Eshbach
Ed Rawski, Randy Weiss (PaDEP)



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

Date Prepared/Revised
09/23/2015

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 19, 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: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP017W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 8.5 " Longitude: 76 ° 27 ' 6.17 "

Depth to Water Level: 42.79 ft Measured from: Land Surface TOC

Casing Stickup: 2.00 ft Elevation of Water Level: 437.91 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 158.19 gal

Total Well Depth: 150.5 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.3

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/17/2015 Sample Collection Time: 9:39

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2089859001 Final Lab Analysis Completion Date: 8/25/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP017W

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	44	SM20-2321
CALCIUM, TOTAL	53.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	172	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	24.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	210	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	2.2	EPA 300
pH-FIELD (SU)	5.26	FIELD
pH-LAB (SU)	6.23	SM20-4500HB
POTASSIUM, TOTAL	3.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	45.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	816	FIELD
SPEC. COND., LAB (umhos/cm)	740	EPA 120.1
SULFATE	52.4	EPA 300
ALKALINITY	44	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	471	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.6	SM20-5310B
TOTAL PHENOLICS (ug/l)	20	SW846 9066
TURBIDITY (N.T.U.)	0.27	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP017W

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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General Reference: Section 273.284
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Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP016W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 19.15 " Longitude: 76 ° 27 ' 0.88 "

Depth to Water Level: 55.24 ft Measured from: Land Surface TOC

Casing Stickup: 1.97 ft Elevation of Water Level: 419.36 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 138.88 gal

Total Well Depth: 149.8 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.0

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/17/2015 Sample Collection Time: 10:02

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2089859002 Final Lab Analysis Completion Date: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP016W

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	30	SM20-2321
CALCIUM, TOTAL	48.7	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	113	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	18.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	68	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	15.7	EPA 300
pH-FIELD (SU)	5.16	FIELD
pH-LAB (SU)	6.09	SM20-4500HB
POTASSIUM, TOTAL	2.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	31.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	638	FIELD
SPEC. COND., LAB (umhos/cm)	577	EPA 120.1
SULFATE	21.5	EPA 300
ALKALINITY	30	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	401	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.25	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP016W

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP027W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 32.62 " Longitude: 76 ° 27 ' 7.12 "

Depth to Water Level: 21.53 ft Measured from: Land Surface TOC

Casing Stickup: 2.50 ft Elevation of Water Level: 500.57 ft./MSL

Sampling Depth: 45 ft Volume of Water Column: 43.28 gal

Total Well Depth: 51 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 3.9

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/17/2015 Sample Collection Time: 10:52

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2089859003 Final Lab Analysis CompletionDate: 8/25/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP027W

Sample Date 8/17/2015

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	12	SM20-2321
CALCIUM, TOTAL	13.8	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	26.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	8.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	20	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	11.8	EPA 300
pH-FIELD (SU)	4.66	FIELD
pH-LAB (SU)	5.78	SM20-4500HB
POTASSIUM, TOTAL	1.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	9.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	240	FIELD
SPEC. COND., LAB (umhos/cm)	194	EPA 120.1
SULFATE	6.8	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	161	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.31	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).
Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP027W

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Monitoring Point Number: FFMP014W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 28.15 " Longitude: 76 ° 27 ' 3.25 "

Depth to Water Level: 16.81 ft Measured from: Land Surface TOC

Casing Stickup: 1.60 ft Elevation of Water Level: 490.49 ft./MSL

Sampling Depth: 24.5 ft Volume of Water Column: 8.35 gal

Total Well Depth: 29.6 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 8.1

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/17/2015 Sample Collection Time: 11:29

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2089859004 Final Lab Analysis Completion Date: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP014W

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	21	SM20-2321
CALCIUM, TOTAL	27.5	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	126	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	180	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	15.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	18	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	6.6	EPA 300
pH-FIELD (SU)	5.17	FIELD
pH-LAB (SU)	5.9	SM20-4500HB
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	54.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	624	FIELD
SPEC. COND., LAB (umhos/cm)	578	EPA 120.1
SULFATE	42.2	EPA 300
ALKALINITY	21	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	333	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	5.31	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

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I.D. No 101389

Monitoring Point No. FFMP014W

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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Monitoring Point Number: FFMP013W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 28.13 " Longitude: 76 ° 27 ' 3.3 "

Depth to Water Level: 16.6 ft Measured from: Land Surface TOC

Casing Stickup: 1.40 ft Elevation of Water Level: 491 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 197.39 gal

Total Well Depth: 151 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.6

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/17/2015 Sample Collection Time: 13:05

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2089859005 Final Lab Analysis CompletionDate: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP013W

Sample Date 8/17/2015

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ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	175	SM20-2321
CALCIUM, TOTAL	82.1	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	90.1	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1800	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	10.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	27	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.8	EPA 300
pH-FIELD (SU)	7.44	FIELD
pH-LAB (SU)	7.95	SM20-4500HB
POTASSIUM, TOTAL	1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	35.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	723	FIELD
SPEC. COND., LAB (umhos/cm)	657	EPA 120.1
SULFATE	32.5	EPA 300
ALKALINITY	175	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	366	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	26.8	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP013W

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

Date Prepared/Revised
09/23/2015

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP30RW Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 15.52 " Longitude: 76 ° 27 ' 26.8 "

Depth to Water Level: 36.28 ft Measured from: Land Surface TOC

Casing Stickup: 2.20 ft Elevation of Water Level: 526.02 ft./MSL

Sampling Depth: 85 ft Volume of Water Column: 78.90 gal

Total Well Depth: 90 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/17/2015 Sample Collection Time: 14:49

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2089859006 Final Lab Analysis CompletionDate: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP30RW

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	96	SM20-2321
CALCIUM, TOTAL	71.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	241	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	16.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	1500	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.9	EPA 300
pH-FIELD (SU)	5.83	FIELD
pH-LAB (SU)	6.65	SM20-4500HB
POTASSIUM, TOTAL	6.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	106	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1130	FIELD
SPEC. COND., LAB (umhos/cm)	1070	EPA 120.1
SULFATE	54	EPA 300
ALKALINITY	96	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	655	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.3	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.94	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).
Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP30RW

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

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MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP04AW Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 15.4 " Longitude: 76 ° 27 ' 26.58 "

Depth to Water Level: 35.77 ft Measured from: Land Surface TOC

Casing Stickup: 2.52 ft Elevation of Water Level: 524.95 ft./MSL

Sampling Depth: 146 ft Volume of Water Column: 390.29 gal

Total Well Depth: 301.52 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.5

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/17/2015 Sample Collection Time: 15:49

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2089859007 Final Lab Analysis Completion Date: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP04AW

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	197	SM20-2321
CALCIUM, TOTAL	152	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	323	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	25.2	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	130	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	0.2 ND	EPA 300
pH-FIELD (SU)	6.79	FIELD
pH-LAB (SU)	7.54	SM20-4500HB
POTASSIUM, TOTAL	2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	80.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1466	FIELD
SPEC. COND., LAB (umhos/cm)	1360	EPA 120.1
SULFATE	43.8	EPA 300
ALKALINITY	197	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	1000	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.89	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP04AW

Sample Date 8/17/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

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FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP028W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 37 ° 57 ' 21.62 " Longitude: 76 ° 27 ' 0.1 "

Depth to Water Level: 8.39 ft Measured from: Land Surface TOC

Casing Stickup: 2.50 ft Elevation of Water Level: 456.61 ft./MSL

Sampling Depth: 50 ft Volume of Water Column: _____ gal

Total Well Depth: 60 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 2.5

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 8/18/2015 Sample Collection Time: 10:09

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2090041001 Final Lab Analysis CompletionDate: 8/25/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP028W

Sample Date 8/18/2015

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES
ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.109	SM20-4500D
BICARBONATE ALKALINITY	30	SM20-2321
CALCIUM, TOTAL	42.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	91	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	18.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	19	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	22.3	EPA 300
pH-FIELD (SU)	5.12	FIELD
pH-LAB (SU)	6.48	SM20-4500HB
POTASSIUM, TOTAL	2.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	28.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	596	FIELD
SPEC. COND., LAB (umhos/cm)	553	EPA 120.1
SULFATE	19.3	EPA 300
ALKALINITY	30	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	435	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.36	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).
Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP028W

Sample Date 8/18/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

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QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP015W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 36.43 " Longitude: 76 ° 27 ' 10.82 "

Depth to Water Level: 58.56 ft Measured from: Land Surface TOC

Casing Stickup: 1.90 ft Elevation of Water Level: 517.84 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 132.68 gal

Total Well Depth: 148.9 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.0

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/18/2015 Sample Collection Time: 12:03

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2090041002 Final Lab Analysis CompletionDate: 8/25/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP015W

Sample Date 8/18/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	16	SM20-2321
CALCIUM, TOTAL	7.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	5.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	6.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	7.2	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	5.1	EPA 300
pH-FIELD (SU)	5.22	FIELD
pH-LAB (SU)	6.5	SM20-4500HB
POTASSIUM, TOTAL	1.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	8.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	158	FIELD
SPEC. COND., LAB (umhos/cm)	134	EPA 120.1
SULFATE	27.8	EPA 300
ALKALINITY	16	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	110	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.13	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP015W

Sample Date 8/18/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

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Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP03AW Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 24.05 " Longitude: 76 ° 27 ' 30.58 "

Depth to Water Level: 53.87 ft Measured from: Land Surface TOC

Casing Stickup: 1.20 ft Elevation of Water Level: 537.03 ft./MSL

Sampling Depth: 130 ft Volume of Water Column: 137.07 gal

Total Well Depth: 147.2 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.6

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/18/2015 Sample Collection Time: 13:27

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2090041003 Final Lab Analysis Completion Date: 8/25/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP03AW

Sample Date 8/18/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	18	SM20-2321
CALCIUM, TOTAL	17.7	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	22.2	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	12	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	170	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	20.7	EPA 300
pH-FIELD (SU)	4.96	FIELD
pH-LAB (SU)	5.91	SM20-4500HB
POTASSIUM, TOTAL	1.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	11.4	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	303	FIELD
SPEC. COND., LAB (umhos/cm)	253	EPA 120.1
SULFATE	3.7	EPA 300
ALKALINITY	18	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	213	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.1 ND	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP03AW

Sample Date 8/18/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

Date Prepared/Revised
09/23/2015

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 19, 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: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Monitoring Point Number: FFMP005W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 10.67 " Longitude: 76 ° 27 ' 21.3 "

Depth to Water Level: 69.92 ft Measured from: Land Surface TOC

Casing Stickup: 1.70 ft Elevation of Water Level: 467.48 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 117.61 gal

Total Well Depth: 150 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.1

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/18/2015 Sample Collection Time: 15:08

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2090041004 Final Lab Analysis Completion Date: 8/25/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP005W

Sample Date 8/18/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	46	SM20-2321
CALCIUM, TOTAL	65.5	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	147	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	15.2	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	35	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.5	EPA 300
pH-FIELD (SU)	5.33	FIELD
pH-LAB (SU)	6.14	SM20-4500HB
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	39.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	747	FIELD
SPEC. COND., LAB (umhos/cm)	703	EPA 120.1
SULFATE	59.5	EPA 300
ALKALINITY	46	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	476	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.16	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP005W

Sample Date 8/18/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

Date Prepared/Revised
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Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP023W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 31.62 " Longitude: 76 ° 27 ' 24.05 "

Depth to Water Level: 62.37 ft Measured from: Land Surface TOC

Casing Stickup: 1.50 ft Elevation of Water Level: 549.43 ft./MSL

Sampling Depth: 79 ft Volume of Water Column: 28.83 gal

Total Well Depth: 82 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 6.0

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/20/2015 Sample Collection Time: 10:22

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2090765001 Final Lab Analysis Completion Date: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP023W

Sample Date 8/20/2015

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	8	SM20-2321
CALCIUM, TOTAL	10.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	6	EPA 410.4
CHLORIDE	23.4	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	8.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	210	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	12.8	EPA 300
pH-FIELD (SU)	4.21	FIELD
pH-LAB (SU)	5.47	SM20-4500HB
POTASSIUM, TOTAL	1.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	9.2	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	216	FIELD
SPEC. COND., LAB (umhos/cm)	180	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	8	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	229	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.43	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).
Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP023W

Sample Date 8/20/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

Date Prepared/Revised
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FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP024W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 31.52 " Longitude: 76 ° 27 ' 24.75 "

Depth to Water Level: 63.76 ft Measured from: Land Surface TOC

Casing Stickup: 0.82 ft Elevation of Water Level: 547.66 ft./MSL

Sampling Depth: 180.78 ft Volume of Water Column: 201.29 gal

Total Well Depth: 200.82 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.5

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/20/2015 Sample Collection Time: 11:41

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2090765002 Final Lab Analysis CompletionDate: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP024W

Sample Date 8/20/2015

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES
ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.12	SM20-4500D
BICARBONATE ALKALINITY	96	SM20-2321
CALCIUM, TOTAL	42	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	10.7	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	0.7	EPA 300
pH-FIELD (SU)	7.33	FIELD
pH-LAB (SU)	7.84	SM20-4500HB
POTASSIUM, TOTAL	0.83	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	7.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	300	FIELD
SPEC. COND., LAB (umhos/cm)	249	EPA 120.1
SULFATE	31.2	EPA 300
ALKALINITY	96	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	239	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.22	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).
Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP024W

Sample Date 8/20/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

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MUNICIPAL WASTE LANDFILL
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Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP002W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 32.25 " Longitude: 76 ° 27 ' 24.03 "

Depth to Water Level: 66.66 ft Measured from: Land Surface TOC

Casing Stickup: 1.60 ft Elevation of Water Level: 546.54 ft./MSL

Sampling Depth: 85 ft Volume of Water Column: 151.18 gal

Total Well Depth: 169.6 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.6

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/20/2015 Sample Collection Time: 12:23

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2090765003 Final Lab Analysis CompletionDate: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP002W

Sample Date 8/20/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	5	SM20-2321
CALCIUM, TOTAL	22.7	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	20.9	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	9.7	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	260	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	24.8	EPA 300
pH-FIELD (SU)	4.66	FIELD
pH-LAB (SU)	5.62	SM20-4500HB
POTASSIUM, TOTAL	1.7	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	15.4	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	343	FIELD
SPEC. COND., LAB (umhos/cm)	285	EPA 120.1
SULFATE	12.8	EPA 300
ALKALINITY	5	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	331	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.61	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP002W

Sample Date 8/20/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

Date Prepared/Revised 09/23/2015
DEP USE ONLY
Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 19, 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: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana
Site Name: Frey Farm Landfill
Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP26RW Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 11.03 " Longitude: 76 ° 27 ' 20.3 "

Depth to Water Level: 80 ft Measured from: Land Surface TOC

Casing Stickup: 3.30 ft Elevation of Water Level: 467.40 ft./MSL

Sampling Depth: 105 ft Volume of Water Column: 49.93 gal

Total Well Depth: 114 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.5

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/20/2015 Sample Collection Time: 13:27

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2090765004 Final Lab Analysis CompletionDate: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP26RW

Sample Date 8/20/2015

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	36	SM20-2321
CALCIUM, TOTAL	55	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	6	EPA 410.4
CHLORIDE	156	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	17	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	270	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	2.3	EPA 300
pH-FIELD (SU)	5.12	FIELD
pH-LAB (SU)	5.99	SM20-4500HB
POTASSIUM, TOTAL	6.6	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	55	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	797	FIELD
SPEC. COND., LAB (umhos/cm)	755	EPA 120.1
SULFATE	76.3	EPA 300
ALKALINITY	36	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	557	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.7	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	1	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).
Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP26RW

Sample Date 8/20/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

Date Prepared/Revised
09/23/2015

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP018W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 11.62 " Longitude: 76 ° 27 ' 5.68 "

Depth to Water Level: 28.18 ft Measured from: Land Surface TOC

Casing Stickup: 2.46 ft Elevation of Water Level: 444.02 ft./MSL

Sampling Depth: 40 ft Volume of Water Column: 15.18 gal

Total Well Depth: 51.43 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 4.0

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/21/2015 Sample Collection Time: 8:57

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2091052001 Final Lab Analysis Completion Date: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP018W

Sample Date 8/21/2015

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES
ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	13	SM20-2321
CALCIUM, TOTAL	38.1	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	143	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	19.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	380	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	6	EPA 300
pH-FIELD (SU)	4.15	FIELD
pH-LAB (SU)	5.79	SM20-4500HB
POTASSIUM, TOTAL	4.8	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	47.6	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	692	FIELD
SPEC. COND., LAB (umhos/cm)	637	EPA 120.1
SULFATE	48.9	EPA 300
ALKALINITY	13	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	503	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.3	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.45	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).
Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP018W

Sample Date 8/21/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

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FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP019W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 11.58 " Longitude: 76 ° 27 ' 5.75 "

Depth to Water Level: 28.8 ft Measured from: Land Surface TOC

Casing Stickup: 1.79 ft Elevation of Water Level: 443.15 ft./MSL

Sampling Depth: 49 ft Volume of Water Column: 67.88 gal

Total Well Depth: 132.79 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 2.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/21/2015 Sample Collection Time: 9:41

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2091052002 Final Lab Analysis CompletionDate: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP019W

Sample Date 8/21/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	66	SM20-2321
CALCIUM, TOTAL	56	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	80.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	5.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	0.52	EPA 300
pH-FIELD (SU)	5.55	FIELD
pH-LAB (SU)	7.08	SM20-4500HB
POTASSIUM, TOTAL	0.94	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	9.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	442	FIELD
SPEC. COND., LAB (umhos/cm)	401	EPA 120.1
SULFATE	14.3	EPA 300
ALKALINITY	66	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	473	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.16	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP019W

Sample Date 8/21/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

Date Prepared/Revised
09/23/2015

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FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D^o MM' SS.S")

Monitoring Point Number: FFMP029W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 12.93 " Longitude: 76 ° 27 ' 0.67 "

Depth to Water Level: _____ ft Measured from: Land Surface TOC

Casing Stickup: 2.00 ft Elevation of Water Level: #Error ft./MSL

Sampling Depth: 55 ft Volume of Water Column: #Error gal

Total Well Depth: 58.5 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 3.3

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 8/21/2015 Sample Collection Time: 10:34

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2091052003 Final Lab Analysis CompletionDate: 8/28/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP029W

Sample Date 8/21/2015

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	13	SM20-2321
CALCIUM, TOTAL	11.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	5 ND	EPA 410.4
CHLORIDE	56.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	7.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	24	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.6	EPA 300
pH-FIELD (SU)	4.84	FIELD
pH-LAB (SU)	5.96	SM20-4500HB
POTASSIUM, TOTAL	1.8	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	18.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	263	FIELD
SPEC. COND., LAB (umhos/cm)	219	EPA 120.1
SULFATE	5.8	EPA 300
ALKALINITY	13	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	317	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).
Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP029W

Sample Date 8/21/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.



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

Date Prepared/Revised
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FORM 19
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QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (D° MM' SS.S")

Monitoring Point Number: FFMP025W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point Latitude: 39 ° 57 ' 19.07 " Longitude: 76 ° 27 ' 1.12 "

Depth to Water Level: 27.31 ft Measured from: Land Surface TOC

Casing Stickup: 1.50 ft Elevation of Water Level: 449.49 ft./MSL

Sampling Depth: 39 ft Volume of Water Column: 18.64 gal

Total Well Depth: 40 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.0

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/28/2015 Sample Collection Time: 8:30

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS Environmental

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 2092391001 Final Lab Analysis Completion Date: 9/4/2015

Name/Affiliation of Person who Filled Out Form: Brooks K. Norris

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP025W

Sample Date 8/28/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****ANALYTES****1-Q. Inorganics (Enter all data in mg/l except as noted)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	18	SM20-2321
CALCIUM, TOTAL	25.8	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	9	EPA 410.4
CHLORIDE	58.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	82	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	14	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010c
MANGANESE, TOTAL (ug/l)	20	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	18.5	EPA 300
pH-FIELD (SU)	5.2	FIELD
pH-LAB (SU)	6.21	SM20-4500HB
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	19.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	189	FIELD
SPEC. COND., LAB (umhos/cm)	393	EPA 120.1
SULFATE	9.1	EPA 300
ALKALINITY	18	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	283	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	10 ND	SW846 9066
TURBIDITY (N.T.U.)	2.26	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4).

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP025W

Sample Date 8/28/2015

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES****2-Q. Organics (Enter all data in ug/l)**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
CIS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
TRANS 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

August 27, 2015

Mr. Brooks Norris
Lancaster County Solid Waste
1299 Hbg Pike, P.O. Box 4425
Lancaster, PA 17604

Certificate of Analysis

Project Name: Frey Farm 2014	Workorder: 2090041
Purchase Order:	Workorder ID: Frey Farm 2014

Dear Mr. Norris:

Enclosed are the analytical results for samples received by the laboratory on Tuesday, August 18, 2015.

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 Mrs. Vanessa N Badman (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. Daniel Brown , Mr. Jeff Musser

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

Mrs. Vanessa N Badman
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2090041 Frey Farm 2014

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2090041001	FFMP028W	Ground Water	8/18/2015 10:09	8/18/2015 16:26	Mr. Brian G Shade
2090041002	FFMP015W	Ground Water	8/18/2015 12:03	8/18/2015 16:26	Mr. Brian G Shade
2090041003	FFMP03AW	Ground Water	8/18/2015 13:27	8/18/2015 16:26	Mr. Brian G Shade
2090041004	FFMP005W	Ground Water	8/18/2015 15:08	8/18/2015 16:26	Mr. Brian G Shade
2090041005	Field Blank	Ground Water	8/18/2015 15:15	8/18/2015 16:26	Mr. Brian G Shade
2090041006	Trip Blank	Ground Water	8/18/2015 16:26	8/18/2015 16:26	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2090041 Frey Farm 2014

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041001**

Date Collected: 8/18/2015 10:09

Matrix: Ground Water

Sample ID: **FFMP028W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 18:33	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 18:33	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 18:33	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 18:33	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 18:33	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 18:33	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 18:33	TMP	H

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041001**

Date Collected: 8/18/2015 10:09

Matrix: Ground Water

Sample ID: **FFMP028W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 18:33	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 18:33	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 18:33	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 18:33	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:33	TMP	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	113		%	62 - 133	SW846 8260B		8/20/15 18:33	TMP	H
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B		8/20/15 18:33	TMP	H
Dibromofluoromethane (S)	96		%	78 - 116	SW846 8260B		8/20/15 18:33	TMP	H
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B		8/20/15 18:33	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	30		mg/L	5	S2320B-97		8/19/15 19:03	MBW	C
Alkalinity, Total	30		mg/L	5	S2320B-97		8/19/15 19:03	MBW	C
Ammonia-N	0.109		mg/L	0.100	D6919-09		8/19/15 09:26	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/19/15 00:15	JAM	B
Chloride	91.0		mg/L	5.0	EPA 300.0		8/19/15 15:59	JP	C
Fluoride	ND		mg/L	0.50	EPA 300.0		8/19/15 15:59	JP	C
Nitrate-N	22.3		mg/L	0.50	EPA 300.0		8/19/15 15:59	JP	C
pH	6.48		pH_Units		S4500HB-00		8/19/15 19:03	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/24/15 NV	8/25/15 11:10	SYB	G
Specific Conductance	553		umhos/cm	1	EPA 120.1		8/19/15 19:03	MBW	C
Sulfate	19.3		mg/L	5.0	EPA 300.0		8/19/15 15:59	JP	C
Total Dissolved Solids	435		mg/L	5	S2540C-11		8/21/15 07:52	ML	C
Total Organic Carbon (TOC)	1.0		mg/L	1.0	S5310B-00		8/19/15 14:33	PAG	E
Turbidity	0.36		NTU	0.10	S2130B-01		8/19/15 07:45	NK	C

METALS
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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041001**


Date Collected: 8/18/2015 10:09

Matrix: Ground Water

Sample ID: **FFMP028W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	42.2		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 11:29	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 11:29	SRT	D1
Magnesium, Total	18.5		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 11:29	SRT	D1
Manganese, Total	0.019		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 11:29	SRT	D1
Potassium, Total	2.2		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 11:29	SRT	D1
Sodium, Total	28.3		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 11:29	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	8.39		Feet		Field		8/18/15 10:09	BGS	J
Ground Water Elevation	456.61		ft/MSL		Field		8/18/15 10:09	BGS	J
pH, Field (SM4500B)	5.12		pH_Units		Field		8/18/15 10:09	BGS	J
Sample Depth	50.00		Feet		Field		8/18/15 10:09	BGS	J
Specific Conductance, Field	596		umhos/cm	1	Field		8/18/15 10:09	BGS	J
Water Level After Purge	35.81		Feet		Field		8/18/15 10:09	BGS	J
Water Level Before Purge	8.39		Feet		Field		8/18/15 10:09	BGS	J
Well Volumes Purged	2.50		Vol		Field		8/18/15 10:09	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041002**

Date Collected: 8/18/2015 12:03

Matrix: Ground Water

Sample ID: **FFMP015W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 18:50	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 18:50	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 18:50	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 18:50	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 18:50	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 18:50	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 18:50	TMP	H

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041002**

Date Collected: 8/18/2015 12:03

Matrix: Ground Water

Sample ID: **FFMP015W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 18:50	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 18:50	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 18:50	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 18:50	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:50	TMP	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	111		%	62 - 133	SW846 8260B		8/20/15 18:50	TMP	H
4-Bromofluorobenzene (S)	104		%	79 - 114	SW846 8260B		8/20/15 18:50	TMP	H
Dibromofluoromethane (S)	94.6		%	78 - 116	SW846 8260B		8/20/15 18:50	TMP	H
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B		8/20/15 18:50	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	16		mg/L	5	S2320B-97		8/19/15 19:14	MBW	C
Alkalinity, Total	16		mg/L	5	S2320B-97		8/19/15 19:14	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/19/15 09:46	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/19/15 00:15	JAM	B
Chloride	5.9		mg/L	2.0	EPA 300.0		8/19/15 16:37	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/19/15 16:37	JP	C
Nitrate-N	5.1		mg/L	0.20	EPA 300.0		8/19/15 16:37	JP	C
pH	6.50		pH_Units		S4500HB-00		8/19/15 19:14	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/24/15 NV	8/25/15 11:11	SYB	G
Specific Conductance	134		umhos/cm	1	EPA 120.1		8/19/15 19:14	MBW	C
Sulfate	27.8		mg/L	2.0	EPA 300.0		8/19/15 16:37	JP	C
Total Dissolved Solids	110		mg/L	5	S2540C-11		8/21/15 07:52	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/19/15 14:33	PAG	E
Turbidity	0.13		NTU	0.10	S2130B-01		8/19/15 07:45	NK	C

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041002**

Date Collected: 8/18/2015 12:03

Matrix: Ground Water

Sample ID: **FFMP015W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	7.3		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 11:32	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 11:32	SRT	D1
Magnesium, Total	6.5		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 11:32	SRT	D1
Manganese, Total	0.0072		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 11:32	SRT	D1
Potassium, Total	1.2		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 11:32	SRT	D1
Sodium, Total	8.8		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 11:32	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	58.56		Feet		Field		8/18/15 12:03	BGS	J
Ground Water Elevation	517.84		ft/MSL		Field		8/18/15 12:03	BGS	J
pH, Field (SM4500B)	5.22		pH_Units		Field		8/18/15 12:03	BGS	J
Sample Depth	135.00		Feet		Field		8/18/15 12:03	BGS	J
Specific Conductance, Field	158		umhos/cm	1	Field		8/18/15 12:03	BGS	J
Water Level After Purge	102.03		Feet		Field		8/18/15 12:03	BGS	J
Water Level Before Purge	58.56		Feet		Field		8/18/15 12:03	BGS	J
Well Volumes Purged	1.00		Vol		Field		8/18/15 12:03	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041003**

Date Collected: 8/18/2015 13:27

Matrix: Ground Water

Sample ID: **FFMP03AW**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 19:07	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 19:07	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 19:07	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 19:07	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 19:07	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 19:07	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 19:07	TMP	H

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041003**

Date Collected: 8/18/2015 13:27

Matrix: Ground Water

Sample ID: **FFMP03AW**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 19:07	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 19:07	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 19:07	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 19:07	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 19:07	TMP	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	113		%	62 - 133	SW846 8260B		8/20/15 19:07	TMP	H
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B		8/20/15 19:07	TMP	H
Dibromofluoromethane (S)	96.1		%	78 - 116	SW846 8260B		8/20/15 19:07	TMP	H
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B		8/20/15 19:07	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	18		mg/L	5	S2320B-97		8/19/15 19:24	MBW	C
Alkalinity, Total	18		mg/L	5	S2320B-97		8/19/15 19:24	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/19/15 10:06	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/19/15 00:15	JAM	B
Chloride	22.2		mg/L	5.0	EPA 300.0		8/19/15 16:50	JP	C
Fluoride	ND		mg/L	0.50	EPA 300.0		8/19/15 16:50	JP	C
Nitrate-N	20.7		mg/L	0.50	EPA 300.0		8/19/15 16:50	JP	C
pH	5.91		pH_Units		S4500HB-00		8/19/15 19:24	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/24/15 NV	8/25/15 11:12	SYB	G
Specific Conductance	253		umhos/cm	1	EPA 120.1		8/19/15 19:24	MBW	C
Sulfate	3.7		mg/L	2.0	EPA 300.0		8/19/15 16:50	JP	C
Total Dissolved Solids	213		mg/L	5	S2540C-11		8/21/15 07:52	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/19/15 14:33	PAG	E
Turbidity	ND		NTU	0.10	S2130B-01		8/19/15 07:45	NK	C

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041003**

Date Collected: 8/18/2015 13:27

Matrix: Ground Water

Sample ID: **FFMP03AW**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	17.7		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 11:36	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 11:36	SRT	D1
Magnesium, Total	12.0		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 11:36	SRT	D1
Manganese, Total	0.17		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 11:36	SRT	D1
Potassium, Total	1.3		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 11:36	SRT	D1
Sodium, Total	11.4		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 11:36	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	53.87		Feet		Field		8/18/15 13:27	BGS	J
Ground Water Elevation	537.03		ft/MSL		Field		8/18/15 13:27	BGS	J
pH, Field (SM4500B)	4.96		pH_Units		Field		8/18/15 13:27	BGS	J
Sample Depth	130.00		Feet		Field		8/18/15 13:27	BGS	J
Specific Conductance, Field	303		umhos/cm	1	Field		8/18/15 13:27	BGS	J
Water Level After Purge	88.19		Feet		Field		8/18/15 13:27	BGS	J
Water Level Before Purge	53.87		Feet		Field		8/18/15 13:27	BGS	J
Well Volumes Purged	0.61		Vol		Field		8/18/15 13:27	BGS	J



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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041004**

Date Collected: 8/18/2015 15:08

Matrix: Ground Water

Sample ID: **FFMP005W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 19:24	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 19:24	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 19:24	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 19:24	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 19:24	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 19:24	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 19:24	TMP	H

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041004**

Date Collected: 8/18/2015 15:08

Matrix: Ground Water

Sample ID: **FFMP005W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 19:24	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 19:24	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 19:24	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 19:24	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 19:24	TMP	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	113		%	62 - 133	SW846 8260B		8/20/15 19:24	TMP	H
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B		8/20/15 19:24	TMP	H
Dibromofluoromethane (S)	96.2		%	78 - 116	SW846 8260B		8/20/15 19:24	TMP	H
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B		8/20/15 19:24	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	46		mg/L	5	S2320B-97		8/19/15 19:35	MBW	C
Alkalinity, Total	46		mg/L	5	S2320B-97		8/19/15 19:35	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/19/15 13:17	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/19/15 00:15	JAM	B
Chloride	147		mg/L	5.0	EPA 300.0		8/19/15 17:03	JP	C
Fluoride	ND		mg/L	0.50	EPA 300.0		8/19/15 17:03	JP	C
Nitrate-N	3.5		mg/L	0.50	EPA 300.0		8/19/15 17:03	JP	C
pH	6.14		pH_Units		S4500HB-00		8/19/15 19:35	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/24/15 NV	8/25/15 11:13	SYB	G
Specific Conductance	703		umhos/cm	1	EPA 120.1		8/19/15 19:35	MBW	C
Sulfate	59.5		mg/L	5.0	EPA 300.0		8/19/15 17:03	JP	C
Total Dissolved Solids	476		mg/L	5	S2540C-11		8/21/15 07:52	ML	C
Total Organic Carbon (TOC)	1.1		mg/L	1.0	S5310B-00		8/19/15 14:33	PAG	E
Turbidity	0.16		NTU	0.10	S2130B-01		8/19/15 07:45	NK	C

METALS
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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041004**

Date Collected: 8/18/2015 15:08

Matrix: Ground Water

Sample ID: **FFMP005W**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	65.5		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 11:39	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 11:39	SRT	D1
Magnesium, Total	15.2		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 11:39	SRT	D1
Manganese, Total	0.035		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 11:39	SRT	D1
Potassium, Total	2.1		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 11:39	SRT	D1
Sodium, Total	39.8		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 11:39	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	69.92		Feet		Field		8/18/15 15:08	BGS	J
Ground Water Elevation	467.48		ft/MSL		Field		8/18/15 15:08	BGS	J
pH, Field (SM4500B)	5.33		pH_Units		Field		8/18/15 15:08	BGS	J
Sample Depth	135.00		Feet		Field		8/18/15 15:08	BGS	J
Specific Conductance, Field	747		umhos/cm	1	Field		8/18/15 15:08	BGS	J
Water Level After Purge	95.12		Feet		Field		8/18/15 15:08	BGS	J
Water Level Before Purge	69.92		Feet		Field		8/18/15 15:08	BGS	J
Well Volumes Purged	1.07		Vol		Field		8/18/15 15:08	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041005**

Date Collected: 8/18/2015 15:15

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 17:24	TMP	A
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 17:24	TMP	A
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 17:24	TMP	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 17:24	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 17:24	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 17:24	TMP	A
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 17:24	TMP	A

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Mexico: Monterrey

ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041005**

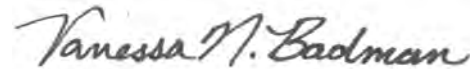
Date Collected: 8/18/2015 15:15

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 17:24	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 17:24	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 17:24	TMP	A
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 17:24	TMP	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:24	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	113		%	62 - 133	SW846 8260B		8/20/15 17:24	TMP	A
4-Bromofluorobenzene (S)	103		%	79 - 114	SW846 8260B		8/20/15 17:24	TMP	A
Dibromofluoromethane (S)	97.7		%	78 - 116	SW846 8260B		8/20/15 17:24	TMP	A
Toluene-d8 (S)	104		%	76 - 127	SW846 8260B		8/20/15 17:24	TMP	A



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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041006**

Date Collected: 8/18/2015 16:26

Matrix: Ground Water

Sample ID: **Trip Blank**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 17:41	TMP	A
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 17:41	TMP	A
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 17:41	TMP	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 17:41	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 17:41	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 17:41	TMP	A
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 17:41	TMP	A

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ANALYTICAL RESULTS

Workorder: 2090041 Frey Farm 2014

Lab ID: **2090041006**

Date Collected: 8/18/2015 16:26

Matrix: Ground Water

Sample ID: **Trip Blank**

Date Received: 8/18/2015 16:26

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 17:41	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 17:41	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 17:41	TMP	A
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 17:41	TMP	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:41	TMP	A
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	113		%	62 - 133	SW846 8260B		8/20/15 17:41	TMP	A
4-Bromofluorobenzene (S)	104		%	79 - 114	SW846 8260B		8/20/15 17:41	TMP	A
Dibromofluoromethane (S)	97.4		%	78 - 116	SW846 8260B		8/20/15 17:41	TMP	A
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B		8/20/15 17:41	TMP	A



Mrs. Vanessa N Badman

Project Coordinator

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1 of 1

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

Generated by ALS
34 Dogwood Lane • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430
Client Name: Lancaster County Solid Waste MA
Address: 1299 Harnsburg Pike, P.O. Box 4424
Lancaster, PA 17604
Contact: Brooks Norris
Phone#: (717) 397-9968
Project Name#: Frey Farm Quarterly
Bill To: Lancaster County Solid Waste MA

Cooler Temp: 12C Therm ID: TH-309
No. of Coolers: Y N
Custody Seals Present?
(if present) Seals Intact?
Received on Ice?
COC/Labels Complete/Accurate?
Cont. in Good Condi.?
Correct Containers?
Correct Sample Volumes?
Correct Preservation?
Headspace/Volatiles?
Courier Tracking #: SSSL

ANALYSES/METHOD REQUESTED

Container Type	AG	AN	CG	PL	PL	PL	PL
125 ml	HCl	H2SO4	HCl	500 ml	HNO3	500 ml	500 ml
500 ml	H2SO4	HCl	40 ml	500 ml	HNO3	500 ml	500 ml
500 ml	HCl	H2SO4	40 ml	500 ml	HNO3	500 ml	500 ml

Matrix: G or C
Enter Number of Containers Per Sample or Field Results Below.

Sample Description/Location	Sample Date	Time	G	C	TOC	O-OH	VOC - Form 190	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	PH, Cl, SPC, F, SO4, TDS, NO3	Alkalinity, HCO3
1. FFMPO2BW	8-18-15	1009	1	1	1	1	1	1	1	1	1	1	1
2. FFMPO15W	1203		1	1	1	1	1	1	1	1	1	1	1
3. FFMPO3AW	1322		1	1	1	1	1	1	1	1	1	1	1
4. FFMPO5W	1508		1	1	1	1	1	1	1	1	1	1	1
5. Field Blank	1515		1	1	1	1	1	1	1	1	1	1	1
6. Trip Blank	1626		1	1	1	1	1	1	1	1	1	1	1

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

Standard CUP-like USACE
Deliverables: USACE Navy
Special Processing: USACE Navy
Sample Disposal: Lab Special
Reportable to PADEP? Yes No
PWSID #
EDDS: Formal Type

LOGGED BY (signature): [Signature] DATE: 8/18/15 TIME: 1900
REVIEWED BY (signature): [Signature] DATE: 8/18/15 TIME: 0220

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
<u>[Signature]</u>	8/18/15	1626	<u>[Signature]</u>	8/18/15	0220
3		4			
5		6			
7		8			
9		10			

* G=Grab; C=Composite **Matrix: A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other; Liquid; SL=Sludge; SO=Soil; WP=Wpcc; WW=Wastewater
ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

August 28, 2015

Mr. Brooks Norris
Lancaster County Solid Waste
1299 Hbg Pike, P.O. Box 4425
Lancaster, PA 17604

Certificate of Analysis

Project Name: Frey Farm 2014	Workorder: 2089859
Purchase Order:	Workorder ID: Frey Farm Quarterly

Dear Mr. Norris:

Enclosed are the analytical results for samples received by the laboratory on Monday, August 17, 2015.

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 Mrs. Vanessa N Badman (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. Daniel Brown , Mr. Jeff Musser

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

Mrs. Vanessa N Badman
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2089859 Frey Farm Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2089859001	FFMP017W	Ground Water	8/17/2015 09:39	8/17/2015 17:05	Mr. Brian G Shade
2089859002	FFMP016W	Ground Water	8/17/2015 10:02	8/17/2015 17:05	Mr. Brian G Shade
2089859003	FFMP027W	Ground Water	8/17/2015 10:52	8/17/2015 17:05	Mr. Brian G Shade
2089859004	FFMP014W	Ground Water	8/17/2015 11:29	8/17/2015 17:05	Mr. Brian G Shade
2089859005	FFMP013W	Ground Water	8/17/2015 13:05	8/17/2015 17:05	Mr. Brian G Shade
2089859006	FFMP30RW	Ground Water	8/17/2015 14:49	8/17/2015 17:05	Mr. Brian G Shade
2089859007	FFMP04AW	Ground Water	8/17/2015 15:49	8/17/2015 17:05	Mr. Brian G Shade
2089859008	Field Blank	Ground Water	8/17/2015 16:00	8/17/2015 17:05	Mr. Brian G Shade
2089859009	Trip Blank	Ground Water	8/17/2015 17:05	8/17/2015 17:05	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2089859 Frey Farm Quarterly

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859001**

Date Collected: 8/17/2015 09:39

Matrix: Ground Water

Sample ID: **FFMP017W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 13:40	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 13:40	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 13:40	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 13:40	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 13:40	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,3-Dichlorobenzene	ND	7	ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,4-Dichlorobenzene	ND	8	ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Dichlorodifluoromethane	ND	12	ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 13:40	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 13:40	TMP	H

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859001**

Date Collected: 8/17/2015 09:39

Matrix: Ground Water

Sample ID: **FFMP017W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 13:40	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 13:40	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
Trichlorofluoromethane	ND	56	ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 13:40	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 13:40	TMP	H
Vinyl Chloride	ND	34	ug/L	1.0	SW846 8260B		8/20/15 13:40	TMP	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	112		%	62 - 133	SW846 8260B		8/20/15 13:40	TMP	H
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B		8/20/15 13:40	TMP	H
Dibromofluoromethane (S)	97		%	78 - 116	SW846 8260B		8/20/15 13:40	TMP	H
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B		8/20/15 13:40	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	44		mg/L	5	S2320B-97		8/18/15 09:29	MBW	C
Alkalinity, Total	44		mg/L	5	S2320B-97		8/18/15 09:29	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/18/15 20:51	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/19/15 00:15	JAM	B
Chloride	172		mg/L	2.0	EPA 300.0		8/18/15 11:05	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/18/15 11:05	JP	C
Nitrate-N	2.2		mg/L	0.20	EPA 300.0		8/18/15 11:05	JP	C
pH	6.23		pH_Units		S4500HB-00		8/18/15 09:29	MBW	C
Phenolics	0.02		mg/L	0.01	SW846 9066	8/24/15 NV	8/25/15 10:26	SYB	G
Specific Conductance	740		umhos/cm	1	EPA 120.1		8/18/15 09:29	MBW	C
Sulfate	52.4		mg/L	2.0	EPA 300.0		8/18/15 11:05	JP	C
Total Dissolved Solids	471		mg/L	5	S2540C-11		8/20/15 09:30	ML	C
Total Organic Carbon (TOC)	1.6		mg/L	1.0	S5310B-00		8/18/15 14:40	PAG	E
Turbidity	0.27		NTU	0.10	S2130B-01		8/18/15 05:20	MBW	C

METALS

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859001**

Date Collected: 8/17/2015 09:39

Matrix: Ground Water

Sample ID: **FFMP017W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	53.2		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:35	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 10:35	SRT	D1
Magnesium, Total	24.6		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:35	SRT	D1
Manganese, Total	0.21		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 10:35	SRT	D1
Potassium, Total	3.3		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:35	SRT	D1
Sodium, Total	45.7		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:35	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	42.79		Feet		Field		8/17/15 09:39	BGS	J
Ground Water Elevation	437.91		ft/MSL		Field		8/17/15 09:39	BGS	J
pH, Field (SM4500B)	5.26		pH_Units		Field		8/17/15 09:39	BGS	J
Sample Depth	135.00		Feet		Field		8/17/15 09:39	BGS	J
Specific Conductance, Field	816		umhos/cm	1	Field		8/17/15 09:39	BGS	J
Water Level After Purge	50.26		Feet		Field		8/17/15 09:39	BGS	J
Water Level Before Purge	42.79		Feet		Field		8/17/15 09:39	BGS	J
Well Volumes Purged	1.30		Vol		Field		8/17/15 09:39	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859002**

Date Collected: 8/17/2015 10:02

Matrix: Ground Water

Sample ID: **FFMP016W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 13:57	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 13:57	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 13:57	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 13:57	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 13:57	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 13:57	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 13:57	TMP	H

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859002**

Date Collected: 8/17/2015 10:02

Matrix: Ground Water

Sample ID: **FFMP016W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 13:57	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 13:57	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 13:57	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 13:57	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 13:57	TMP	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	112		%	62 - 133	SW846 8260B		8/20/15 13:57	TMP	H
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B		8/20/15 13:57	TMP	H
Dibromofluoromethane (S)	96.3		%	78 - 116	SW846 8260B		8/20/15 13:57	TMP	H
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B		8/20/15 13:57	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	30		mg/L	5	S2320B-97		8/18/15 09:39	MBW	C
Alkalinity, Total	30		mg/L	5	S2320B-97		8/18/15 09:39	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/18/15 21:11	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/19/15 00:15	JAM	B
Chloride	113		mg/L	2.0	EPA 300.0		8/18/15 11:18	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/18/15 11:18	JP	C
Nitrate-N	15.7		mg/L	0.20	EPA 300.0		8/18/15 11:18	JP	C
pH	6.09		pH_Units		S4500HB-00		8/18/15 09:39	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/25/15 NV	8/28/15 09:31	SYB	G
Specific Conductance	577		umhos/cm	1	EPA 120.1		8/18/15 09:39	MBW	C
Sulfate	21.5		mg/L	2.0	EPA 300.0		8/18/15 11:18	JP	C
Total Dissolved Solids	401		mg/L	5	S2540C-11		8/20/15 09:30	ML	C
Total Organic Carbon (TOC)	1.0		mg/L	1.0	S5310B-00		8/18/15 14:40	PAG	E
Turbidity	0.25		NTU	0.10	S2130B-01		8/18/15 05:20	MBW	C

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859002**

Date Collected: 8/17/2015 10:02

Matrix: Ground Water

Sample ID: **FFMP016W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	48.7		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:38	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 10:38	SRT	D1
Magnesium, Total	18.1		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:38	SRT	D1
Manganese, Total	0.068		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 10:38	SRT	D1
Potassium, Total	2.2		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:38	SRT	D1
Sodium, Total	31.7		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:38	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	55.24		Feet		Field		8/17/15 10:02	BGS	J
Ground Water Elevation	419.36		ft/MSL		Field		8/17/15 10:02	BGS	J
pH, Field (SM4500B)	5.16		pH_Units		Field		8/17/15 10:02	BGS	J
Sample Depth	135.00		Feet		Field		8/17/15 10:02	BGS	J
Specific Conductance, Field	638		umhos/cm	1	Field		8/17/15 10:02	BGS	J
Water Level After Purge	55.24		Feet		Field		8/17/15 10:02	BGS	J
Water Level Before Purge	55.24		Feet		Field		8/17/15 10:02	BGS	J
Well Volumes Purged	0.00		Vol		Field		8/17/15 10:02	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859003**

Date Collected: 8/17/2015 10:52

Matrix: Ground Water

Sample ID: **FFMP027W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 14:14	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 14:14	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 14:14	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 14:14	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 14:14	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 14:14	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 14:14	TMP	H

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

 Lab ID: **2089859003**

Date Collected: 8/17/2015 10:52

Matrix: Ground Water

 Sample ID: **FFMP027W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 14:14	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 14:14	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 14:14	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 14:14	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 14:14	TMP	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	111		%	62 - 133	SW846 8260B		8/20/15 14:14	TMP	H
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B		8/20/15 14:14	TMP	H
Dibromofluoromethane (S)	97		%	78 - 116	SW846 8260B		8/20/15 14:14	TMP	H
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B		8/20/15 14:14	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	12		mg/L	5	S2320B-97		8/18/15 09:50	MBW	C
Alkalinity, Total	12		mg/L	5	S2320B-97		8/18/15 09:50	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/18/15 21:30	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/19/15 00:15	JAM	B
Chloride	26.9		mg/L	2.0	EPA 300.0		8/18/15 11:32	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/18/15 11:32	JP	C
Nitrate-N	11.8		mg/L	0.20	EPA 300.0		8/18/15 11:32	JP	C
pH	5.78		pH_Units		S4500HB-00		8/18/15 09:50	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/20/15 NV	8/21/15 13:54	AMH	G
Specific Conductance	194		umhos/cm	1	EPA 120.1		8/18/15 09:50	MBW	C
Sulfate	6.8		mg/L	2.0	EPA 300.0		8/18/15 11:32	JP	C
Total Dissolved Solids	161		mg/L	5	S2540C-11		8/20/15 09:30	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/18/15 14:40	PAG	E
Turbidity	0.31		NTU	0.10	S2130B-01		8/18/15 05:20	MBW	C

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859003**

Date Collected: 8/17/2015 10:52

Matrix: Ground Water

Sample ID: **FFMP027W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	13.8		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:42	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 10:42	SRT	D1
Magnesium, Total	8.5		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:42	SRT	D1
Manganese, Total	0.020		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 10:42	SRT	D1
Potassium, Total	1.3		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:42	SRT	D1
Sodium, Total	9.8		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:42	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	21.53		Feet		Field		8/17/15 10:52	BGS	J
Ground Water Elevation	500.57		ft/MSL		Field		8/17/15 10:52	BGS	J
pH, Field (SM4500B)	4.66		pH_Units		Field		8/17/15 10:52	BGS	J
Sample Depth	45.00		Feet		Field		8/17/15 10:52	BGS	J
Specific Conductance, Field	240		umhos/cm	1	Field		8/17/15 10:52	BGS	J
Water Level After Purge	21.92		Feet		Field		8/17/15 10:52	BGS	J
Water Level Before Purge	21.53		Feet		Field		8/17/15 10:52	BGS	J
Well Volumes Purged	3.90		Vol		Field		8/17/15 10:52	BGS	J



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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859004**

Date Collected: 8/17/2015 11:29

Matrix: Ground Water

Sample ID: **FFMP014W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 15:24	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 15:24	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 15:24	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 15:24	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 15:24	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 15:24	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 15:24	TMP	H

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859004**

Date Collected: 8/17/2015 11:29

Matrix: Ground Water

Sample ID: **FFMP014W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 15:24	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 15:24	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 15:24	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 15:24	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 15:24	TMP	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	114		%	62 - 133	SW846 8260B		8/20/15 15:24	TMP	H
4-Bromofluorobenzene (S)	104		%	79 - 114	SW846 8260B		8/20/15 15:24	TMP	H
Dibromofluoromethane (S)	99.5		%	78 - 116	SW846 8260B		8/20/15 15:24	TMP	H
Toluene-d8 (S)	103		%	76 - 127	SW846 8260B		8/20/15 15:24	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	21		mg/L	5	S2320B-97		8/18/15 10:00	MBW	C
Alkalinity, Total	21		mg/L	5	S2320B-97		8/18/15 10:00	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/18/15 21:50	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/19/15 00:15	JAM	B
Chloride	126		mg/L	2.0	EPA 300.0		8/18/15 11:45	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/18/15 11:45	JP	C
Nitrate-N	6.6		mg/L	0.20	EPA 300.0		8/18/15 11:45	JP	C
pH	5.90		pH_Units		S4500HB-00		8/18/15 10:00	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/25/15 NV	8/28/15 09:32	SYB	G
Specific Conductance	578		umhos/cm	1	EPA 120.1		8/18/15 10:00	MBW	C
Sulfate	42.2		mg/L	2.0	EPA 300.0		8/18/15 11:45	JP	C
Total Dissolved Solids	333		mg/L	5	S2540C-11		8/20/15 09:30	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/18/15 14:40	PAG	E
Turbidity	5.31		NTU	0.10	S2130B-01		8/18/15 05:20	MBW	C

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859004**

Date Collected: 8/17/2015 11:29

Matrix: Ground Water

Sample ID: **FFMP014W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	27.5		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:46	SRT	D1
Iron, Total	0.18		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 10:46	SRT	D1
Magnesium, Total	15.9		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:46	SRT	D1
Manganese, Total	0.018		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 10:46	SRT	D1
Potassium, Total	2.1		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:46	SRT	D1
Sodium, Total	54.3		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:46	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	16.81		Feet		Field		8/17/15 11:29	BGS	J
Ground Water Elevation	490.49		ft/MSL		Field		8/17/15 11:29	BGS	J
pH, Field (SM4500B)	5.17		pH_Units		Field		8/17/15 11:29	BGS	J
Sample Depth	24.50		Feet		Field		8/17/15 11:29	BGS	J
Specific Conductance, Field	624		umhos/cm	1	Field		8/17/15 11:29	BGS	J
Water Level After Purge	18.11		Feet		Field		8/17/15 11:29	BGS	J
Water Level Before Purge	16.81		Feet		Field		8/17/15 11:29	BGS	J
Well Volumes Purged	8.10		Vol		Field		8/17/15 11:29	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859005**

Date Collected: 8/17/2015 13:05

Matrix: Ground Water

Sample ID: **FFMP013W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 15:41	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 15:41	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 15:41	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 15:41	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 15:41	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 15:41	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 15:41	TMP	H

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859005**

Date Collected: 8/17/2015 13:05

Matrix: Ground Water

Sample ID: **FFMP013W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 15:41	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 15:41	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 15:41	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 15:41	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 15:41	TMP	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	111		%	62 - 133	SW846 8260B		8/20/15 15:41	TMP	H
4-Bromofluorobenzene (S)	104		%	79 - 114	SW846 8260B		8/20/15 15:41	TMP	H
Dibromofluoromethane (S)	98.7		%	78 - 116	SW846 8260B		8/20/15 15:41	TMP	H
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B		8/20/15 15:41	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	175		mg/L	5	S2320B-97		8/18/15 10:57	MBW	C
Alkalinity, Total	175		mg/L	5	S2320B-97		8/18/15 10:57	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/18/15 23:10	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/20/15 01:00	JAM	B
Chloride	90.1		mg/L	2.0	EPA 300.0		8/18/15 13:07	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/18/15 13:07	JP	C
Nitrate-N	3.8		mg/L	0.20	EPA 300.0		8/18/15 13:07	JP	C
pH	7.95		pH_Units		S4500HB-00		8/18/15 10:57	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/25/15 NV	8/28/15 09:33	SYB	G
Specific Conductance	657		umhos/cm	1	EPA 120.1		8/18/15 10:57	MBW	C
Sulfate	32.5		mg/L	2.0	EPA 300.0		8/18/15 13:07	JP	C
Total Dissolved Solids	366		mg/L	5	S2540C-11		8/20/15 09:30	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/19/15 14:33	PAG	E
Turbidity	26.8		NTU	0.10	S2130B-01		8/18/15 05:20	MBW	C

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859005**

Date Collected: 8/17/2015 13:05

Matrix: Ground Water

Sample ID: **FFMP013W**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	82.1		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:49	SRT	D1
Iron, Total	1.8		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 10:49	SRT	D1
Magnesium, Total	10.5		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:49	SRT	D1
Manganese, Total	0.027		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 10:49	SRT	D1
Potassium, Total	1.0		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:49	SRT	D1
Sodium, Total	35.7		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:49	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	16.60		Feet		Field		8/17/15 13:05	BGS	J
Ground Water Elevation	491.00		ft/MSL		Field		8/17/15 13:05	BGS	J
pH, Field (SM4500B)	7.44		pH_Units		Field		8/17/15 13:05	BGS	J
Sample Depth	135.00		Feet		Field		8/17/15 13:05	BGS	J
Specific Conductance, Field	723		umhos/cm	1	Field		8/17/15 13:05	BGS	J
Water Level After Purge	85.82		Feet		Field		8/17/15 13:05	BGS	J
Water Level Before Purge	16.60		Feet		Field		8/17/15 13:05	BGS	J
Well Volumes Purged	0.57		Vol		Field		8/17/15 13:05	BGS	J



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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859006**

Date Collected: 8/17/2015 14:49

Matrix: Ground Water

Sample ID: **FFMP30RW**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 17:59	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 17:59	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 17:59	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 17:59	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 17:59	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 17:59	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 17:59	TMP	H

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859006**

Date Collected: 8/17/2015 14:49

Matrix: Ground Water

Sample ID: **FFMP30RW**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 17:59	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 17:59	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 17:59	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 17:59	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:59	TMP	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	112		%	62 - 133	SW846 8260B		8/20/15 17:59	TMP	H
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B		8/20/15 17:59	TMP	H
Dibromofluoromethane (S)	96.4		%	78 - 116	SW846 8260B		8/20/15 17:59	TMP	H
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B		8/20/15 17:59	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	96		mg/L	5	S2320B-97		8/18/15 11:07	MBW	C
Alkalinity, Total	96		mg/L	5	S2320B-97		8/18/15 11:07	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/18/15 23:30	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/20/15 01:00	JAM	B
Chloride	241		mg/L	5.0	EPA 300.0		8/19/15 07:40	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/18/15 13:21	JP	C
Nitrate-N	3.9		mg/L	0.20	EPA 300.0		8/18/15 13:21	JP	C
pH	6.65		pH_Units		S4500HB-00		8/18/15 11:07	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/25/15 NV	8/28/15 09:34	SYB	G
Specific Conductance	1070		umhos/cm	1	EPA 120.1		8/18/15 11:07	MBW	C
Sulfate	54.0		mg/L	2.0	EPA 300.0		8/18/15 13:21	JP	C
Total Dissolved Solids	655		mg/L	5	S2540C-11		8/20/15 09:30	ML	C
Total Organic Carbon (TOC)	1.3		mg/L	1.0	S5310B-00		8/19/15 14:33	PAG	E
Turbidity	0.94		NTU	0.10	S2130B-01		8/18/15 05:20	MBW	C

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859006**


Date Collected: 8/17/2015 14:49

Matrix: Ground Water

Sample ID: **FFMP30RW**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	71.3		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:53	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 10:53	SRT	D1
Magnesium, Total	16.9		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:53	SRT	D1
Manganese, Total	1.5		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 10:53	SRT	D1
Potassium, Total	6.5		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:53	SRT	D1
Sodium, Total	106		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:53	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	36.28		Feet		Field		8/17/15 14:49	BGS	J
Ground Water Elevation	526.02		ft/MSL		Field		8/17/15 14:49	BGS	J
pH, Field (SM4500B)	5.83		pH_Units		Field		8/17/15 14:49	BGS	J
Sample Depth	85.00		Feet		Field		8/17/15 14:49	BGS	J
Specific Conductance, Field	1130		umhos/cm	1	Field		8/17/15 14:49	BGS	J
Water Level After Purge	71.30		Feet		Field		8/17/15 14:49	BGS	J
Water Level Before Purge	36.28		Feet		Field		8/17/15 14:49	BGS	J
Well Volumes Purged	1.70		Vol		Field		8/17/15 14:49	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859007**

Date Collected: 8/17/2015 15:49

Matrix: Ground Water

Sample ID: **FFMP04AW**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 18:16	TMP	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 18:16	TMP	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 18:16	TMP	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 18:16	TMP	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 18:16	TMP	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 18:16	TMP	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 18:16	TMP	H

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859007**

Date Collected: 8/17/2015 15:49

Matrix: Ground Water

Sample ID: **FFMP04AW**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 18:16	TMP	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 18:16	TMP	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 18:16	TMP	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 18:16	TMP	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 18:16	TMP	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	112		%	62 - 133	SW846 8260B		8/20/15 18:16	TMP	H
4-Bromofluorobenzene (S)	102		%	79 - 114	SW846 8260B		8/20/15 18:16	TMP	H
Dibromofluoromethane (S)	96.7		%	78 - 116	SW846 8260B		8/20/15 18:16	TMP	H
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B		8/20/15 18:16	TMP	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	197		mg/L	5	S2320B-97		8/18/15 11:19	MBW	C
Alkalinity, Total	197		mg/L	5	S2320B-97		8/18/15 11:19	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/22/15 10:51	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/20/15 01:00	JAM	B
Chloride	323		mg/L	5.0	EPA 300.0		8/19/15 06:51	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/18/15 13:34	JP	C
Nitrate-N	ND		mg/L	0.20	EPA 300.0		8/18/15 13:34	JP	C
pH	7.54		pH_Units		S4500HB-00		8/18/15 11:19	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/25/15 NV	8/28/15 09:35	SYB	G
Specific Conductance	1360		umhos/cm	1	EPA 120.1		8/18/15 11:19	MBW	C
Sulfate	43.8		mg/L	2.0	EPA 300.0		8/18/15 13:34	JP	C
Total Dissolved Solids	1000		mg/L	5	S2540C-11		8/20/15 09:30	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/19/15 14:33	PAG	E
Turbidity	0.89		NTU	0.10	S2130B-01		8/18/15 05:20	MBW	C

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859007**

Date Collected: 8/17/2015 15:49

Matrix: Ground Water

Sample ID: **FFMP04AW**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	152		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:56	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/24/15 JPS	8/25/15 10:56	SRT	D1
Magnesium, Total	25.2		mg/L	0.11	SW846 6010C	8/24/15 JPS	8/25/15 10:56	SRT	D1
Manganese, Total	0.13		mg/L	0.0056	SW846 6010C	8/24/15 JPS	8/25/15 10:56	SRT	D1
Potassium, Total	2.0		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:56	SRT	D1
Sodium, Total	80.1		mg/L	0.56	SW846 6010C	8/24/15 JPS	8/25/15 10:56	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	35.77		Feet		Field		8/17/15 15:49	BGS	J
Ground Water Elevation	524.95		ft/MSL		Field		8/17/15 15:49	BGS	J
pH, Field (SM4500B)	6.79		pH_Units		Field		8/17/15 15:49	BGS	J
Sample Depth	146.00		Feet		Field		8/17/15 15:49	BGS	J
Specific Conductance, Field	1466		umhos/cm	1	Field		8/17/15 15:49	BGS	J
Water Level After Purge	81.27		Feet		Field		8/17/15 15:49	BGS	J
Water Level Before Purge	35.77		Feet		Field		8/17/15 15:49	BGS	J
Well Volumes Purged	0.48		Vol		Field		8/17/15 15:49	BGS	J



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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859008**

Date Collected: 8/17/2015 16:00

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 16:50	TMP	A
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 16:50	TMP	A
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 16:50	TMP	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 16:50	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 16:50	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 16:50	TMP	A
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 16:50	TMP	A

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859008**

Date Collected: 8/17/2015 16:00

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 16:50	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 16:50	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 16:50	TMP	A
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 16:50	TMP	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 16:50	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	109		%	62 - 133	SW846 8260B		8/20/15 16:50	TMP	A
4-Bromofluorobenzene (S)	100		%	79 - 114	SW846 8260B		8/20/15 16:50	TMP	A
Dibromofluoromethane (S)	94.1		%	78 - 116	SW846 8260B		8/20/15 16:50	TMP	A
Toluene-d8 (S)	101		%	76 - 127	SW846 8260B		8/20/15 16:50	TMP	A



Mrs. Vanessa N Badman

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859009**

Date Collected: 8/17/2015 17:05

Matrix: Ground Water

Sample ID: **Trip Blank**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/20/15 17:07	TMP	A
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/20/15 17:07	TMP	A
Benzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Bromoform	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/20/15 17:07	TMP	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Chloroform	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/20/15 17:07	TMP	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/20/15 17:07	TMP	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/20/15 17:07	TMP	A
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/20/15 17:07	TMP	A

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ANALYTICAL RESULTS

Workorder: 2089859 Frey Farm Quarterly

Lab ID: **2089859009**

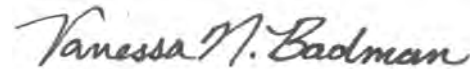
Date Collected: 8/17/2015 17:05

Matrix: Ground Water

Sample ID: **Trip Blank**

Date Received: 8/17/2015 17:05

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Styrene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Toluene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/20/15 17:07	TMP	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/20/15 17:07	TMP	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/20/15 17:07	TMP	A
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/20/15 17:07	TMP	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/20/15 17:07	TMP	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	110		%	62 - 133	SW846 8260B		8/20/15 17:07	TMP	A
4-Bromofluorobenzene (S)	101		%	79 - 114	SW846 8260B		8/20/15 17:07	TMP	A
Dibromofluoromethane (S)	97		%	78 - 116	SW846 8260B		8/20/15 17:07	TMP	A
Toluene-d8 (S)	102		%	76 - 127	SW846 8260B		8/20/15 17:07	TMP	A



Mrs. Vanessa N Badman

Project Coordinator

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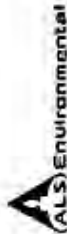
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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2089859001	1	FFMP017W	SW846 8260B	Dichlorodifluoromethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 172 and the control limits were 17 to 166.				
2089859001	2	FFMP017W	SW846 8260B	Dichlorodifluoromethane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Dichlorodifluoromethane. The % Recovery was reported as 174 and the control limits were 17 to 166.				
2089859001	3	FFMP017W	SW846 8260B	Vinyl Chloride
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 141 and the control limits were 27 to 138.				
2089859001	4	FFMP017W	SW846 8260B	Vinyl Chloride
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Vinyl Chloride. The % Recovery was reported as 142 and the control limits were 27 to 138.				
2089859001	5	FFMP017W	SW846 8260B	Trichlorofluoromethane
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 133 and the control limits were 38 to 123.				
2089859001	6	FFMP017W	SW846 8260B	Trichlorofluoromethane
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Trichlorofluoromethane. The % Recovery was reported as 130 and the control limits were 38 to 123.				
2089859001	7	FFMP017W	SW846 8260B	1,3-Dichlorobenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,3-Dichlorobenzene. The % Recovery was reported as 121 and the control limits were 81 to 118.				
2089859001	8	FFMP017W	SW846 8260B	1,4-Dichlorobenzene
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,4-Dichlorobenzene. The % Recovery was reported as 121 and the control limits were 81 to 116.				

ALS Environmental Laboratory Locations Across North America

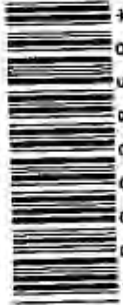
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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT / SAMPLER. INSTRUCTIONS ON THE BACK.

COC #: **ALS Q001**



Client Name: Lancaster County Solid Waste MA
 Address: 1299 Harnsburg Pike, P.O. Box 4424
 Lancaster, PA 17604

Contact: Brooks Norris
 Phone#: (717) 397-9988

Project Name#: Frey Farm Quarterly
 Bill To: Lancaster County Solid Waste MA

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

Date Required: _____ Approved By: _____

Email?: Email: bnorris@LCSWMA.com

Fax?: Fax No.: (717) 397-9973

Sample Description | Location | Time

1 FFMP017W | 8-27-15 0959

2 FFMP016W | 1002

3 FFMP027W | 1052

4 FFMP014W | 1129

5 FFMP013W | 1305

6 FFMP302W | 1449

7 FFMP04AW | 1549

8 Field Blank | 1600

9 Trip Blank | 0786

10

Project Comments:

Requested By / Company Name: *[Signature]* Date: 8-27-15 Time: 1705

Received By / Company Name: *[Signature]* Date: 8/27/15 Time: 1705

3

5

7

9

LOGGED BY (signature): *[Signature]* 8/27/15 1705

REVIEWED BY (signature): _____

Date: _____ Time: _____

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ALS Environmental

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

G=Grab; C=Composite

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

Rev 8/04

Friday, August 28, 2015 11:10:21 PM

Page 30 of 30

ALS

August 31, 2015

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

Certificate of Analysis

Project Name: Frey Farm 2014	Workorder: 2090765
Purchase Order:	Workorder ID: Frey Farm Quarterly

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Thursday, August 20, 2015.

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 Mrs. Vanessa N Badman (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 , Mr. Brooks Norris

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



Mrs. Vanessa N Badman
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2090765 Frey Farm Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2090765001	FFMP023W	Ground Water	8/20/2015 10:22	8/20/2015 15:01	Mr. Brian G Shade
2090765002	FFMP024W	Ground Water	8/20/2015 11:41	8/20/2015 15:01	Mr. Brian G Shade
2090765003	FFMP002W	Ground Water	8/20/2015 12:23	8/20/2015 15:01	Mr. Brian G Shade
2090765004	FFMP026RW	Ground Water	8/20/2015 13:27	8/20/2015 15:01	Mr. Brian G Shade
2090765005	Field Blank	Ground Water	8/20/2015 13:40	8/20/2015 15:01	Mr. Brian G Shade
2090765006	Trip Blank	Ground Water	8/20/2015 15:01	8/20/2015 15:01	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2090765 Frey Farm Quarterly

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765001**

Date Collected: 8/20/2015 10:22

Matrix: Ground Water

Sample ID: **FFMP023W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/26/15 01:58	DD	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/26/15 01:58	DD	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/26/15 01:58	DD	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/26/15 01:58	DD	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/26/15 01:58	DD	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/26/15 01:58	DD	H
Iodomethane	ND	1	ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/26/15 01:58	DD	H

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765001**

Date Collected: 8/20/2015 10:22

Matrix: Ground Water

Sample ID: **FFMP023W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/26/15 01:58	DD	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/26/15 01:58	DD	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/26/15 01:58	DD	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/26/15 01:58	DD	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:58	DD	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	92.1		%	62 - 133	SW846 8260B		8/26/15 01:58	DD	H
4-Bromofluorobenzene (S)	94.4		%	79 - 114	SW846 8260B		8/26/15 01:58	DD	H
Dibromofluoromethane (S)	90.2		%	78 - 116	SW846 8260B		8/26/15 01:58	DD	H
Toluene-d8 (S)	89.9		%	76 - 127	SW846 8260B		8/26/15 01:58	DD	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	8		mg/L	5	S2320B-97		8/21/15 16:41	MBW	C
Alkalinity, Total	8		mg/L	5	S2320B-97		8/21/15 16:41	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/22/15 06:41	JAM	B
Chemical Oxygen Demand (COD)	6		mg/L	5	EPA 410.4		8/23/15 00:50	JAM	B
Chloride	23.4		mg/L	2.0	EPA 300.0		8/21/15 10:08	JP	C
Fluoride	ND		mg/L	0.50	EPA 300.0		8/21/15 10:08	JP	C
Nitrate-N	12.8		mg/L	0.20	EPA 300.0		8/21/15 10:08	JP	C
pH	5.47		pH_Units		S4500HB-00		8/21/15 16:41	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/26/15 AMH	8/28/15 11:08	SYB	G
Specific Conductance	180		umhos/cm	1	EPA 120.1		8/21/15 16:41	MBW	C
Sulfate	ND		mg/L	2.0	EPA 300.0		8/21/15 10:08	JP	C
Total Dissolved Solids	229		mg/L	5	S2540C-11		8/26/15 09:54	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/21/15 10:45	PAG	E
Turbidity	0.43		NTU	0.10	S2130B-01		8/21/15 06:32	NK	C

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765001**


Date Collected: 8/20/2015 10:22

Matrix: Ground Water

Sample ID: **FFMP023W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	10.2		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 16:45	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/26/15 JPS	8/26/15 16:45	SRT	D1
Magnesium, Total	8.3		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 16:45	SRT	D1
Manganese, Total	0.21		mg/L	0.0056	SW846 6010C	8/26/15 JPS	8/26/15 16:45	SRT	D1
Potassium, Total	1.1		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 16:45	SRT	D1
Sodium, Total	9.2		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 16:45	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	62.37		Feet		Field		8/20/15 10:22	BGS	J
Ground Water Elevation	549.43		ft/MSL		Field		8/20/15 10:22	BGS	J
pH, Field (SM4500B)	4.21		pH_Units		Field		8/20/15 10:22	BGS	J
Sample Depth	79.00		Feet		Field		8/20/15 10:22	BGS	J
Specific Conductance, Field	216		umhos/cm	1	Field		8/20/15 10:22	BGS	J
Water Level After Purge	62.94		Feet		Field		8/20/15 10:22	BGS	J
Water Level Before Purge	62.37		Feet		Field		8/20/15 10:22	BGS	J
Well Volumes Purged	6.00		Vol		Field		8/20/15 10:22	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765002**

Date Collected: 8/20/2015 11:41

Matrix: Ground Water

Sample ID: **FFMP024W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/26/15 23:53	CJG	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/26/15 23:53	CJG	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/26/15 23:53	CJG	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/26/15 23:53	CJG	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/26/15 23:53	CJG	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/26/15 23:53	CJG	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/26/15 23:53	CJG	H

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765002**

Date Collected: 8/20/2015 11:41

Matrix: Ground Water

Sample ID: **FFMP024W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/26/15 23:53	CJG	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/26/15 23:53	CJG	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/26/15 23:53	CJG	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/26/15 23:53	CJG	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 23:53	CJG	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	88.7		%	62 - 133	SW846 8260B		8/26/15 23:53	CJG	H
4-Bromofluorobenzene (S)	91.7		%	79 - 114	SW846 8260B		8/26/15 23:53	CJG	H
Dibromofluoromethane (S)	84.5		%	78 - 116	SW846 8260B		8/26/15 23:53	CJG	H
Toluene-d8 (S)	85.3		%	76 - 127	SW846 8260B		8/26/15 23:53	CJG	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	96		mg/L	5	S2320B-97		8/21/15 16:53	MBW	C
Alkalinity, Total	96		mg/L	5	S2320B-97		8/21/15 16:53	MBW	C
Ammonia-N	0.120		mg/L	0.100	D6919-09		8/22/15 07:44	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/23/15 00:50	JAM	B
Chloride	10.7		mg/L	5.0	EPA 300.0		8/21/15 11:38	JP	C
Fluoride	ND		mg/L	0.50	EPA 300.0		8/21/15 11:38	JP	C
Nitrate-N	0.70		mg/L	0.50	EPA 300.0		8/21/15 11:38	JP	C
pH	7.84		pH_Units		S4500HB-00		8/21/15 16:53	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/26/15 AMH	8/28/15 11:09	SYB	G
Specific Conductance	249		umhos/cm	1	EPA 120.1		8/21/15 16:53	MBW	C
Sulfate	31.2		mg/L	5.0	EPA 300.0		8/21/15 11:38	JP	C
Total Dissolved Solids	239		mg/L	5	S2540C-11		8/26/15 09:54	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/21/15 10:45	PAG	E
Turbidity	0.22		NTU	0.10	S2130B-01		8/21/15 06:32	NK	C

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765002**

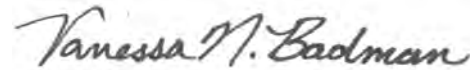
Date Collected: 8/20/2015 11:41

Matrix: Ground Water

Sample ID: **FFMP024W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	42.0		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 16:49	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/26/15 JPS	8/26/15 16:49	SRT	D1
Magnesium, Total	4.0		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 16:49	SRT	D1
Manganese, Total	ND		mg/L	0.0056	SW846 6010C	8/26/15 JPS	8/26/15 16:49	SRT	D1
Potassium, Total	0.83		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 16:49	SRT	D1
Sodium, Total	7.5		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 16:49	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	63.76		Feet		Field		8/20/15 11:41	BGS	J
Ground Water Elevation	547.66		ft/MSL		Field		8/20/15 11:41	BGS	J
pH, Field (SM4500B)	7.33		pH_Units		Field		8/20/15 11:41	BGS	J
Sample Depth	180.78		Feet		Field		8/20/15 11:41	BGS	J
Specific Conductance, Field	300		umhos/cm	1	Field		8/20/15 11:41	BGS	J
Water Level After Purge	123.47		Feet		Field		8/20/15 11:41	BGS	J
Water Level Before Purge	63.76		Feet		Field		8/20/15 11:41	BGS	J
Well Volumes Purged	0.50		Vol		Field		8/20/15 11:41	BGS	J



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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765003**

Date Collected: 8/20/2015 12:23

Matrix: Ground Water

Sample ID: **FFMP002W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/26/15 01:36	DD	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/26/15 01:36	DD	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/26/15 01:36	DD	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/26/15 01:36	DD	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/26/15 01:36	DD	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
cis-1,3-Dichloropropene	ND	4	ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/26/15 01:36	DD	H
Iodomethane	ND	1	ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/26/15 01:36	DD	H

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765003**

Date Collected: 8/20/2015 12:23

Matrix: Ground Water

Sample ID: **FFMP002W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/26/15 01:36	DD	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/26/15 01:36	DD	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/26/15 01:36	DD	H
Vinyl Acetate	ND	23	ug/L	5.0	SW846 8260B		8/26/15 01:36	DD	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:36	DD	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	91.1		%	62 - 133	SW846 8260B		8/26/15 01:36	DD	H
4-Bromofluorobenzene (S)	94.9		%	79 - 114	SW846 8260B		8/26/15 01:36	DD	H
Dibromofluoromethane (S)	89.8		%	78 - 116	SW846 8260B		8/26/15 01:36	DD	H
Toluene-d8 (S)	91		%	76 - 127	SW846 8260B		8/26/15 01:36	DD	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	5		mg/L	5	S2320B-97		8/21/15 17:04	MBW	C
Alkalinity, Total	5		mg/L	5	S2320B-97		8/21/15 17:04	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/22/15 07:02	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/23/15 00:50	JAM	B
Chloride	20.9		mg/L	5.0	EPA 300.0		8/21/15 11:51	JP	C
Fluoride	ND		mg/L	0.50	EPA 300.0		8/21/15 11:51	JP	C
Nitrate-N	24.8		mg/L	0.50	EPA 300.0		8/21/15 11:51	JP	C
pH	5.62		pH_Units		S4500HB-00		8/21/15 17:04	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/26/15 AMH	8/28/15 11:10	SYB	G
Specific Conductance	285		umhos/cm	1	EPA 120.1		8/21/15 17:04	MBW	C
Sulfate	12.8		mg/L	5.0	EPA 300.0		8/21/15 11:51	JP	C
Total Dissolved Solids	331		mg/L	5	S2540C-11		8/26/15 09:54	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/21/15 10:45	PAG	E
Turbidity	0.61		NTU	0.10	S2130B-01		8/21/15 06:32	NK	C

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765003**

Date Collected: 8/20/2015 12:23

Matrix: Ground Water

Sample ID: **FFMP002W**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	22.7		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 16:53	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/26/15 JPS	8/26/15 16:53	SRT	D1
Magnesium, Total	9.7		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 16:53	SRT	D1
Manganese, Total	0.26		mg/L	0.0056	SW846 6010C	8/26/15 JPS	8/26/15 16:53	SRT	D1
Potassium, Total	1.7		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 16:53	SRT	D1
Sodium, Total	15.4		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 16:53	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	66.66		Feet		Field		8/20/15 12:23	BGS	J
Ground Water Elevation	546.54		ft/MSL		Field		8/20/15 12:23	BGS	J
pH, Field (SM4500B)	4.66		pH_Units		Field		8/20/15 12:23	BGS	J
Sample Depth	85.00		Feet		Field		8/20/15 12:23	BGS	J
Specific Conductance, Field	343		umhos/cm	1	Field		8/20/15 12:23	BGS	J
Water Level After Purge	81.41		Feet		Field		8/20/15 12:23	BGS	J
Water Level Before Purge	66.66		Feet		Field		8/20/15 12:23	BGS	J
Well Volumes Purged	0.58		Vol		Field		8/20/15 12:23	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765004**
Sample ID: **FFMP026RW**

Date Collected: 8/20/2015 13:27 Matrix: Ground Water
Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/27/15 00:15	CJG	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/27/15 00:15	CJG	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/27/15 00:15	CJG	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/27/15 00:15	CJG	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/27/15 00:15	CJG	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/27/15 00:15	CJG	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/27/15 00:15	CJG	H

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

 Lab ID: **2090765004**
 Sample ID: **FFMP026RW**

 Date Collected: 8/20/2015 13:27 Matrix: Ground Water
 Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/27/15 00:15	CJG	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/27/15 00:15	CJG	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/27/15 00:15	CJG	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/27/15 00:15	CJG	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/27/15 00:15	CJG	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	88.5		%	62 - 133	SW846 8260B		8/27/15 00:15	CJG	H
4-Bromofluorobenzene (S)	91.3		%	79 - 114	SW846 8260B		8/27/15 00:15	CJG	H
Dibromofluoromethane (S)	84		%	78 - 116	SW846 8260B		8/27/15 00:15	CJG	H
Toluene-d8 (S)	86.4		%	76 - 127	SW846 8260B		8/27/15 00:15	CJG	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	36		mg/L	5	S2320B-97		8/21/15 17:14	MBW	C
Alkalinity, Total	36		mg/L	5	S2320B-97		8/21/15 17:14	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/22/15 07:23	JAM	B
Chemical Oxygen Demand (COD)	6		mg/L	5	EPA 410.4		8/23/15 00:50	JAM	B
Chloride	156		mg/L	5.0	EPA 300.0		8/21/15 12:04	JP	C
Fluoride	ND		mg/L	0.50	EPA 300.0		8/21/15 12:04	JP	C
Nitrate-N	2.3		mg/L	0.50	EPA 300.0		8/21/15 12:04	JP	C
pH	5.99		pH_Units		S4500HB-00		8/21/15 17:14	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/26/15 AMH	8/28/15 11:11	SYB	G
Specific Conductance	755		umhos/cm	1	EPA 120.1		8/21/15 17:14	MBW	C
Sulfate	76.3		mg/L	5.0	EPA 300.0		8/21/15 12:04	JP	C
Total Dissolved Solids	557		mg/L	5	S2540C-11		8/26/15 09:54	ML	C
Total Organic Carbon (TOC)	1.7		mg/L	1.0	S5310B-00		8/21/15 10:45	PAG	E
Turbidity	1.00		NTU	0.10	S2130B-01		8/21/15 06:32	NK	C

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765004**
Sample ID: **FFMP026RW**

Date Collected: 8/20/2015 13:27 Matrix: Ground Water
Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	55.0		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 16:56	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/26/15 JPS	8/26/15 16:56	SRT	D1
Magnesium, Total	17.0		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 16:56	SRT	D1
Manganese, Total	0.27		mg/L	0.0056	SW846 6010C	8/26/15 JPS	8/26/15 16:56	SRT	D1
Potassium, Total	6.6		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 16:56	SRT	D1
Sodium, Total	55.0		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 16:56	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	80.00		Feet		Field		8/20/15 13:27	BGS	J
Ground Water Elevation	467.40		ft/MSL		Field		8/20/15 13:27	BGS	J
pH, Field (SM4500B)	5.12		pH_Units		Field		8/20/15 13:27	BGS	J
Sample Depth	105.00		Feet		Field		8/20/15 13:27	BGS	J
Specific Conductance, Field	797		umhos/cm	1	Field		8/20/15 13:27	BGS	J
Water Level After Purge	99.11		Feet		Field		8/20/15 13:27	BGS	J
Water Level Before Purge	80.00		Feet		Field		8/20/15 13:27	BGS	J
Well Volumes Purged	1.50		Vol		Field		8/20/15 13:27	BGS	J



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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765005**

Date Collected: 8/20/2015 13:40

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/26/15 00:53	DD	A
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/26/15 00:53	DD	A
Benzene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Bromoform	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/26/15 00:53	DD	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Chloroform	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/26/15 00:53	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/26/15 00:53	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/26/15 00:53	DD	A
Iodomethane	ND	1	ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/26/15 00:53	DD	A

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765005**

Date Collected: 8/20/2015 13:40

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/26/15 00:53	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/26/15 00:53	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/26/15 00:53	DD	A
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/26/15 00:53	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 00:53	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	90.5		%	62 - 133	SW846 8260B		8/26/15 00:53	DD	A
4-Bromofluorobenzene (S)	97.8		%	79 - 114	SW846 8260B		8/26/15 00:53	DD	A
Dibromofluoromethane (S)	88.1		%	78 - 116	SW846 8260B		8/26/15 00:53	DD	A
Toluene-d8 (S)	90.9		%	76 - 127	SW846 8260B		8/26/15 00:53	DD	A



Mrs. Vanessa N Badman

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765006**

Date Collected: 8/20/2015 15:01

Matrix: Ground Water

Sample ID: **Trip Blank**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/26/15 01:15	DD	A
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/26/15 01:15	DD	A
Benzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Bromoform	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/26/15 01:15	DD	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Chloroform	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/26/15 01:15	DD	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/26/15 01:15	DD	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/26/15 01:15	DD	A
Iodomethane	ND	1	ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/26/15 01:15	DD	A

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ANALYTICAL RESULTS

Workorder: 2090765 Frey Farm Quarterly

Lab ID: **2090765006**

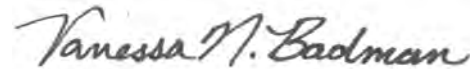
Date Collected: 8/20/2015 15:01

Matrix: Ground Water

Sample ID: **Trip Blank**

Date Received: 8/20/2015 15:01

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Styrene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Toluene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/26/15 01:15	DD	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/26/15 01:15	DD	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/26/15 01:15	DD	A
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/26/15 01:15	DD	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 01:15	DD	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	86.7		%	62 - 133	SW846 8260B		8/26/15 01:15	DD	A
4-Bromofluorobenzene (S)	93.1		%	79 - 114	SW846 8260B		8/26/15 01:15	DD	A
Dibromofluoromethane (S)	86.8		%	78 - 116	SW846 8260B		8/26/15 01:15	DD	A
Toluene-d8 (S)	88.4		%	76 - 127	SW846 8260B		8/26/15 01:15	DD	A



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Project Coordinator

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PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
2090765001	1	FFMP023W	SW846 8260B	Iodomethane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 34.2 and the control limits were 37 to 128.				
2090765003	1	FFMP002W	SW846 8260B	Iodomethane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 34.2 and the control limits were 37 to 128.				
2090765003	2	FFMP002W	SW846 8260B	Vinyl Acetate
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 51 and the control limits were 58 to 136.				
2090765003	3	FFMP002W	SW846 8260B	Vinyl Acetate
The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 51.4 and the control limits were 58 to 136.				
2090765003	4	FFMP002W	SW846 8260B	cis-1,3-Dichloropropene
The QC sample type MS for method SW846 8260B was outside the control limits for the analyte cis-1,3-Dichloropropene. The % Recovery was reported as 80.6 and the control limits were 81 to 121.				
2090765005	1	Field Blank	SW846 8260B	Iodomethane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 34.2 and the control limits were 37 to 128.				
2090765006	1	Trip Blank	SW846 8260B	Iodomethane
The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 34.2 and the control limits were 37 to 128.				

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

COC #: **ALS QUC**
 * 2 0 9 0 7 6 5 *

Client Name: Lancaster-County Solid Waste MA
 Address: 1299 Harrisburg Pike, P.O. Box 4424
 Lancaster, PA 17604
 Contact: Brooks Norris
 Phone#: (717) 397-9968
 Project Name#: Frey Farm Quarterly
 Bill To: Lancaster County Solid Waste MA

TAT Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.
 Date Required: _____ Approved By: _____
 Email? Y N Email: bnorris@LCSWMA.com
 Fax? Y N No.: (717) 397-9973

Container Type	AG	AN	CG	PL	PL	PL	PL	PL	PL	PL	PL
Container Size	125 ml	500 ml	40 ml	500 ml	500 ml	500 ml	500 ml	500 ml	500 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	H2SO4	HNO3	HNO3	HNO3	HNO3	HNO3	HNO3	HNO3

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Enter Number of Containers Per Sample or Field Results Below.												
			TOC	O-OH	VOC - Form 190	Field Measurements	Sample Depth for AUX Data	NH3-N: COD	Metals: Fe, Mn, Na, Ca, K, Mg	PH, Cl, SPC, F, SO4, TDS, NO3	Alkalinity: HCO3	Alkalinity: HCO3			
1. FFMP002W	8-20-10	1032	G	GW	12	1	2	X	X	1	1	1	1	1	1
2. FFMP002W	11A1														
3. FFMP002W	122														
4. FFMP002W	132														
5. Field Blank	140														
6. Trip Blank	150														
7															
8															
9															
10															

Project Comments:
 Retrievished by / Company Name: Brooks Norris
 Date: 8-20-10 Time: 1507
 Received By / Company Name: Brooks Norris
 Date: 8-20-10 Time: 1507

LOGGED BY (signature): Brooks Norris 08/21/10 1507
 REVIEWED BY (signature): _____

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:

Special Processing: USACE Navy
 State Samples Collected In: NY NJ PA NC

Reportable to PADEP? Yes No
 PWSID # _____
 EDDS: Format Type: _____



August 31, 2015

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

Certificate of Analysis

Project Name: Frey Farm 2014	Workorder: 2091052
Purchase Order:	Workorder ID: Frey Farm Quarterly

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 21, 2015.

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 Mrs. Vanessa N Badman (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 , Mr. Brooks Norris

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

Mrs. Vanessa N Badman
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2091052 Frey Farm Quarterly

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2091052001	FFMP018W	Ground Water	8/21/2015 08:57	8/21/2015 15:59	Mr. Brian G Shade
2091052002	FFMP019W	Ground Water	8/21/2015 09:41	8/21/2015 15:59	Mr. Brian G Shade
2091052003	FFMP029W	Ground Water	8/21/2015 10:34	8/21/2015 15:59	Mr. Brian G Shade
2091052004	Field Blank	Ground Water	8/21/2015 11:02	8/21/2015 15:59	Mr. Brian G Shade
2091052005	Trip Blank	Ground Water	8/21/2015 15:59	8/21/2015 15:59	Mr. Brian G Shade

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SAMPLE SUMMARY

Workorder: 2091052 Frey Farm Quarterly

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052001**

Date Collected: 8/21/2015 08:57

Matrix: Ground Water

Sample ID: **FFMP018W**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/27/15 00:38	CJG	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/27/15 00:38	CJG	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/27/15 00:38	CJG	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/27/15 00:38	CJG	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/27/15 00:38	CJG	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/27/15 00:38	CJG	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/27/15 00:38	CJG	H

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052001**

Date Collected: 8/21/2015 08:57

Matrix: Ground Water

Sample ID: **FFMP018W**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/27/15 00:38	CJG	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/27/15 00:38	CJG	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/27/15 00:38	CJG	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/27/15 00:38	CJG	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/27/15 00:38	CJG	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	87.7		%	62 - 133	SW846 8260B		8/27/15 00:38	CJG	H
4-Bromofluorobenzene (S)	90.6		%	79 - 114	SW846 8260B		8/27/15 00:38	CJG	H
Dibromofluoromethane (S)	84		%	78 - 116	SW846 8260B		8/27/15 00:38	CJG	H
Toluene-d8 (S)	85.8		%	76 - 127	SW846 8260B		8/27/15 00:38	CJG	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	13		mg/L	5	S2320B-97		8/22/15 14:17	MBW	C
Alkalinity, Total	13		mg/L	5	S2320B-97		8/22/15 14:17	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/22/15 16:24	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/23/15 00:50	JAM	B
Chloride	143		mg/L	2.0	EPA 300.0		8/22/15 07:19	MBW	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/22/15 07:19	MBW	C
Nitrate-N	6.0		mg/L	0.20	EPA 300.0		8/22/15 07:19	MBW	C
pH	5.79		pH_Units		S4500HB-00		8/22/15 14:17	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/26/15 NV	8/28/15 11:50	SYB	G
Specific Conductance	637		umhos/cm	1	EPA 120.1		8/22/15 14:17	MBW	C
Sulfate	48.9		mg/L	2.0	EPA 300.0		8/22/15 07:19	MBW	C
Total Dissolved Solids	503		mg/L	5	S2540C-11		8/26/15 20:45	NV	C
Total Organic Carbon (TOC)	1.3		mg/L	1.0	S5310B-00		8/24/15 11:02	PAG	E
Turbidity	0.45		NTU	0.10	S2130B-01		8/22/15 07:45	MBW	C

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052001**
Sample ID: **FFMP018W**

Date Collected: 8/21/2015 08:57 Matrix: Ground Water
Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	38.1		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 17:08	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/26/15 JPS	8/26/15 17:08	SRT	D1
Magnesium, Total	19.6		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 17:08	SRT	D1
Manganese, Total	0.38		mg/L	0.0056	SW846 6010C	8/26/15 JPS	8/26/15 17:08	SRT	D1
Potassium, Total	4.8		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 17:08	SRT	D1
Sodium, Total	47.6		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 17:08	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	28.18		Feet		Field		8/21/15 08:57	BGS	J
Ground Water Elevation	444.02		ft/MSL		Field		8/21/15 08:57	BGS	J
pH, Field (SM4500B)	4.15		pH_Units		Field		8/21/15 08:57	BGS	J
Sample Depth	40.00		Feet		Field		8/21/15 08:57	BGS	J
Specific Conductance, Field	692		umhos/cm	1	Field		8/21/15 08:57	BGS	J
Water Level After Purge	29.66		Feet		Field		8/21/15 08:57	BGS	J
Water Level Before Purge	28.18		Feet		Field		8/21/15 08:57	BGS	J
Well Volumes Purged	4.00		Vol		Field		8/21/15 08:57	BGS	J



Mrs. Vanessa N Badman
Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052002**

Date Collected: 8/21/2015 09:41

Matrix: Ground Water

Sample ID: **FFMP019W**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/27/15 01:00	CJG	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/27/15 01:00	CJG	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/27/15 01:00	CJG	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/27/15 01:00	CJG	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/27/15 01:00	CJG	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/27/15 01:00	CJG	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/27/15 01:00	CJG	H

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052002**

Date Collected: 8/21/2015 09:41

Matrix: Ground Water

Sample ID: **FFMP019W**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/27/15 01:00	CJG	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/27/15 01:00	CJG	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/27/15 01:00	CJG	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/27/15 01:00	CJG	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/27/15 01:00	CJG	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	89.4		%	62 - 133	SW846 8260B		8/27/15 01:00	CJG	H
4-Bromofluorobenzene (S)	93.4		%	79 - 114	SW846 8260B		8/27/15 01:00	CJG	H
Dibromofluoromethane (S)	84.3		%	78 - 116	SW846 8260B		8/27/15 01:00	CJG	H
Toluene-d8 (S)	86.5		%	76 - 127	SW846 8260B		8/27/15 01:00	CJG	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	66		mg/L	5	S2320B-97		8/22/15 14:28	MBW	C
Alkalinity, Total	66		mg/L	5	S2320B-97		8/22/15 14:28	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/22/15 16:43	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/23/15 00:50	JAM	B
Chloride	80.2		mg/L	2.0	EPA 300.0		8/22/15 10:48	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/22/15 10:48	JP	C
Nitrate-N	0.52		mg/L	0.20	EPA 300.0		8/22/15 10:48	JP	C
pH	7.08		pH_Units		S4500HB-00		8/22/15 14:28	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/26/15 NV	8/28/15 11:54	SYB	G
Specific Conductance	401		umhos/cm	1	EPA 120.1		8/22/15 14:28	MBW	C
Sulfate	14.3		mg/L	2.0	EPA 300.0		8/22/15 10:48	JP	C
Total Dissolved Solids	473		mg/L	5	S2540C-11		8/27/15 11:00	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/24/15 11:02	PAG	E
Turbidity	0.16		NTU	0.10	S2130B-01		8/22/15 07:45	MBW	C

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052003**

Date Collected: 8/21/2015 10:34

Matrix: Ground Water

Sample ID: **FFMP029W**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/27/15 01:23	CJG	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/27/15 01:23	CJG	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/27/15 01:23	CJG	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/27/15 01:23	CJG	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/27/15 01:23	CJG	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/27/15 01:23	CJG	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/27/15 01:23	CJG	H

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052003**

Date Collected: 8/21/2015 10:34

Matrix: Ground Water

Sample ID: **FFMP029W**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/27/15 01:23	CJG	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/27/15 01:23	CJG	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/27/15 01:23	CJG	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/27/15 01:23	CJG	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/27/15 01:23	CJG	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	88.3		%	62 - 133	SW846 8260B		8/27/15 01:23	CJG	H
4-Bromofluorobenzene (S)	90.3		%	79 - 114	SW846 8260B		8/27/15 01:23	CJG	H
Dibromofluoromethane (S)	82.9		%	78 - 116	SW846 8260B		8/27/15 01:23	CJG	H
Toluene-d8 (S)	85.3		%	76 - 127	SW846 8260B		8/27/15 01:23	CJG	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	13		mg/L	5	S2320B-97		8/22/15 14:39	MBW	C
Alkalinity, Total	13		mg/L	5	S2320B-97		8/22/15 14:39	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/22/15 17:01	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/23/15 00:50	JAM	B
Chloride	56.7		mg/L	2.0	EPA 300.0		8/22/15 14:09	JP	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/22/15 14:09	JP	C
Nitrate-N	3.6		mg/L	0.20	EPA 300.0		8/22/15 14:09	JP	C
pH	5.96		pH_Units		S4500HB-00		8/22/15 14:39	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/26/15 NV	8/28/15 11:55	SYB	G
Specific Conductance	219		umhos/cm	1	EPA 120.1		8/22/15 14:39	MBW	C
Sulfate	5.8		mg/L	2.0	EPA 300.0		8/22/15 14:09	JP	C
Total Dissolved Solids	317		mg/L	5	S2540C-11		8/27/15 11:00	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/24/15 11:02	PAG	E
Turbidity	0.30		NTU	0.10	S2130B-01		8/22/15 07:45	MBW	C

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052003**

Date Collected: 8/21/2015 10:34

Matrix: Ground Water

Sample ID: **FFMP029W**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	11.3		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 17:22	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/26/15 JPS	8/26/15 17:22	SRT	D1
Magnesium, Total	7.9		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 17:22	SRT	D1
Manganese, Total	0.024		mg/L	0.0056	SW846 6010C	8/26/15 JPS	8/26/15 17:22	SRT	D1
Potassium, Total	1.8		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 17:22	SRT	D1
Sodium, Total	18.9		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 17:22	SRT	D1
FIELD PARAMETERS									
Ground Water Elevation	437.56		ft/MSL		Field		8/21/15 10:34	BGS	J
pH, Field (SM4500B)	4.84		pH_Units		Field		8/21/15 10:34	BGS	J
Sample Depth	55.00		Feet		Field		8/21/15 10:34	BGS	J
Specific Conductance, Field	263		umhos/cm	1	Field		8/21/15 10:34	BGS	J
Water Level After Purge	47.54		Feet		Field		8/21/15 10:34	BGS	J
Water Level Before Purge	39.74		Feet		Field		8/21/15 10:34	BGS	J
Well Volumes Purged	3.30		Vol		Field		8/21/15 10:34	BGS	J



Mrs. Vanessa N Badman

Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052004**

Date Collected: 8/21/2015 11:02

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/26/15 22:22	CJG	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/26/15 22:22	CJG	H
Benzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Bromoform	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/26/15 22:22	CJG	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Chloroform	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/26/15 22:22	CJG	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/26/15 22:22	CJG	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/26/15 22:22	CJG	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/26/15 22:22	CJG	H

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052004**

Date Collected: 8/21/2015 11:02

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Styrene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Toluene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/26/15 22:22	CJG	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/26/15 22:22	CJG	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/26/15 22:22	CJG	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/26/15 22:22	CJG	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 22:22	CJG	H
Surrogate Recoveries	Results	Flag	Units	Limits	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	88.2		%	62 - 133	SW846 8260B		8/26/15 22:22	CJG	H
4-Bromofluorobenzene (S)	92.3		%	79 - 114	SW846 8260B		8/26/15 22:22	CJG	H
Dibromofluoromethane (S)	83.8		%	78 - 116	SW846 8260B		8/26/15 22:22	CJG	H
Toluene-d8 (S)	86.4		%	76 - 127	SW846 8260B		8/26/15 22:22	CJG	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	ND		mg/L	5	S2320B-97		8/22/15 15:32	MBW	C
Alkalinity, Total	ND		mg/L	5	S2320B-97		8/22/15 15:32	MBW	C
Ammonia-N	ND		mg/L	0.010	D6919-09		8/22/15 17:20	JAM	B
Chemical Oxygen Demand (COD)	ND		mg/L	5	EPA 410.4		8/23/15 00:50	JAM	B
Chloride	ND		mg/L	1.0	EPA 300.0		8/22/15 14:36	JP	C
Fluoride	ND		mg/L	0.10	EPA 300.0		8/22/15 14:36	JP	C
Nitrate-N	ND		mg/L	0.10	EPA 300.0		8/22/15 14:36	JP	C
pH	6.71		pH_Units		S4500HB-00		8/22/15 15:32	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	8/26/15 NV	8/28/15 11:56	SYB	G
Specific Conductance	ND		umhos/cm	1	EPA 120.1		8/22/15 15:32	MBW	C
Sulfate	ND		mg/L	1.0	EPA 300.0		8/22/15 14:36	JP	C
Total Dissolved Solids	76		mg/L	5	S2540C-11		8/27/15 11:00	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/24/15 11:02	PAG	E
Turbidity	ND		NTU	0.10	S2130B-01		8/22/15 07:45	MBW	C

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052004**

Date Collected: 8/21/2015 11:02

Matrix: Ground Water

Sample ID: **Field Blank**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	ND		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 17:26	SRT	D1
Iron, Total	ND		mg/L	0.067	SW846 6010C	8/26/15 JPS	8/26/15 17:26	SRT	D1
Magnesium, Total	ND		mg/L	0.11	SW846 6010C	8/26/15 JPS	8/26/15 17:26	SRT	D1
Manganese, Total	ND		mg/L	0.0056	SW846 6010C	8/26/15 JPS	8/26/15 17:26	SRT	D1
Potassium, Total	1.3		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 17:26	SRT	D1
Sodium, Total	2.8		mg/L	0.56	SW846 6010C	8/26/15 JPS	8/26/15 17:26	SRT	D1



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Project Coordinator

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052005**

Date Collected: 8/21/2015 15:59

Matrix: Ground Water

Sample ID: **Trip Blank**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		8/26/15 22:45	CJG	A
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		8/26/15 22:45	CJG	A
Benzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Bromoform	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Bromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
2-Butanone	ND		ug/L	10.0	SW846 8260B		8/26/15 22:45	CJG	A
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Chloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Chloroform	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Chloromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		8/26/15 22:45	CJG	A
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Dibromomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		8/26/15 22:45	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
2-Hexanone	ND		ug/L	5.0	SW846 8260B		8/26/15 22:45	CJG	A
Iodomethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		8/26/15 22:45	CJG	A

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ANALYTICAL RESULTS

Workorder: 2091052 Frey Farm Quarterly

Lab ID: **2091052005**

Date Collected: 8/21/2015 15:59

Matrix: Ground Water

Sample ID: **Trip Blank**

Date Received: 8/21/2015 15:59

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Styrene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Toluene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Total Xylenes	ND		ug/L	3.0	SW846 8260B		8/26/15 22:45	CJG	A
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		8/26/15 22:45	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Trichloroethene	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		8/26/15 22:45	CJG	A
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		8/26/15 22:45	CJG	A
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		8/26/15 22:45	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	87		%	62 - 133	SW846 8260B		8/26/15 22:45	CJG	A
4-Bromofluorobenzene (S)	90.8		%	79 - 114	SW846 8260B		8/26/15 22:45	CJG	A
Dibromofluoromethane (S)	82.8		%	78 - 116	SW846 8260B		8/26/15 22:45	CJG	A
Toluene-d8 (S)	85.8		%	76 - 127	SW846 8260B		8/26/15 22:45	CJG	A

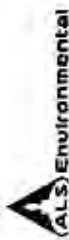


Mrs. Vanessa N Badman

Project Coordinator

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 www.alsenv.com

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

COC #:

ALS Quot#



Client Name: Lancaster County Solid Waste MA
 Address: 1299 Harnsburg Pike, P.O. Box 4424
 Lancaster, PA 17604

Contact: Brooks Norris
 Phone#: (717) 397-9968

Project Name#: Frey Farm Quarterly
 Bill To: Lancaster County Solid Waste MA

TAT Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.
 Date Required: Approved By:
 Email? Y N Email: bnorris@LCSWMA.com
 Fax? Y N Fax No.: (717) 397-9973

ANALYSES/METHOD REQUESTED										
Container Type	AG	AN	CG	PL	PL	PL	PL	PL	PL	PL
Combinel Size	125 ml	500 ml	40 ml	500 ml	500 ml	500 ml	1 L	500 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	H2SO4	HNO3	HNO3	None	None	None	None

Enter Number of Containers Per Sample or Field Results Below.										
Field Measurements	VOC - Form 190		Sample Depth for AUX Data		Metals: Fe, Mn, Na, Ca, K, Mg		PH, Cl, Spc, P, SO4, TDS, NO3		Alkalinity, HCO3	
TOC	1	2	1	1	1	1	1	1	1	1
O-OH	1	2	1	1	1	1	1	1	1	1
Matrix	G	GW	G	GW	G	GW	G	GW	G	GW

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1. FFMP018100	8-21-15	0857
2. FFMP0191W	↓	0946
3. FFMP024W	↓	1034
4. Field Blank	↓	1102
5. Trip Blank	↓	1559
6.		
7.		
8.		
9.		
10.		

LOGGED BY (signature):	DATE	TIME
<i>Frank Youngland</i>	8/21/15	0821
REVIEWED BY (signature):	DATE	TIME
<i>Brooks Norris</i>	8/24/15	1559

Cooler Temp: 14 Therm ID: 309
 No. of Coolers: Y N Initial
 Y N Initial
 Corebody Seals Present?
 (if present) Seals Intact?
 Received on Ice?
 COC Labels Complete/Accurate?
 Cont. in Good Cond.?
 Correct Containers?
 Correct Sample Volumes?
 Correct Preservation?
 Headspace/Volatilities?

Courier/Tracking #:
 Sample/COC Comments:

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:

Special Processing
 USACE
 Navy
 Reportable to PADEP?
 Yes
 PWSID #
 EDDS: Format Type:

State Samples Collected In
 NY
 NJ
 PA
 NC

Project Comments: FFMP001 P well
 dry - no sample taken

Relinquished By (Company Name)	Date	Time
<i>Brooks Norris</i>	8-24-15	1559
3		
5		
7		
9		

* G=Grab; C=Composite ** Matrix - AL=Air; DW=Drinking Water; GW=Groundwater; OL=Oil; Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
 ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

September 15, 2015

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

Certificate of Analysis

Project Name: Frey Farm 2014	Workorder: 2092391
Purchase Order:	Workorder ID: Frey Farm 2015

Dear Mr. Brown:

Enclosed are the analytical results for samples received by the laboratory on Friday, August 28, 2015.

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 Mrs. Vanessa N Badman (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 , Mr. Brooks Norris

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



Mrs. Vanessa N Badman
Project Coordinator

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SAMPLE SUMMARY

Workorder: 2092391 Frey Farm 2015

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2092391001	FFMP025W	Ground Water	8/28/2015 08:30	8/28/2015 16:21	Mr. Jeff Musser

Notes

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

Standard Acronyms/Flags

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

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ANALYTICAL RESULTS

Workorder: 2092391 Frey Farm 2015

Lab ID: **2092391001**

Date Collected: 8/28/2015 08:30

Matrix: Ground Water

Sample ID: **FFMP025W**

Date Received: 8/28/2015 16:21

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
VOLATILE ORGANICS									
Acetone	ND		ug/L	10.0	SW846 8260B		9/4/15 00:30	CJG	H
Acrylonitrile	ND		ug/L	5.0	SW846 8260B		9/4/15 00:30	CJG	H
Benzene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Bromochloromethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Bromodichloromethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Bromoform	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Bromomethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
2-Butanone	ND		ug/L	10.0	SW846 8260B		9/4/15 00:30	CJG	H
Carbon Disulfide	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Carbon Tetrachloride	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Chlorobenzene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Chlorodibromomethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Chloroethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Chloroform	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Chloromethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
3-Chloro-1-propene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,2-Dibromo-3-chloropropane	ND		ug/L	7.0	SW846 8260B		9/4/15 00:30	CJG	H
1,2-Dibromoethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Dibromomethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
trans-1,4-Dichloro-2-butene	ND		ug/L	3.0	SW846 8260B		9/4/15 00:30	CJG	H
1,2-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,3-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,4-Dichlorobenzene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Dichlorodifluoromethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,1-Dichloroethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,2-Dichloroethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,1-Dichloroethene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
cis-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
trans-1,2-Dichloroethene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,2-Dichloropropane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
cis-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
trans-1,3-Dichloropropene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Ethylbenzene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
2-Hexanone	ND		ug/L	5.0	SW846 8260B		9/4/15 00:30	CJG	H
Iodomethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
4-Methyl-2-Pentanone(MIBK)	ND		ug/L	5.0	SW846 8260B		9/4/15 00:30	CJG	H

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ANALYTICAL RESULTS

Workorder: 2092391 Frey Farm 2015

Lab ID: **2092391001**

Date Collected: 8/28/2015 08:30

Matrix: Ground Water

Sample ID: **FFMP025W**

Date Received: 8/28/2015 16:21

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Styrene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,1,1,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Tetrachloroethene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Toluene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Total Xylenes	ND		ug/L	3.0	SW846 8260B		9/4/15 00:30	CJG	H
1,2,4-Trichlorobenzene	ND		ug/L	2.0	SW846 8260B		9/4/15 00:30	CJG	H
1,1,1-Trichloroethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,1,2-Trichloroethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Trichloroethene	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
Trichlorofluoromethane	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
1,2,3-Trichloropropane	ND		ug/L	2.0	SW846 8260B		9/4/15 00:30	CJG	H
Vinyl Acetate	ND		ug/L	5.0	SW846 8260B		9/4/15 00:30	CJG	H
Vinyl Chloride	ND		ug/L	1.0	SW846 8260B		9/4/15 00:30	CJG	H
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
1,2-Dichloroethane-d4 (S)	97.7		%	62 - 133	SW846 8260B		9/4/15 00:30	CJG	H
4-Bromofluorobenzene (S)	97.2		%	79 - 114	SW846 8260B		9/4/15 00:30	CJG	H
Dibromofluoromethane (S)	92.7		%	78 - 116	SW846 8260B		9/4/15 00:30	CJG	H
Toluene-d8 (S)	90.6		%	76 - 127	SW846 8260B		9/4/15 00:30	CJG	H
WET CHEMISTRY									
Alkalinity, Bicarbonate	18		mg/L	5	S2320B-97		8/29/15 18:34	MBW	C
Alkalinity, Total	18		mg/L	5	S2320B-97		8/29/15 18:34	MBW	C
Ammonia-N	ND		mg/L	0.100	D6919-09		8/31/15 18:52	JAM	B
Chemical Oxygen Demand (COD)	9		mg/L	5	EPA 410.4		8/31/15 01:00	JAM	B
Chloride	58.6		mg/L	2.0	EPA 300.0		8/29/15 06:42	MBW	C
Fluoride	ND		mg/L	0.20	EPA 300.0		8/29/15 06:42	MBW	C
Nitrate-N	18.5		mg/L	0.20	EPA 300.0		8/29/15 06:42	MBW	C
pH	6.21		pH_Units		S4500HB-00		8/29/15 18:34	MBW	C
Phenolics	ND		mg/L	0.01	SW846 9066	9/2/15 NV	9/4/15 12:15	AMH	G
Specific Conductance	393		umhos/cm	1	EPA 120.1		8/29/15 18:34	MBW	C
Sulfate	9.1		mg/L	2.0	EPA 300.0		8/29/15 06:42	MBW	C
Total Dissolved Solids	283		mg/L	5	S2540C-11		9/3/15 11:00	ML	C
Total Organic Carbon (TOC)	ND		mg/L	1.0	S5310B-00		8/31/15 11:38	PAG	E
Turbidity	2.26		NTU	0.10	S2130B-01		8/29/15 06:25	MBW	C

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

ANALYTICAL RESULTS

Workorder: 2092391 Frey Farm 2015

Lab ID: **2092391001**

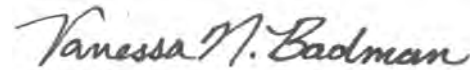
Date Collected: 8/28/2015 08:30

Matrix: Ground Water

Sample ID: **FFMP025W**

Date Received: 8/28/2015 16:21

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Calcium, Total	25.8		mg/L	0.11	SW846 6010C	8/30/15 JPS	8/31/15 14:18	SRT	D1
Iron, Total	0.082		mg/L	0.067	SW846 6010C	8/30/15 JPS	8/31/15 14:18	SRT	D1
Magnesium, Total	14.0		mg/L	0.11	SW846 6010C	8/30/15 JPS	8/31/15 14:18	SRT	D1
Manganese, Total	0.020		mg/L	0.0056	SW846 6010C	8/30/15 JPS	8/31/15 14:18	SRT	D1
Potassium, Total	2.1		mg/L	0.56	SW846 6010C	8/30/15 JPS	8/31/15 14:18	SRT	D1
Sodium, Total	19.3		mg/L	0.56	SW846 6010C	8/30/15 JPS	8/31/15 14:18	SRT	D1
FIELD PARAMETERS									
Depth to Water Level	27.31		Feet		Field		8/28/15 08:30	CLT	J
Ground Water Elevation	449.49		ft/MSL		Field		8/28/15 08:30	CLT	J
pH, Field (SM4500B)	5.20		pH_Units		Field		8/28/15 08:30	CLT	J
Sample Depth	39.00		Feet		Field		8/28/15 08:30	CLT	J
Specific Conductance, Field	189		umhos/cm	1	Field		8/28/15 08:30	CLT	J
Water Level After Purge	28.52		Feet		Field		8/28/15 08:30	CLT	J
Water Level Before Purge	27.31		Feet		Field		8/28/15 08:30	CLT	J
Well Volumes Purged	0.00		Vol		Field		8/28/15 08:30	CLT	J



Mrs. Vanessa N Badman
Project Coordinator

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Middletown, PA 17057
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F. 717-944-1430

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

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

Client Name: LCSWMA
Address:
Contact:
Phone#:
Project Name#:
Bill To:

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

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
FFMP025W	8/28/2015	08:30
2		
3		
4		
5		
6		
7		
8		
9		
10		

Container Type	P	AN	CG	AV	P	P	P
Container Size	500	500	40	40	500	500	1L
Preservative	none	H2SO4	HCL	HCL	HNO3	H2SO4	none

ANALYSES/METHOD REQUESTED			
Matrix	Enter Number of Containers Per Sample or Field Results Below.	Ca, Fe, Mg, Mn, K, Na	PH, TDS, NO3, Cl, SO4, F, Turb, SpC
Alk, HCO3	1	1	1
O-OH	1	2	1
VOC term 190	2	2	1
TOC	1	1	1
NH3N, COD	1	1	1

Project Comments:
 Requisitioned By / Company Name: *Jill Murray LCSWMA* Date: 8/28/2015 Time: 10:32
 Received By / Company Name: *J Kelly* Date: 8/28/2015 Time: 10:32
 Date: 8/28/2015 Time: 10:32
 Date: 8/28/2015 Time: 10:32