COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 63.97 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.90 ft — Elevation of Water Level: 512.43 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 124.73 gal

Total Well Depth: 148.9 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 1.4

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/1/2023 — Sample Collection Time: 10:36

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285699001 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP015W
Sample Date	2/1/2023

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	0.214	D6919-09
BICARBONATE ALKALINITY	24	SM20-2320B
CALCIUM, TOTAL	38.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	43.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	31.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	18	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	44.5 E	EPA 300
pH-FIELD (SU)	5.62	FIELD
pH-LAB (SU)	7.22	SM20-4500HB
POTASSIUM, TOTAL	2.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	22.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	829	FIELD
SPEC. COND., LAB (umhos/cm)	615	SW846 9050A
SULFATE	23.1	EPA 300
ALKALINITY	24	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	338	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.3	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 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.	FFMP015W
Sample Date	2/1/2023

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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Site Name: Frey Farm Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 51.64 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.20 ft — Elevation of Water Level: 539.26 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 140.34 gal

Total Well Depth: 147.2 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 1.3

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/1/2023 — Sample Collection Time: 11:57

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285699002 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP03AW
Sample Date	2/1/2023

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	0.256	D6919-09
BICARBONATE ALKALINITY	11	SM20-2320B
CALCIUM, TOTAL	21.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	35.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	16.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	380	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	22.5 E	EPA 300
pH-FIELD (SU)	5.1	FIELD
pH-LAB (SU)	6.94	SM20-4500HB
POTASSIUM, TOTAL	1.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	14	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	482	FIELD
SPEC. COND., LAB (umhos/cm)	357	SW846 9050A
SULFATE	2.8	EPA 300
ALKALINITY	11	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	184	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 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	2/1/2023

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.

2540-FM-BWM0041 Rev. 6/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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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

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 33.21 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.20 ft — Elevation of Water Level: 529.09 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 83.40 gal

Total Well Depth: 90 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 1.7

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/1/2023 — Sample Collection Time: 13:20

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285699003 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP30RW
Sample Date	2/1/2023

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	0.414	D6919-09
BICARBONATE ALKALINITY	28	SM20-2320B
CALCIUM, TOTAL	34.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	183	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	160	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	16.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	1800	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	5.6	EPA 300
pH-FIELD (SU)	5.36	FIELD
pH-LAB (SU)	7.04	SM20-4500HB
POTASSIUM, TOTAL	4.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	75.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1123	FIELD
SPEC. COND., LAB (umhos/cm)	764	SW846 9050A
SULFATE	23.5	EPA 300
ALKALINITY	28	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	408	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.61	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.8	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.	FFMP30RW
Sample Date	2/1/2023

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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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 33.43 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.52 ft — Elevation of Water Level: 527.29 ft./MSL

Sampling Depth: 146 ft — Volume of Water Column: 393.73 gal

Total Well Depth: 301.52 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 1.6

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/1/2023 — Sample Collection Time: 13:28

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285699004 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP04AW
Sample Date	2/1/2023

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	0.419	D6919-09
BICARBONATE ALKALINITY	174	SM20-2320B
CALCIUM, TOTAL	161	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	315	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	25.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	340	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	2.5 ND	EPA 300
pH-FIELD (SU)	6.93	FIELD
pH-LAB (SU)	8.2	SM20-4500HB
POTASSIUM, TOTAL	2.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	87.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1998	FIELD
SPEC. COND., LAB (umhos/cm)	1450	SW846 9050A
SULFATE	49.3	EPA 300
ALKALINITY	181	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	842	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.65	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.5	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	2/1/2023

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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Site Name: Frey Farm Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 38.25 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.00 ft — Elevation of Water Level: 442.45 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 164.86 gal

Total Well Depth: 150.5 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 0.9

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/2/2023 — Sample Collection Time: 9:58

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285977001 — Final Lab Analysis CompletionDate: 2/17/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP017W
Sample Date	2/2/2023

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	0.708	D6919-09
BICARBONATE ALKALINITY	129	SM20-2320B
CALCIUM, TOTAL	99.8	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	271	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	40.9	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)	6.01	FIELD
pH-LAB (SU)	8.24	SM20-4500HB
POTASSIUM, TOTAL	8.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	96.4	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1837	FIELD
SPEC. COND., LAB (umhos/cm)	1290	SW846 9050A
SULFATE	77.7	EPA 300
ALKALINITY	129	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	710	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	2.8	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 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.	FFMP017W
Sample Date	2/2/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 26.72 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.79 ft — Elevation of Water Level: 445.23 ft./MSL

Sampling Depth: 49 ft — Volume of Water Column: 69.24 gal

Total Well Depth: 132.79 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 2.2

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/2/2023 — Sample Collection Time: 11:15

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285977002 — Final Lab Analysis CompletionDate: 2/17/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP019W
Sample Date	2/2/2023

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	0.211	D6919-09
BICARBONATE ALKALINITY	63	SM20-2320B
CALCIUM, TOTAL	68.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	91	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	6.8	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	6.59	FIELD
pH-LAB (SU)	8.04	SM20-4500HB
POTASSIUM, TOTAL	1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	12.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	651	FIELD
SPEC. COND., LAB (umhos/cm)	472	SW846 9050A
SULFATE	15.2	EPA 300
ALKALINITY	63	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	302	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 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.	FFMP019W
Sample Date	2/2/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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: FFMP029W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 37.03 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.00 ft — Elevation of Water Level: 440.27 ft./MSL

Sampling Depth: 55 ft — Volume of Water Column: 31.53 gal

Total Well Depth: 58.5 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 3.8

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/2/2023 — Sample Collection Time: 11:50

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285977003 — Final Lab Analysis CompletionDate: 2/17/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP029W
Sample Date	2/2/2023

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	0.218	D6919-09
BICARBONATE ALKALINITY	9	SM20-2320B
CALCIUM, TOTAL	13.8	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	70.3	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	10.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	36	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.4	EPA 300
pH-FIELD (SU)	5.16	FIELD
pH-LAB (SU)	7.07	SM20-4500HB
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	23.4	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	414	FIELD
SPEC. COND., LAB (umhos/cm)	304	SW846 9050A
SULFATE	3.7	EPA 300
ALKALINITY	9	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	170	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.4	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	2/2/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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: FFMP035W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: MANOR TOWNSHIP

Sampling Point — Latitude: 39 ° 57 ' 15.95 " — Longitude: 76 ° 26 ' 57.26 "

Depth to Water Level: 42.13 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.45 ft — Elevation of Water Level: 435.43 ft./MSL

Sampling Depth: 65 ft — Volume of Water Column: 40.93 gal

Total Well Depth: 70 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 0.6

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/2/2023 — Sample Collection Time: 12:59

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285977004 — Final Lab Analysis CompletionDate: 2/17/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP035W
Sample Date	2/2/2023

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	0.33	D6919-09
BICARBONATE ALKALINITY	111	SM20-2320B
CALCIUM, TOTAL	87.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	121	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	15.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	4.4	EPA 300
pH-FIELD (SU)	6.67	FIELD
pH-LAB (SU)	8.24	SM20-4500HB
POTASSIUM, TOTAL	2.6	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	37.6	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1023	FIELD
SPEC. COND., LAB (umhos/cm)	746	SW846 9050A
SULFATE	42.3	EPA 300
ALKALINITY	111	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	438	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.72	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 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.	FFMP035W
Sample Date	2/2/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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: FFMP036W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: MANOR TOWNSHIP

Sampling Point — Latitude: 39 ° 57 ' 16.03 " — Longitude: 76 ° 26 ' 57.28 "

Depth to Water Level: 45.42 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.91 ft — Elevation of Water Level: 432.81 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 138.91 gal

Total Well Depth: 140 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 0.8

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/2/2023 — Sample Collection Time: 13:31

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285977005 — Final Lab Analysis CompletionDate: 2/17/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP036W
Sample Date	2/2/2023

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	0.238	D6919-09
BICARBONATE ALKALINITY	94	SM20-2320B
CALCIUM, TOTAL	54.6	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	33.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	2200	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	5.4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	120	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	7.78	FIELD
pH-LAB (SU)	8.26	SM20-4500HB
POTASSIUM, TOTAL	1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	15.2	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	510	FIELD
SPEC. COND., LAB (umhos/cm)	374	SW846 9050A
SULFATE	33.8	EPA 300
ALKALINITY	94	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	210	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	6.4	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.	FFMP036W
Sample Date	2/2/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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: FFMP005W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 52.02 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.70 ft — Elevation of Water Level: 485.38 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 143.90 gal

Total Well Depth: 150 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 2.1

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/2/2023 — Sample Collection Time: 14:22

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285977006 — Final Lab Analysis CompletionDate: 2/17/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP005W
Sample Date	2/2/2023

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	0.508	D6919-09
BICARBONATE ALKALINITY	59	SM20-2320B
CALCIUM, TOTAL	86	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	189	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	21.8	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	220	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1.4	EPA 300
pH-FIELD (SU)	5.53	FIELD
pH-LAB (SU)	7.9	SM20-4500HB
POTASSIUM, TOTAL	3.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	63.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1343	FIELD
SPEC. COND., LAB (umhos/cm)	965	SW846 9050A
SULFATE	84.3	EPA 300
ALKALINITY	59	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	550	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.7	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 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.	FFMP005W
Sample Date	2/2/2023

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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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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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

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 61.74 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 3.30 ft — Elevation of Water Level: 485.66 ft./MSL

Sampling Depth: 105 ft — Volume of Water Column: 76.75 gal

Total Well Depth: 114 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 4.7

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/2/2023 — Sample Collection Time: 14:35

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3285977007 — Final Lab Analysis CompletionDate: 2/17/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP26RW
Sample Date	2/2/2023

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	0.243	D6919-09
BICARBONATE ALKALINITY	69	SM20-2320B
CALCIUM, TOTAL	76.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	130	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	16.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	950	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	5.69	FIELD
pH-LAB (SU)	7.96	SM20-4500HB
POTASSIUM, TOTAL	9.8	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	53.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1115	FIELD
SPEC. COND., LAB (umhos/cm)	806	SW846 9050A
SULFATE	113	EPA 300
ALKALINITY	69	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	472	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	2.3	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 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	2/2/2023

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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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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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

Facitlity 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: FFMP034W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: ___

Sampling Point — Latitude: ___ ° ___ ' ___ " — Longitude: ___ ° ___ ' ___ "

Depth to Water Level: 9.94 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 462.94 ft./MSL

Sampling Depth: 25.85 ft — Volume of Water Column: ___ gal

Total Well Depth: 121 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 0.6

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/3/2023 — Sample Collection Time: 10:21

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3286221001 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments: ___

I.D. No	101389
Monitoring Point No.	FFMP034W
Sample Date	2/3/2023

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	0.332	D6919-09
BICARBONATE ALKALINITY	41	SM20-2320B
CALCIUM, TOTAL	60.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	163	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	2200	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	23	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	140	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	9	EPA 300
pH-FIELD (SU)	5.75	FIELD
pH-LAB (SU)	6.81	SM20-4500HB
POTASSIUM, TOTAL	3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	46.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1096	FIELD
SPEC. COND., LAB (umhos/cm)	799	SW846 9050A
SULFATE	25.7	EPA 300
ALKALINITY	41	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	506	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.82	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	34	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.	FFMP034W
Sample Date	2/3/2023

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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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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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

Facitlity 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: FFMP033W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: MANOR TOWNSHIP

Sampling Point — Latitude: 39 ° 57 ' 31.09 " — Longitude: 76 ° 27 ' 4.98 "

Depth to Water Level: 21.64 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 0.49 ft — Elevation of Water Level: 494.88 ft./MSL

Sampling Depth: 79 ft — Volume of Water Column: 109.21 gal

Total Well Depth: 96 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 1.1

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/3/2023 — Sample Collection Time: 10:33

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3286221002 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP033W
Sample Date	2/3/2023

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	0.493	D6919-09
BICARBONATE ALKALINITY	41	SM20-2320B
CALCIUM, TOTAL	38	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	74.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	9300	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	14.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	620	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	9.5	EPA 300
pH-FIELD (SU)	5.76	FIELD
pH-LAB (SU)	6.79	SM20-4500HB
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	19	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	624	FIELD
SPEC. COND., LAB (umhos/cm)	453	SW846 9050A
SULFATE	5.1	EPA 300
ALKALINITY	41	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	304	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	60	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.	FFMP033W
Sample Date	2/3/2023

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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BUREAU OF WASTE MANAGEMENT

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Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity 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: FFMP031W — X Well ___ Spring ___ Stream ___ Other

X Upgradient/Upstream ___ Downgradient/Downstream

Location (County): Lancaster County — Municipality: MANOR TOWNSHIP

Sampling Point — Latitude: 39 ° 57 ' 31.2 " — Longitude: 76 ° 27 ' 23.53 "

Depth to Water Level: 63.07 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.38 ft — Elevation of Water Level: 549.59 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 112.98 gal

Total Well Depth: 140 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 0.8

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/3/2023 — Sample Collection Time: 12:15

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3286221003 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP031W
Sample Date	2/3/2023

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	0.195	D6919-09
BICARBONATE ALKALINITY	111	SM20-2320B
CALCIUM, TOTAL	66.5	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	20.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	610	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	4.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	420	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1.1	EPA 300
pH-FIELD (SU)	7.57	FIELD
pH-LAB (SU)	8.05	SM20-4500HB
POTASSIUM, TOTAL	1.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	9.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	541	FIELD
SPEC. COND., LAB (umhos/cm)	405	SW846 9050A
SULFATE	47.1	EPA 300
ALKALINITY	111	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	234	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	7.1	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.	FFMP031W
Sample Date	2/3/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

X 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: 56.16 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.60 ft — Elevation of Water Level: 557.04 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 166.60 gal

Total Well Depth: 169.6 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 1.6

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/3/2023 — Sample Collection Time: 11:43

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3286221004 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP002W
Sample Date	2/3/2023

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	0.836	D6919-09
BICARBONATE ALKALINITY	6	SM20-2320B
CALCIUM, TOTAL	17.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	16	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	180	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	7.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	210	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	18.1	EPA 300
pH-FIELD (SU)	4.73	FIELD
pH-LAB (SU)	5.93	SM20-4500HB
POTASSIUM, TOTAL	1.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	13.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	349	FIELD
SPEC. COND., LAB (umhos/cm)	249	SW846 9050A
SULFATE	11.1	EPA 300
ALKALINITY	6	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	154	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.65	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	2/3/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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: FFMP032W — X Well ___ Spring ___ Stream ___ Other

X Upgradient/Upstream ___ Downgradient/Downstream

Location (County): Lancaster County — Municipality: MANOR TOWNSHIP

Sampling Point — Latitude: 39 ° 57 ' 33.45 " — Longitude: 76 ° 27 ' 17.71 "

Depth to Water Level: 49.92 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.06 ft — Elevation of Water Level: 544.17 ft./MSL

Sampling Depth: 62 ft — Volume of Water Column: 36.83 gal

Total Well Depth: 75 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 0.3

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/3/2023 — Sample Collection Time: 12:43

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3286221005 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP032W
Sample Date	2/3/2023

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	0.925	D6919-09
BICARBONATE ALKALINITY	65	SM20-2320B
CALCIUM, TOTAL	17.1	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	19.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	7800	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	6.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	620	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	7.05	FIELD
pH-LAB (SU)	7.64	SM20-4500HB
POTASSIUM, TOTAL	1.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	13.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	285	FIELD
SPEC. COND., LAB (umhos/cm)	198	SW846 9050A
SULFATE	2 ND	EPA 300
ALKALINITY	65	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	84	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.52	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	85	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.	FFMP032W
Sample Date	2/3/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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: FFMP02DW — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: MANOR TOWNSHIP

Sampling Point — Latitude: 39 ° 57 ' 27.74 " — Longitude: 76 ° 27 ' 1.49 "

Depth to Water Level: 20.11 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 489.49 ft./MSL

Sampling Depth: 120 ft — Volume of Water Column: ___ gal

Total Well Depth: 152 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 1.0

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/3/2023 — Sample Collection Time: 14:07

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3286221006 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP02DW
Sample Date	2/3/2023

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	0.164	D6919-09
BICARBONATE ALKALINITY	107	SM20-2320B
CALCIUM, TOTAL	148	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	176	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	2400	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	24.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	610	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	2.3	EPA 300
pH-FIELD (SU)	7.07	FIELD
pH-LAB (SU)	7.9	SM20-4500HB
POTASSIUM, TOTAL	1.7	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	166	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	2473	FIELD
SPEC. COND., LAB (umhos/cm)	1780	SW846 9050A
SULFATE	14.1	EPA 300
ALKALINITY	107	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	1030	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.83	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	40	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.	FFMP02DW
Sample Date	2/3/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 25.08 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.46 ft — Elevation of Water Level: 447.12 ft./MSL

Sampling Depth: 40 ft — Volume of Water Column: 17.20 gal

Total Well Depth: 51.43 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 3.2

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/3/2023 — Sample Collection Time: 13:41

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3286221007 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP018W
Sample Date	2/3/2023

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	0.176	D6919-09
BICARBONATE ALKALINITY	19	SM20-2320B
CALCIUM, TOTAL	32.9	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 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	19.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	210	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.6	EPA 300
pH-FIELD (SU)	5.31	FIELD
pH-LAB (SU)	6.41	SM20-4500HB
POTASSIUM, TOTAL	4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	39.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	773	FIELD
SPEC. COND., LAB (umhos/cm)	565	SW846 9050A
SULFATE	34.5	EPA 300
ALKALINITY	19	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	330	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.76	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.9	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	2/3/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
04/05/2023
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

Facitlity 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: FFMP02SW — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: MANOR TOWNSHIP

Sampling Point — Latitude: 39 ° 57 ' 27.9 " — Longitude: 76 ° 27 ' 1.58 "

Depth to Water Level: 14.68 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 495.22 ft./MSL

Sampling Depth: 18 ft — Volume of Water Column: ___ gal

Total Well Depth: 25 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 0.5

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/3/2023 — Sample Collection Time: 14:08

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3286221008 — Final Lab Analysis CompletionDate: 2/16/2023

Name/Affiliation of Person who Filled Out Form: Daniel A. Brown

Comments:

I.D. No	101389
Monitoring Point No.	FFMP02SW
Sample Date	2/3/2023

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	1.7	D6919-09
BICARBONATE ALKALINITY	22	SM20-2320B
CALCIUM, TOTAL	20.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	49.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	310	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	8.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	16	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	8.8	EPA 300
pH-FIELD (SU)	5.73	FIELD
pH-LAB (SU)	6.86	SM20-4500HB
POTASSIUM, TOTAL	5.6	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	37.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	530	FIELD
SPEC. COND., LAB (umhos/cm)	382	SW846 9050A
SULFATE	30.4	EPA 300
ALKALINITY	22	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	200	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	2.5	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	28	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.	FFMP02SW
Sample Date	2/3/2023

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.

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

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

Analytical Results Report For **Lancaster County Solid Waste Authority**

Project 1ST QTR 2023 GWMP-FORM 19Q
Workorder 3286221
Report ID 225544 on 2/17/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 03, 2023.

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 Susan Scherer (Project Coordinator) at (717) 944-5541.

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

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jordan Gallagher - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3286221001	FFMP034W	Ground Water	02/03/2023 10:21	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221002	FFMP033W	Ground Water	02/03/2023 10:33	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221003	FFMP031W	Ground Water	02/03/2023 12:15	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221004	FFMP002W	Ground Water	02/03/2023 11:43	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221005	FFMP032W	Ground Water	02/03/2023 12:43	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221006	FFMP02DW	Ground Water	02/03/2023 14:07	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221007	FFMP018W	Ground Water	02/03/2023 13:41	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221008	FFMP02SW	Ground Water	02/03/2023 14:08	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221009	FIELD BLANK	Water	02/03/2023 14:40	02/03/2023 16:48	BGS	Analytical Laboratory Service
3286221010	TRIP BLANK	Water	02/03/2023 16:48	02/03/2023 16:48	BGS	Analytical Laboratory Service

Reference

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

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) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
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
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	Method ASTMD6919-09 is equivalent to Method ASTMD6919-17.
3	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Chloride. The % Recovery was reported as 63.5 and the control limits were 80 to 120.
4	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
5	The QC sample type MSD for method SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 111 and the control limits were 90 to 110.
6	The QC sample type MS for method SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 85.3 and the control limits were 90 to 110.

Detected Results Summary

Client Sample ID	FFMP034W	Collected	02/03/2023 10:21
Lab Sample ID	3286221001	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	9.94	Feet		Field	#
Dissolved Oxygen	1.83	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	472.88	Feet		Field	#
Flow Rate	1.75	gal/min		Field	#
Ground Water Elevation	462.94	ft/MSL		Field	#
Oxidation-Reduction Potential	135	mV		Field	#
pH, Field (SM4500B)	5.75	pH_Units		Field	#
Sample Depth	25.85	Feet		Field	#
Specific Conductance, Field	1096	umhos/cm	1	Field	#
Temperature	14.39	Deg. C		Field	#
Total Well Depth	121.00	Feet		Field	#
Turbidity, Field	45	NTU	1	Field	#
Volume in Water Column	163.26	Gallons		Field	#
Water Level After Purge	19.18	Feet		Field	#
Well Volumes Purged	0.64	Vol		Field	#
METALS					
Calcium, Total	60.2	mg/L	0.11	SW846 6010C	#
Iron, Total	2.2	mg/L	0.067	SW846 6010C	#
Magnesium, Total	23.0	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.14	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	46.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	41	mg/L	5	SM2320B-2011	#
Alkalinity, Total	41	mg/L	5	SM2320B-2011	#
Ammonia-N	0.332	mg/L	0.100	ASTM D6919-09	#
Chloride	163	mg/L	2.0	EPA 300.0	#
Nitrate-N	9.0	mg/L	1.0	EPA 300.0	#
pH	6.81	pH_Units		S4500HB-11	#
Specific Conductance	799	umhos/cm	5	SW846 9050A	#
Sulfate	25.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	506	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.82	mg/L	0.50	SW846 9060A	#
Turbidity	34	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP033W	Collected	02/03/2023 10:33
Lab Sample ID	3286221002	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	21.64	Feet		Field	#
Dissolved Oxygen	1.15	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	516.52	Feet		Field	#
Flow Rate	2.09	gal/min		Field	#
Ground Water Elevation	494.88	ft/MSL		Field	#
Oxidation-Reduction Potential	41	mV		Field	#
pH, Field (SM4500B)	5.76	pH_Units		Field	#
Sample Depth	79.00	Feet		Field	#
Specific Conductance, Field	624	umhos/cm	1	Field	#
Temperature	15.12	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Turbidity, Field	87	NTU	1	Field	#
Volume in Water Column	115.19	Gallons		Field	#
Water Level After Purge	38.76	Feet		Field	#
Well Volumes Purged	1.09	Vol		Field	#
METALS					
Calcium, Total	38.0	mg/L	0.11	SW846 6010C	#
Iron, Total	9.3	mg/L	0.067	SW846 6010C	#
Magnesium, Total	14.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.62	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	19.0	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	41	mg/L	5	SM2320B-2011	#
Alkalinity, Total	41	mg/L	5	SM2320B-2011	#
Ammonia-N	0.493	mg/L	0.100	ASTM D6919-09	#
Chloride	74.2	mg/L	2.0	EPA 300.0	#
Nitrate-N	9.5	mg/L	1.0	EPA 300.0	#
pH	6.79	pH_Units		S4500HB-11	#
Specific Conductance	453	umhos/cm	5	SW846 9050A	#
Sulfate	5.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	304	mg/L	25	S2540C-11	#
Turbidity	60	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP031W	Collected	02/03/2023 12:15
Lab Sample ID	3286221003	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	63.07	Feet		Field	#
Dissolved Oxygen	3.74	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	612.66	Feet		Field	#
Flow Rate	1.49	gal/min		Field	#
Ground Water Elevation	549.59	ft/MSL		Field	#
Oxidation-Reduction Potential	-93	mV		Field	#
pH, Field (SM4500B)	7.57	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	541	umhos/cm	1	Field	#
Temperature	13.87	Deg. C		Field	#
Total Well Depth	142.70	Feet		Field	#
Turbidity, Field	106	NTU	1	Field	#
Volume in Water Column	117.06	Gallons		Field	#
Water Level After Purge	90.56	Feet		Field	#
Well Volumes Purged	0.76	Vol		Field	#
METALS					
Calcium, Total	66.5	mg/L	0.11	SW846 6010C	#
Iron, Total	0.61	mg/L	0.067	SW846 6010C	#
Magnesium, Total	4.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.42	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	9.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	111	mg/L	5	SM2320B-2011	#
Alkalinity, Total	111	mg/L	5	SM2320B-2011	#
Ammonia-N	0.195	mg/L	0.100	ASTM D6919-09	#
Chloride	20.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.1	mg/L	1.0	EPA 300.0	#
pH	8.05	pH_Units		S4500HB-11	#
Specific Conductance	405	umhos/cm	5	SW846 9050A	#
Sulfate	47.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	234	mg/L	25	S2540C-11	#
Turbidity	7.1	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP002W	Collected	02/03/2023 11:43
Lab Sample ID	3286221004	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	56.16	Feet		Field	#
Dissolved Oxygen	7.09	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	613.20	Feet		Field	#
Flow Rate	3.96	gal/min		Field	#
Ground Water Elevation	557.04	ft/MSL		Field	#
Oxidation-Reduction Potential	363	mV		Field	#
pH, Field (SM4500B)	4.73	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	349	umhos/cm	1	Field	#
Temperature	14.18	Deg. C		Field	#
Total Well Depth	90.02	Feet		Field	#
Volume in Water Column	49.77	Gallons		Field	#
Water Level After Purge	75.50	Feet		Field	#
Well Volumes Purged	1.59	Vol		Field	#
METALS					
Calcium, Total	17.2	mg/L	0.11	SW846 6010C	#
Iron, Total	0.18	mg/L	0.067	SW846 6010C	#
Magnesium, Total	7.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.21	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	6	mg/L	5	SM2320B-2011	#
Alkalinity, Total	6	mg/L	5	SM2320B-2011	#
Ammonia-N	0.836	mg/L	0.100	ASTM D6919-09	#
Chloride	16.0	mg/L	2.0	EPA 300.0	#
Nitrate-N	18.1	mg/L	1.0	EPA 300.0	#
pH	5.93	pH_Units		S4500HB-11	#
Specific Conductance	249	umhos/cm	5	SW846 9050A	#
Sulfate	11.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	154	mg/L	25	S2540C-11	#
Turbidity	0.65	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP032W	Collected	02/03/2023 12:43
Lab Sample ID	3286221005	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	49.92	Feet		Field	#
Dissolved Oxygen	0.21	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	594.09	Feet		Field	#
Flow Rate	0.75	gal/min		Field	#
Ground Water Elevation	544.17	ft/MSL		Field	#
Oxidation-Reduction Potential	-111	mV		Field	#
pH, Field (SM4500B)	7.05	pH_Units		Field	#
Sample Depth	62.00	Feet		Field	#
Specific Conductance, Field	285	umhos/cm	1	Field	#
Temperature	14.56	Deg. C		Field	#
Total Well Depth	77.60	Feet		Field	#
Turbidity, Field	57	NTU	1	Field	#
Volume in Water Column	40.69	Gallons		Field	#
Water Level After Purge	58.10	Feet		Field	#
Well Volumes Purged	0.29	Vol		Field	#
METALS					
Calcium, Total	17.1	mg/L	0.11	SW846 6010C	#
Iron, Total	7.8	mg/L	0.067	SW846 6010C	#
Magnesium, Total	6.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.62	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	65	mg/L	5	SM2320B-2011	#
Alkalinity, Total	65	mg/L	5	SM2320B-2011	#
Ammonia-N	0.925	mg/L	0.100	ASTM D6919-09	#
Chloride	19.8	mg/L	2.0	EPA 300.0	#
pH	7.64	pH_Units		S4500HB-11	#
Specific Conductance	198	umhos/cm	5	SW846 9050A	#
Total Dissolved Solids	84	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.52	mg/L	0.50	SW846 9060A	#
Turbidity	85	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP02DW	Collected	02/03/2023 14:07
Lab Sample ID	3286221006	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	20.11	Feet		Field	#
Dissolved Oxygen	1.24	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	509.60	Feet		Field	#
Flow Rate	3.40	gal/min		Field	#
Ground Water Elevation	489.49	ft/MSL		Field	#
Oxidation-Reduction Potential	14	mV		Field	#
pH, Field (SM4500B)	7.07	pH_Units		Field	#
Sample Depth	120.00	Feet		Field	#
Specific Conductance, Field	2473	umhos/cm	1	Field	#
Temperature	11.06	Deg. C		Field	#
Total Well Depth	153.00	Feet		Field	#
Turbidity, Field	57	NTU	1	Field	#
Volume in Water Column	195.35	Gallons		Field	#
Water Level After Purge	49.22	Feet		Field	#
Well Volumes Purged	1.05	Vol		Field	#
METALS					
Calcium, Total	148	mg/L	0.11	SW846 6010C	#
Iron, Total	2.4	mg/L	0.067	SW846 6010C	#
Magnesium, Total	24.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.61	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	166	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	107	mg/L	5	SM2320B-2011	#
Alkalinity, Total	107	mg/L	5	SM2320B-2011	#
Ammonia-N	0.164	mg/L	0.100	ASTM D6919-09	#
Chloride	176	mg/L	2.0	EPA 300.0	#
Nitrate-N	2.3	mg/L	1.0	EPA 300.0	#
pH	7.90	pH_Units		S4500HB-11	#
Specific Conductance	1780	umhos/cm	5	SW846 9050A	#
Sulfate	14.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	1030	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.83	mg/L	0.50	SW846 9060A	#
Turbidity	40	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP018W	Collected	02/03/2023 13:41
Lab Sample ID	3286221007	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	25.08	Feet		Field	#
Dissolved Oxygen	4.96	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	472.20	Feet		Field	#
Flow Rate	3.43	gal/min		Field	#
Ground Water Elevation	447.12	ft/MSL		Field	#
Oxidation-Reduction Potential	304	mV		Field	#
pH, Field (SM4500B)	5.31	pH_Units		Field	#
Sample Depth	40.00	Feet		Field	#
Specific Conductance, Field	773	umhos/cm	1	Field	#
Temperature	15.18	Deg. C		Field	#
Total Well Depth	51.46	Feet		Field	#
Volume in Water Column	17.15	Gallons		Field	#
Water Level After Purge	27.31	Feet		Field	#
Well Volumes Purged	3.20	Vol		Field	#
METALS					
Calcium, Total	32.9	mg/L	0.11	SW846 6010C	#
Magnesium, Total	19.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.21	mg/L	0.0056	SW846 6010C	#
Potassium, Total	4.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	39.3	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	19	mg/L	5	SM2320B-2011	#
Alkalinity, Total	19	mg/L	5	SM2320B-2011	#
Ammonia-N	0.176	mg/L	0.100	ASTM D6919-09	#
Chloride	113	mg/L	2.0	EPA 300.0	#
Nitrate-N	3.6	mg/L	1.0	EPA 300.0	#
pH	6.41	pH_Units		S4500HB-11	#
Specific Conductance	565	umhos/cm	5	SW846 9050A	#
Sulfate	34.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	330	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.76	mg/L	0.50	SW846 9060A	#
Turbidity	0.90	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP02SW	Collected	02/03/2023 14:08
Lab Sample ID	3286221008	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	14.68	Feet		Field	#
Dissolved Oxygen	7.11	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	509.90	Feet		Field	#
Flow Rate	0.26	gal/min		Field	#
Ground Water Elevation	495.22	ft/MSL		Field	#
Oxidation-Reduction Potential	234	mV		Field	#
pH, Field (SM4500B)	5.73	pH_Units		Field	#
Sample Depth	18.00	Feet		Field	#
Specific Conductance, Field	530	umhos/cm	1	Field	#
Temperature	14.24	Deg. C		Field	#
Total Well Depth	22.70	Feet		Field	#
Turbidity, Field	60	NTU	1	Field	#
Volume in Water Column	5.21	Gallons		Field	#
Water Level After Purge	17.70	Feet		Field	#
Well Volumes Purged	0.50	Vol		Field	#
METALS					
Calcium, Total	20.2	mg/L	0.11	SW846 6010C	#
Iron, Total	0.31	mg/L	0.067	SW846 6010C	#
Magnesium, Total	8.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.016	mg/L	0.0056	SW846 6010C	#
Potassium, Total	5.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	37.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	22	mg/L	5	SM2320B-2011	#
Alkalinity, Total	22	mg/L	5	SM2320B-2011	#
Ammonia-N	1.70	mg/L	0.100	ASTM D6919-09	#
Chloride	49.8	mg/L	2.0	EPA 300.0	#
Nitrate-N	8.8	mg/L	1.0	EPA 300.0	#
pH	6.86	pH_Units		S4500HB-11	#
Specific Conductance	382	umhos/cm	5	SW846 9050A	#
Sulfate	30.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	200	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	2.5	mg/L	0.50	SW846 9060A	#
Turbidity	28	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FIELD BLANK	Collected	02/03/2023 14:40
Lab Sample ID	3286221009	Lab Receipt	02/03/2023 16:48

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Ammonia-N	0.106	mg/L	0.010	ASTM D6919-09	#
pH	5.57	pH_Units		S4500HB-11	#

Results

Client Sample ID	FFMP034W	Collected	02/03/2023 10:21
Lab Sample ID	3286221001	Lab Receipt	02/03/2023 16:48

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	9.94		Feet		Field	1	02/03/2023 10:21	BGS	D
Dissolved Oxygen	1.83		mg/L	0.01	Field	1	02/03/2023 10:21	BGS	D
Elev Top MW Casing above MSL	472.88		Feet		Field	1	02/03/2023 10:21	BGS	D
Flow Rate	1.75		gal/min		Field	1	02/03/2023 10:21	BGS	D
Ground Water Elevation	462.94		ft/MSL		Field	1	02/03/2023 10:21	BGS	D
Oxidation-Reduction Potential	135		mV		Field	1	02/03/2023 10:21	BGS	D
pH, Field (SM4500B)	5.75		pH_Units		Field	1	02/03/2023 10:21	BGS	D
Sample Depth	25.85		Feet		Field	1	02/03/2023 10:21	BGS	D
Specific Conductance, Field	1096		umhos/cm	1	Field	1	02/03/2023 10:21	BGS	D
Temperature	14.39		Deg. C		Field	1	02/03/2023 10:21	BGS	D
Total Well Depth	121.00		Feet		Field	1	02/03/2023 10:21	BGS	D
Turbidity, Field	45		NTU	1	Field	1	02/03/2023 10:21	BGS	D
Volume in Water Column	163.26		Gallons		Field	1	02/03/2023 10:21	BGS	D
Water Level After Purge	19.18		Feet		Field	1	02/03/2023 10:21	BGS	D
Well Volumes Purged	0.64		Vol		Field	1	02/03/2023 10:21	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	60.2		mg/L	0.11	SW846 6010C	1	02/13/2023 12:22	A1S	J1
Iron, Total	2.2		mg/L	0.067	SW846 6010C	1	02/13/2023 12:22	A1S	J1
Magnesium, Total	23.0		mg/L	0.11	SW846 6010C	1	02/13/2023 12:22	A1S	J1
Manganese, Total	0.14		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:22	A1S	J1
Potassium, Total	3.0		mg/L	0.56	SW846 6010C	1	02/13/2023 12:22	A1S	J1
Sodium, Total	46.9		mg/L	0.56	SW846 6010C	1	02/13/2023 12:22	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 04:53	PDK	H

Results

Client Sample ID	FFMP034W	Collected	02/03/2023 10:21
Lab Sample ID	3286221001	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.5%	62 – 133	02/11/2023 04:53	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/11/2023 04:53	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/11/2023 04:53	
Toluene-d8	2037-26-5	94.8%	76 – 127	02/11/2023 04:53	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	41		mg/L	5	SM2320B-2011	1	02/14/2023 14:38	NML	B
Alkalinity, Total	41	1	mg/L	5	SM2320B-2011	1	02/14/2023 14:38	NML	B
Ammonia-N	0.332	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 07:11	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	163	3	mg/L	2.0	EPA 300.0	2	02/04/2023 12:33	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 12:33	AXW	B
Nitrate-N	9.0		mg/L	1.0	EPA 300.0	2	02/04/2023 12:33	AXW	B
pH	6.81	4	pH_Units		S4500HB-11	1	02/14/2023 14:38	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 16:31	MXF	G
Specific Conductance	799		umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	25.7		mg/L	2.0	EPA 300.0	2	02/04/2023 12:33	AXW	B
Total Dissolved Solids	506		mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	0.82		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	34		NTU	0.30	SM2130B-2011	1	02/04/2023 00:37	NRB	B

Results

Client Sample ID	FFMP033W	Collected	02/03/2023 10:33
Lab Sample ID	3286221002	Lab Receipt	02/03/2023 16:48

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	21.64		Feet		Field	1	02/03/2023 10:33	BGS	D
Dissolved Oxygen	1.15		mg/L	0.01	Field	1	02/03/2023 10:33	BGS	D
Elev Top MW Casing above MSL	516.52		Feet		Field	1	02/03/2023 10:33	BGS	D
Flow Rate	2.09		gal/min		Field	1	02/03/2023 10:33	BGS	D
Ground Water Elevation	494.88		ft/MSL		Field	1	02/03/2023 10:33	BGS	D
Oxidation-Reduction Potential	41		mV		Field	1	02/03/2023 10:33	BGS	D
pH, Field (SM4500B)	5.76		pH_Units		Field	1	02/03/2023 10:33	BGS	D
Sample Depth	79.00		Feet		Field	1	02/03/2023 10:33	BGS	D
Specific Conductance, Field	624		umhos/cm	1	Field	1	02/03/2023 10:33	BGS	D
Temperature	15.12		Deg. C		Field	1	02/03/2023 10:33	BGS	D
Total Well Depth	100.00		Feet		Field	1	02/03/2023 10:33	BGS	D
Turbidity, Field	87		NTU	1	Field	1	02/03/2023 10:33	BGS	D
Volume in Water Column	115.19		Gallons		Field	1	02/03/2023 10:33	BGS	D
Water Level After Purge	38.76		Feet		Field	1	02/03/2023 10:33	BGS	D
Well Volumes Purged	1.09		Vol		Field	1	02/03/2023 10:33	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	38.0		mg/L	0.11	SW846 6010C	1	02/13/2023 12:23	A1S	J1
Iron, Total	9.3		mg/L	0.067	SW846 6010C	1	02/13/2023 12:23	A1S	J1
Magnesium, Total	14.1		mg/L	0.11	SW846 6010C	1	02/13/2023 12:23	A1S	J1
Manganese, Total	0.62		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:23	A1S	J1
Potassium, Total	2.1		mg/L	0.56	SW846 6010C	1	02/13/2023 12:23	A1S	J1
Sodium, Total	19.0		mg/L	0.56	SW846 6010C	1	02/13/2023 12:23	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:16	PDK	H

Results

Client Sample ID	FFMP033W	Collected	02/03/2023 10:33
Lab Sample ID	3286221002	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.6%	62 – 133	02/11/2023 05:16	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	02/11/2023 05:16	
Dibromofluoromethane	1868-53-7	104%	78 – 116	02/11/2023 05:16	
Toluene-d8	2037-26-5	95.8%	76 – 127	02/11/2023 05:16	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	41		mg/L	5	SM2320B-2011	1	02/14/2023 15:14	NML	B
Alkalinity, Total	41	1	mg/L	5	SM2320B-2011	1	02/14/2023 15:14	NML	B
Ammonia-N	0.493	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 08:16	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	74.2		mg/L	2.0	EPA 300.0	2	02/04/2023 13:15	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 13:15	AXW	B
Nitrate-N	9.5		mg/L	1.0	EPA 300.0	2	02/04/2023 13:15	AXW	B
pH	6.79	4	pH_Units		S4500HB-11	1	02/14/2023 15:14	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 15:53	MXF	G
Specific Conductance	453		umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	5.1		mg/L	2.0	EPA 300.0	2	02/04/2023 13:15	AXW	B
Total Dissolved Solids	304		mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	60		NTU	0.30	SM2130B-2011	1	02/04/2023 00:37	NRB	B

Results

Client Sample ID	FFMP031W	Collected	02/03/2023 12:15
Lab Sample ID	3286221003	Lab Receipt	02/03/2023 16:48

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	63.07		Feet		Field	1	02/03/2023 12:15	BGS	D
Dissolved Oxygen	3.74		mg/L	0.01	Field	1	02/03/2023 12:15	BGS	D
Elev Top MW Casing above MSL	612.66		Feet		Field	1	02/03/2023 12:15	BGS	D
Flow Rate	1.49		gal/min		Field	1	02/03/2023 12:15	BGS	D
Ground Water Elevation	549.59		ft/MSL		Field	1	02/03/2023 12:15	BGS	D
Oxidation-Reduction Potential	-93		mV		Field	1	02/03/2023 12:15	BGS	D
pH, Field (SM4500B)	7.57		pH_Units		Field	1	02/03/2023 12:15	BGS	D
Sample Depth	130.00		Feet		Field	1	02/03/2023 12:15	BGS	D
Specific Conductance, Field	541		umhos/cm	1	Field	1	02/03/2023 12:15	BGS	D
Temperature	13.87		Deg. C		Field	1	02/03/2023 12:15	BGS	D
Total Well Depth	142.70		Feet		Field	1	02/03/2023 12:15	BGS	D
Turbidity, Field	106		NTU	1	Field	1	02/03/2023 12:15	BGS	D
Volume in Water Column	117.06		Gallons		Field	1	02/03/2023 12:15	BGS	D
Water Level After Purge	90.56		Feet		Field	1	02/03/2023 12:15	BGS	D
Well Volumes Purged	0.76		Vol		Field	1	02/03/2023 12:15	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	66.5		mg/L	0.11	SW846 6010C	1	02/13/2023 12:24	A1S	J1
Iron, Total	0.61		mg/L	0.067	SW846 6010C	1	02/13/2023 12:24	A1S	J1
Magnesium, Total	4.5		mg/L	0.11	SW846 6010C	1	02/13/2023 12:24	A1S	J1
Manganese, Total	0.42		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:24	A1S	J1
Potassium, Total	1.4		mg/L	0.56	SW846 6010C	1	02/13/2023 12:24	A1S	J1
Sodium, Total	9.7		mg/L	0.56	SW846 6010C	1	02/13/2023 12:24	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 05:38	PDK	H

Results

Client Sample ID	FFMP031W	Collected	02/03/2023 12:15
Lab Sample ID	3286221003	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94%	62 – 133	02/11/2023 05:38	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/11/2023 05:38	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/11/2023 05:38	
Toluene-d8	2037-26-5	95.7%	76 – 127	02/11/2023 05:38	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	111		mg/L	5	SM2320B-2011	1	02/14/2023 14:50	NML	B
Alkalinity, Total	111	1	mg/L	5	SM2320B-2011	1	02/14/2023 14:50	NML	B
Ammonia-N	0.195	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 08:29	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	20.9		mg/L	2.0	EPA 300.0	2	02/04/2023 13:25	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 13:25	AXW	B
Nitrate-N	1.1		mg/L	1.0	EPA 300.0	2	02/04/2023 13:25	AXW	B
pH	8.05	4	pH_Units		S4500HB-11	1	02/14/2023 14:50	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 15:50	MXF	G
Specific Conductance	405		umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	47.1		mg/L	2.0	EPA 300.0	2	02/04/2023 13:25	AXW	B
Total Dissolved Solids	234		mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	7.1		NTU	0.30	SM2130B-2011	1	02/04/2023 00:37	NRB	B

Results

Client Sample ID	FFMP002W	Collected	02/03/2023 11:43
Lab Sample ID	3286221004	Lab Receipt	02/03/2023 16:48

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	56.16		Feet		Field	1	02/03/2023 11:43	BGS	D
Dissolved Oxygen	7.09		mg/L	0.01	Field	1	02/03/2023 11:43	BGS	D
Elev Top MW Casing above MSL	613.20		Feet		Field	1	02/03/2023 11:43	BGS	D
Flow Rate	3.96		gal/min		Field	1	02/03/2023 11:43	BGS	D
Ground Water Elevation	557.04		ft/MSL		Field	1	02/03/2023 11:43	BGS	D
Oxidation-Reduction Potential	363		mV		Field	1	02/03/2023 11:43	BGS	D
pH, Field (SM4500B)	4.73		pH_Units		Field	1	02/03/2023 11:43	BGS	D
Sample Depth	85.00		Feet		Field	1	02/03/2023 11:43	BGS	D
Specific Conductance, Field	349		umhos/cm	1	Field	1	02/03/2023 11:43	BGS	D
Temperature	14.18		Deg. C		Field	1	02/03/2023 11:43	BGS	D
Total Well Depth	90.02		Feet		Field	1	02/03/2023 11:43	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/03/2023 11:43	BGS	D
Volume in Water Column	49.77		Gallons		Field	1	02/03/2023 11:43	BGS	D
Water Level After Purge	75.50		Feet		Field	1	02/03/2023 11:43	BGS	D
Well Volumes Purged	1.59		Vol		Field	1	02/03/2023 11:43	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	17.2		mg/L	0.11	SW846 6010C	1	02/13/2023 12:25	A1S	J1
Iron, Total	0.18		mg/L	0.067	SW846 6010C	1	02/13/2023 12:25	A1S	J1
Magnesium, Total	7.6		mg/L	0.11	SW846 6010C	1	02/13/2023 12:25	A1S	J1
Manganese, Total	0.21		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:25	A1S	J1
Potassium, Total	1.2		mg/L	0.56	SW846 6010C	1	02/13/2023 12:25	A1S	J1
Sodium, Total	13.9		mg/L	0.56	SW846 6010C	1	02/13/2023 12:25	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:01	PDK	H

Results

Client Sample ID	FFMP002W	Collected	02/03/2023 11:43
Lab Sample ID	3286221004	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.4%	62 – 133	02/11/2023 06:01	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	02/11/2023 06:01	
Dibromofluoromethane	1868-53-7	102%	78 – 116	02/11/2023 06:01	
Toluene-d8	2037-26-5	95%	76 – 127	02/11/2023 06:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	6		mg/L	5	SM2320B-2011	1	02/14/2023 15:02	NML	B
Alkalinity, Total	6	1	mg/L	5	SM2320B-2011	1	02/14/2023 15:02	NML	B
Ammonia-N	0.836	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 08:43	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	16.0		mg/L	2.0	EPA 300.0	2	02/04/2023 13:36	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 13:36	AXW	B
Nitrate-N	18.1		mg/L	1.0	EPA 300.0	2	02/04/2023 13:36	AXW	B
pH	5.93	4	pH_Units		S4500HB-11	1	02/14/2023 15:02	NML	B
Phenolics	ND	ND,5	mg/L	0.004	SW846 9066	1	02/13/2023 16:04	MXF	G
Specific Conductance	249		umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	11.1		mg/L	2.0	EPA 300.0	2	02/04/2023 13:36	AXW	B
Total Dissolved Solids	154		mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	0.65		NTU	0.30	SM2130B-2011	1	02/04/2023 00:37	NRB	B

Results

Client Sample ID	FFMP032W	Collected	02/03/2023 12:43
Lab Sample ID	3286221005	Lab Receipt	02/03/2023 16:48

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	49.92		Feet		Field	1	02/03/2023 12:43	BGS	D
Dissolved Oxygen	0.21		mg/L	0.01	Field	1	02/03/2023 12:43	BGS	D
Elev Top MW Casing above MSL	594.09		Feet		Field	1	02/03/2023 12:43	BGS	D
Flow Rate	0.75		gal/min		Field	1	02/03/2023 12:43	BGS	D
Ground Water Elevation	544.17		ft/MSL		Field	1	02/03/2023 12:43	BGS	D
Oxidation-Reduction Potential	-111		mV		Field	1	02/03/2023 12:43	BGS	D
pH, Field (SM4500B)	7.05		pH_Units		Field	1	02/03/2023 12:43	BGS	D
Sample Depth	62.00		Feet		Field	1	02/03/2023 12:43	BGS	D
Specific Conductance, Field	285		umhos/cm	1	Field	1	02/03/2023 12:43	BGS	D
Temperature	14.56		Deg. C		Field	1	02/03/2023 12:43	BGS	D
Total Well Depth	77.60		Feet		Field	1	02/03/2023 12:43	BGS	D
Turbidity, Field	57		NTU	1	Field	1	02/03/2023 12:43	BGS	D
Volume in Water Column	40.69		Gallons		Field	1	02/03/2023 12:43	BGS	D
Water Level After Purge	58.10		Feet		Field	1	02/03/2023 12:43	BGS	D
Well Volumes Purged	0.29		Vol		Field	1	02/03/2023 12:43	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	17.1		mg/L	0.11	SW846 6010C	1	02/13/2023 12:26	A1S	J1
Iron, Total	7.8		mg/L	0.067	SW846 6010C	1	02/13/2023 12:26	A1S	J1
Magnesium, Total	6.1		mg/L	0.11	SW846 6010C	1	02/13/2023 12:26	A1S	J1
Manganese, Total	0.62		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:26	A1S	J1
Potassium, Total	1.3		mg/L	0.56	SW846 6010C	1	02/13/2023 12:26	A1S	J1
Sodium, Total	13.5		mg/L	0.56	SW846 6010C	1	02/13/2023 12:26	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:24	PDK	H

Results

Client Sample ID	FFMP032W	Collected	02/03/2023 12:43
Lab Sample ID	3286221005	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.9%	62 – 133	02/11/2023 06:24	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/11/2023 06:24	
Dibromofluoromethane	1868-53-7	105%	78 – 116	02/11/2023 06:24	
Toluene-d8	2037-26-5	96.3%	76 – 127	02/11/2023 06:24	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	65		mg/L	5	SM2320B-2011	1	02/14/2023 16:06	NML	B
Alkalinity, Total	65	1	mg/L	5	SM2320B-2011	1	02/14/2023 16:06	NML	B
Ammonia-N	0.925	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 08:57	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	19.8		mg/L	2.0	EPA 300.0	2	02/04/2023 13:46	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 13:46	AXW	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/04/2023 13:46	AXW	B
pH	7.64	4	pH_Units		S4500HB-11	1	02/14/2023 16:06	NML	B
Phenolics	ND	ND,6	mg/L	0.004	SW846 9066	1	02/13/2023 13:16	MXF	G
Specific Conductance	198		umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	02/04/2023 13:46	AXW	B
Total Dissolved Solids	84		mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	0.52		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	85		NTU	0.30	SM2130B-2011	1	02/04/2023 00:37	NRB	B

Results

Client Sample ID	FFMP02DW	Collected	02/03/2023 14:07
Lab Sample ID	3286221006	Lab Receipt	02/03/2023 16:48

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	20.11		Feet		Field	1	02/03/2023 14:07	BGS	D
Dissolved Oxygen	1.24		mg/L	0.01	Field	1	02/03/2023 14:07	BGS	D
Elev Top MW Casing above MSL	509.60		Feet		Field	1	02/03/2023 14:07	BGS	D
Flow Rate	3.40		gal/min		Field	1	02/03/2023 14:07	BGS	D
Ground Water Elevation	489.49		ft/MSL		Field	1	02/03/2023 14:07	BGS	D
Oxidation-Reduction Potential	14		mV		Field	1	02/03/2023 14:07	BGS	D
pH, Field (SM4500B)	7.07		pH_Units		Field	1	02/03/2023 14:07	BGS	D
Sample Depth	120.00		Feet		Field	1	02/03/2023 14:07	BGS	D
Specific Conductance, Field	2473		umhos/cm	1	Field	1	02/03/2023 14:07	BGS	D
Temperature	11.06		Deg. C		Field	1	02/03/2023 14:07	BGS	D
Total Well Depth	153.00		Feet		Field	1	02/03/2023 14:07	BGS	D
Turbidity, Field	57		NTU	1	Field	1	02/03/2023 14:07	BGS	D
Volume in Water Column	195.35		Gallons		Field	1	02/03/2023 14:07	BGS	D
Water Level After Purge	49.22		Feet		Field	1	02/03/2023 14:07	BGS	D
Well Volumes Purged	1.05		Vol		Field	1	02/03/2023 14:07	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	148		mg/L	0.11	SW846 6010C	1	02/13/2023 12:38	A1S	J1
Iron, Total	2.4		mg/L	0.067	SW846 6010C	1	02/13/2023 12:38	A1S	J1
Magnesium, Total	24.1		mg/L	0.11	SW846 6010C	1	02/13/2023 12:38	A1S	J1
Manganese, Total	0.61		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:38	A1S	J1
Potassium, Total	1.7		mg/L	0.56	SW846 6010C	1	02/13/2023 12:38	A1S	J1
Sodium, Total	166		mg/L	0.56	SW846 6010C	1	02/13/2023 12:38	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 06:47	PDK	H

Results

Client Sample ID	FFMP02DW	Collected	02/03/2023 14:07
Lab Sample ID	3286221006	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.3%	62 – 133	02/11/2023 06:47	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/11/2023 06:47	
Dibromofluoromethane	1868-53-7	104%	78 – 116	02/11/2023 06:47	
Toluene-d8	2037-26-5	95.6%	76 – 127	02/11/2023 06:47	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	107		mg/L	5	SM2320B-2011	1	02/14/2023 16:21	NML	B
Alkalinity, Total	107	1	mg/L	5	SM2320B-2011	1	02/14/2023 16:21	NML	B
Ammonia-N	0.164	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 09:10	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	176		mg/L	2.0	EPA 300.0	2	02/04/2023 13:57	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 13:57	AXW	B
Nitrate-N	2.3		mg/L	1.0	EPA 300.0	2	02/04/2023 13:57	AXW	B
pH	7.90	4	pH_Units		S4500HB-11	1	02/14/2023 16:21	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 15:46	MXF	G
Specific Conductance	1780		umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	14.1		mg/L	2.0	EPA 300.0	2	02/04/2023 13:57	AXW	B
Total Dissolved Solids	1030		mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	0.83		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	40		NTU	0.30	SM2130B-2011	1	02/04/2023 00:37	NRB	B

Results

Client Sample ID	FFMP018W	Collected	02/03/2023 13:41
Lab Sample ID	3286221007	Lab Receipt	02/03/2023 16:48

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	25.08		Feet		Field	1	02/03/2023 13:40	BGS	D
Dissolved Oxygen	4.96		mg/L	0.01	Field	1	02/03/2023 13:40	BGS	D
Elev Top MW Casing above MSL	472.20		Feet		Field	1	02/03/2023 13:40	BGS	D
Flow Rate	3.43		gal/min		Field	1	02/03/2023 13:40	BGS	D
Ground Water Elevation	447.12		ft/MSL		Field	1	02/03/2023 13:40	BGS	D
Oxidation-Reduction Potential	304		mV		Field	1	02/03/2023 13:40	BGS	D
pH, Field (SM4500B)	5.31		pH_Units		Field	1	02/03/2023 13:40	BGS	D
Sample Depth	40.00		Feet		Field	1	02/03/2023 13:40	BGS	D
Specific Conductance, Field	773		umhos/cm	1	Field	1	02/03/2023 13:40	BGS	D
Temperature	15.18		Deg. C		Field	1	02/03/2023 13:40	BGS	D
Total Well Depth	51.46		Feet		Field	1	02/03/2023 13:40	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/03/2023 13:40	BGS	D
Volume in Water Column	17.15		Gallons		Field	1	02/03/2023 13:40	BGS	D
Water Level After Purge	27.31		Feet		Field	1	02/03/2023 13:40	BGS	D
Well Volumes Purged	3.20		Vol		Field	1	02/03/2023 13:40	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	32.9		mg/L	0.11	SW846 6010C	1	02/13/2023 12:40	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/13/2023 12:40	A1S	J1
Magnesium, Total	19.9		mg/L	0.11	SW846 6010C	1	02/13/2023 12:40	A1S	J1
Manganese, Total	0.21		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:40	A1S	J1
Potassium, Total	4.0		mg/L	0.56	SW846 6010C	1	02/13/2023 12:40	A1S	J1
Sodium, Total	39.3		mg/L	0.56	SW846 6010C	1	02/13/2023 12:40	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:09	PDK	H

Results

Client Sample ID	FFMP018W	Collected	02/03/2023 13:41
Lab Sample ID	3286221007	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.7%	62 – 133	02/11/2023 07:09	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/11/2023 07:09	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/11/2023 07:09	
Toluene-d8	2037-26-5	95.5%	76 – 127	02/11/2023 07:09	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	19		mg/L	5	SM2320B-2011	1	02/14/2023 16:36	NML	B
Alkalinity, Total	19	1	mg/L	5	SM2320B-2011	1	02/14/2023 16:36	NML	B
Ammonia-N	0.176	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 10:32	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	113		mg/L	2.0	EPA 300.0	2	02/04/2023 14:07	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 14:07	AXW	B
Nitrate-N	3.6		mg/L	1.0	EPA 300.0	2	02/04/2023 14:07	AXW	B
pH	6.41	4	pH_Units		S4500HB-11	1	02/14/2023 16:36	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 13:26	MXF	G
Specific Conductance	565		umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	34.5		mg/L	2.0	EPA 300.0	2	02/04/2023 14:07	AXW	B
Total Dissolved Solids	330		mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	0.76		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	0.90		NTU	0.30	SM2130B-2011	1	02/04/2023 00:37	NRB	B

Results

Client Sample ID	FFMP02SW	Collected	02/03/2023 14:08
Lab Sample ID	3286221008	Lab Receipt	02/03/2023 16:48

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	14.68		Feet		Field	1	02/03/2023 14:08	BGS	D
Dissolved Oxygen	7.11		mg/L	0.01	Field	1	02/03/2023 14:08	BGS	D
Elev Top MW Casing above MSL	509.90		Feet		Field	1	02/03/2023 14:08	BGS	D
Flow Rate	0.26		gal/min		Field	1	02/03/2023 14:08	BGS	D
Ground Water Elevation	495.22		ft/MSL		Field	1	02/03/2023 14:08	BGS	D
Oxidation-Reduction Potential	234		mV		Field	1	02/03/2023 14:08	BGS	D
pH, Field (SM4500B)	5.73		pH_Units		Field	1	02/03/2023 14:08	BGS	D
Sample Depth	18.00		Feet		Field	1	02/03/2023 14:08	BGS	D
Specific Conductance, Field	530		umhos/cm	1	Field	1	02/03/2023 14:08	BGS	D
Temperature	14.24		Deg. C		Field	1	02/03/2023 14:08	BGS	D
Total Well Depth	22.70		Feet		Field	1	02/03/2023 14:08	BGS	D
Turbidity, Field	60		NTU	1	Field	1	02/03/2023 14:08	BGS	D
Volume in Water Column	5.21		Gallons		Field	1	02/03/2023 14:08	BGS	D
Water Level After Purge	17.70		Feet		Field	1	02/03/2023 14:08	BGS	D
Well Volumes Purged	0.50		Vol		Field	1	02/03/2023 14:08	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	20.2		mg/L	0.11	SW846 6010C	1	02/13/2023 12:41	A1S	J1
Iron, Total	0.31		mg/L	0.067	SW846 6010C	1	02/13/2023 12:41	A1S	J1
Magnesium, Total	8.3		mg/L	0.11	SW846 6010C	1	02/13/2023 12:41	A1S	J1
Manganese, Total	0.016		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:41	A1S	J1
Potassium, Total	5.6		mg/L	0.56	SW846 6010C	1	02/13/2023 12:41	A1S	J1
Sodium, Total	37.9		mg/L	0.56	SW846 6010C	1	02/13/2023 12:41	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 07:32	PDK	H

Results

Client Sample ID	FFMP02SW	Collected	02/03/2023 14:08
Lab Sample ID	3286221008	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.2%	62 – 133	02/11/2023 07:32	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	02/11/2023 07:32	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/11/2023 07:32	
Toluene-d8	2037-26-5	95.1%	76 – 127	02/11/2023 07:32	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	22		mg/L	5	SM2320B-2011	1	02/14/2023 16:51	NML	B
Alkalinity, Total	22	1	mg/L	5	SM2320B-2011	1	02/14/2023 16:51	NML	B
Ammonia-N	1.70	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 10:46	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	49.8		mg/L	2.0	EPA 300.0	2	02/04/2023 14:18	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 14:18	AXW	B
Nitrate-N	8.8		mg/L	1.0	EPA 300.0	2	02/04/2023 14:18	AXW	B
pH	6.86	4	pH_Units		S4500HB-11	1	02/14/2023 16:51	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 20:43	MXF	G
Specific Conductance	382		umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	30.4		mg/L	2.0	EPA 300.0	2	02/04/2023 14:18	AXW	B
Total Dissolved Solids	200		mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	2.5		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	28		NTU	0.30	SM2130B-2011	1	02/04/2023 00:37	NRB	B

Results

Client Sample ID	FIELD BLANK	Collected	02/03/2023 14:40
Lab Sample ID	3286221009	Lab Receipt	02/03/2023 16:48

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	02/13/2023 12:42	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/13/2023 12:42	A1S	J1
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	02/13/2023 12:42	A1S	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	02/13/2023 12:42	A1S	J1
Potassium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	02/13/2023 12:42	A1S	J1
Sodium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	02/13/2023 12:42	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 01:52	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.2%	62 – 133	02/11/2023 01:52	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/11/2023 01:52	
Dibromofluoromethane	1868-53-7	102%	78 – 116	02/11/2023 01:52	
Toluene-d8	2037-26-5	95.5%	76 – 127	02/11/2023 01:52	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	02/14/2023 17:00	NML	B
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	02/14/2023 17:00	NML	B
Ammonia-N	0.106	2	mg/L	0.010	ASTM D6919-09	1	02/16/2023 11:00	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2023 13:58	KMS	A
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	02/04/2023 14:28	AXW	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/04/2023 14:28	AXW	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/04/2023 14:28	AXW	B
pH	5.57	4	pH_Units		S4500HB-11	1	02/14/2023 17:00	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 15:43	MXF	G

Results

Client Sample ID	FIELD BLANK	Collected	02/03/2023 14:40
Lab Sample ID	3286221009	Lab Receipt	02/03/2023 16:48

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Specific Conductance	ND	ND	umhos/cm	5	SW846 9050A	1	02/10/2023 12:50	JXL	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	02/04/2023 14:28	AXW	B
Total Dissolved Solids	ND	ND	mg/L	25	S2540C-11	1	02/07/2023 09:20	SMS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/04/2023 08:10	GMM	B

Results

Client Sample ID	TRIP BLANK	Collected	02/03/2023 16:48
Lab Sample ID	3286221010	Lab Receipt	02/03/2023 16:48

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/09/2023 16:01	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.3%	62 – 133	02/09/2023 16:01	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	02/09/2023 16:01	
Dibromofluoromethane	1868-53-7	97.3%	78 – 116	02/09/2023 16:01	
Toluene-d8	2037-26-5	92.8%	76 – 127	02/09/2023 16:01	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3286221001	FFMP034W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3286221002	FFMP033W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3286221003	FFMP031W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3286221004	FFMP002W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3286221005	FFMP032W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3286221006	FFMP02DW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3286221007	FFMP018W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3286221008	FFMP02SW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3286221009	FIELD BLANK	SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3286221010	TRIP BLANK	SW846 8260B	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3286221001	FFMP034W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948388
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	941958
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3286221002	FFMP033W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948388
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	941958
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3286221003	FFMP031W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948388
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	941958
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3286221004	FFMP002W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948388
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	941958
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3286221005	FFMP032W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948388
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	941958
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3286221006	FFMP02DW	N/A	N/A	N/A		Field	943695
		SW846 3015A	944320	02/09/2023 21:50	ANN	SW846 6010C	947071
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948388
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	941958
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3286221007	FFMP018W	N/A	N/A	N/A		Field	943695
		SW846 3015A	944320	02/09/2023 21:50	ANN	SW846 6010C	947071
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948390
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	941958
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3286221008	FFMP02SW	N/A	N/A	N/A		Field	943695
		SW846 3015A	944320	02/09/2023 21:50	ANN	SW846 6010C	947071
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948390
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	941958
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3286221009	FIELD BLANK	SW846 3015A	944320	02/09/2023 21:50	ANN	SW846 6010C	947071
		N/A	N/A	N/A		SW846 8260B	946463
		N/A	N/A	N/A		ASTM D6919-09	948390
		N/A	N/A	N/A		EPA 300.0	942067
		N/A	N/A	N/A		EPA 410.4	944066
		N/A	N/A	N/A		S2540C-11	942859
		N/A	N/A	N/A		S4500HB-11	947765
		N/A	N/A	N/A		SM2130B-2011	942062
		N/A	N/A	N/A		SM2320B-2011	947765
		N/A	N/A	N/A		SW846 9050A	946066
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3286221010	TRIP BLANK	N/A	N/A	N/A		SW846 8260B	945302

ALS Environmental
34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5541 • Fax: 717-944-1430 • www.alsglobal.com
301 Fulling Mill Road • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Gener

3286221
Logged By: SLS
PM: SJB

221 | 1 of 1

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

Client Name: Lancaster County Solid Waste MA
Address: 1299 Harrisburg Pike, P.O. Box 4424
Lancaster, PA 17604
Contact: Dan Brown
Phone#: (717) 735-0193
Project Name/#: Frey Farm Quarterly (GWMP)
Bill To: Lancaster County Solid Waste MA
TAT [X] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.
Date Required: _____ **Approved By:** _____
Email? [X] -Y dbrown@LCSWMA.com
Fax? [X] -Y No.: (717) 397-9973

Container Type	AG	AW	CG	----	----	PL	PL		
Container Size	40 ml	125 ml	40 ml	----	----	250 ml	125 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	----	----	H2SO4	HNO3	None	None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	VOC - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	pH, Cl, SpC, F, SO4, TDS, NO3, Turb.	Alkalinity Bicarbonate	
					Enter Number of Containers Per Sample or Field Results Below.									
1. FFMP034W	02/03/23	1021	G	GW	2	1	2	X	X	1	R	1	1	
2. FFMP033W	02/03/23	1033	G	GW	2	1	2	X	X	1	R	1	1	
3. FFMP031W	02/03/23	1215	G	GW	2	1	2	X	X	1	R	1	1	
4. FFMP002W	02/03/23	1143	G	GW	2	1	2	X	X	1	R	1	1	
5. FFMP032W	02/03/23	1243	G	GW	2	1	2	X	X	1	R	1	1	
6. FFMP02DW	02/03/23	1407	G	GW	2	1	2	X	X	1	R	1	1	
7. FFMP018W	02/03/23	1341	G	GW	2	1	2	X	X	1	R	1	1	
8. FFMP02SW	02/03/23	1408	G	GW	2	1	2	X	X	1	R	1	1	
9. Field Blank	02/03/23	1440	G	DI	2	1	2			1	R	1	1	
10. Trip Blank	02/03/23	1640	G	DI			2				R	1	1	

DPB 2/3/23

Project Comments:

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2.2.23	1640	2 [signature]	2.3.23	1648
3			4		
5			6		
7			8		
9			10		

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

ation (completed by Receiving Lab)

Cooler Temp: 7 Therm ID: 570
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			

Temp By: KB | WO Temp (°C): 7.0 | Therm ID: 570

	DPB
Receipt Info Completed By:	
Cooler Custody Seal Intact	Y N NA
Sample Custody Seal Intact	Y N NA
Received on Ice	Y N NA
Cooler & Samples Intact	N
Correct Containers Provided	N
Sample Label/COC Agree	N
Adequate Sample Volumes	N
CR6 Samples Filtered	Y N NA
OP Samples Filtered	Y N NA
VOA Headspace Present	Y N NA
Voa Trip Blank	Y N NA
NJ≤ 4 Days?	Y
Rad Screen (uCi)	
Courier/Tracking #:	
SDWA Compliance	Y
PWSID	
WV Containers 0-6°C	Y N NA

ALS Field Services: ☐Pickup ☐Labor
☐Composite_Sampling ☐Rental_Equipment
☐Other: _____

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type-

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

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

Analytical Results Report For **Lancaster County Solid Waste Authority**

Project 1ST QTR 2023 GWMP-FORM 19Q
Workorder 3285699
Report ID 225508 on 2/17/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 01, 2023.

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 Susan Scherer (Project Coordinator) at (717) 944-5541.

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

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jordan Gallagher - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3285699001	FFMP015W	Ground Water	02/01/2023 10:36	02/01/2023 14:50	BGS	Analytical Laboratory Service
3285699002	FFMP03AW	Ground Water	02/01/2023 11:57	02/01/2023 14:50	BGS	Analytical Laboratory Service
3285699003	FFMP30RW	Ground Water	02/01/2023 13:20	02/01/2023 14:50	BGS	Analytical Laboratory Service
3285699004	FFMP04AW	Ground Water	02/01/2023 13:28	02/01/2023 14:50	BGS	Analytical Laboratory Service

Reference

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

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) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
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
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
E	Result reported exceeds instrument calibration
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	Method ASTMD6919-09 is equivalent to Method ASTMD6919-17.
3	This sample was reran out of hold within the instrument's calibration range, for the analyte Nitrate-N, and confirms the initial in-hold reported result.
4	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.

Detected Results Summary

Client Sample ID	FFMP015W	Collected	02/01/2023 10:36
Lab Sample ID	3285699001	Lab Receipt	02/01/2023 14:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	63.97	Feet		Field	#
Dissolved Oxygen	7.95	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	576.40	Feet		Field	#
Flow Rate	3.00	gal/min		Field	#
Ground Water Elevation	512.43	ft/MSL		Field	#
Oxidation-Reduction Potential	284	mV		Field	#
pH, Field (SM4500B)	5.62	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	829	umhos/cm	1	Field	#
Temperature	13.57	Deg. C		Field	#
Total Well Depth	149.90	Feet		Field	#
Volume in Water Column	126.32	Gallons		Field	#
Water Level After Purge	100.64	Feet		Field	#
Well Volumes Purged	1.43	Vol		Field	#
METALS					
Calcium, Total	38.4	mg/L	0.11	SW846 6010C	#
Magnesium, Total	31.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.018	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	22.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	24	mg/L	5	SM2320B-2011	#
Alkalinity, Total	24	mg/L	5	SM2320B-2011	#
Ammonia-N	0.214	mg/L	0.100	ASTM D6919-09	#
Chloride	43.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	44.5	mg/L	1.0	EPA 300.0	#
pH	7.22	pH_Units		S4500HB-11	#
Specific Conductance	615	umhos/cm	5	SW846 9050A	#
Sulfate	23.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	338	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.3	mg/L	0.50	SW846 9060A	#

Detected Results Summary

Client Sample ID	FFMP03AW	Collected	02/01/2023 11:57
Lab Sample ID	3285699002	Lab Receipt	02/01/2023 14:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	51.64	Feet		Field	#
Dissolved Oxygen	1.35	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	590.90	Feet		Field	#
Flow Rate	3.10	gal/min		Field	#
Ground Water Elevation	539.26	ft/MSL		Field	#
Oxidation-Reduction Potential	348	mV		Field	#
pH, Field (SM4500B)	5.10	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	482	umhos/cm	1	Field	#
Temperature	13.80	Deg. C		Field	#
Total Well Depth	148.40	Feet		Field	#
Volume in Water Column	142.24	Gallons		Field	#
Water Level After Purge	86.11	Feet		Field	#
Well Volumes Purged	1.31	Vol		Field	#
METALS					
Calcium, Total	21.4	mg/L	0.11	SW846 6010C	#
Magnesium, Total	16.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.38	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	14.0	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	11	mg/L	5	SM2320B-2011	#
Alkalinity, Total	11	mg/L	5	SM2320B-2011	#
Ammonia-N	0.256	mg/L	0.100	ASTM D6919-09	#
Chloride	35.4	mg/L	2.0	EPA 300.0	#
Nitrate-N	22.5	mg/L	1.0	EPA 300.0	#
pH	6.94	pH_Units		S4500HB-11	#
Specific Conductance	357	umhos/cm	5	SW846 9050A	#
Sulfate	2.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	184	mg/L	25	S2540C-11	#

Detected Results Summary

Client Sample ID	FFMP30RW	Collected	02/01/2023 13:20
Lab Sample ID	3285699003	Lab Receipt	02/01/2023 14:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	33.21	Feet		Field	#
Dissolved Oxygen	1.33	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	562.30	Feet		Field	#
Flow Rate	2.55	gal/min		Field	#
Ground Water Elevation	529.09	ft/MSL		Field	#
Oxidation-Reduction Potential	301	mV		Field	#
pH, Field (SM4500B)	5.36	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	1123	umhos/cm	1	Field	#
Temperature	13.64	Deg. C		Field	#
Total Well Depth	94.20	Feet		Field	#
Volume in Water Column	89.66	Gallons		Field	#
Water Level After Purge	45.23	Feet		Field	#
Well Volumes Purged	1.71	Vol		Field	#
METALS					
Calcium, Total	34.4	mg/L	0.11	SW846 6010C	#
Iron, Total	0.16	mg/L	0.067	SW846 6010C	#
Magnesium, Total	16.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	1.8	mg/L	0.0056	SW846 6010C	#
Potassium, Total	4.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	75.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	28	mg/L	5	SM2320B-2011	#
Alkalinity, Total	28	mg/L	5	SM2320B-2011	#
Ammonia-N	0.414	mg/L	0.100	ASTM D6919-09	#
Chloride	183	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.6	mg/L	1.0	EPA 300.0	#
pH	7.04	pH_Units		S4500HB-11	#
Specific Conductance	764	umhos/cm	5	SW846 9050A	#
Sulfate	23.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	408	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.61	mg/L	0.50	SW846 9060A	#
Turbidity	1.8	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP04AW	Collected	02/01/2023 13:28
Lab Sample ID	3285699004	Lab Receipt	02/01/2023 14:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	33.43	Feet		Field	#
Elev Top MW Casing above MSL	560.72	Feet		Field	#
Flow Rate	4.54	gal/min		Field	#
Ground Water Elevation	527.29	ft/MSL		Field	#
Oxidation-Reduction Potential	100	mV		Field	#
pH, Field (SM4500B)	6.93	pH_Units		Field	#
Sample Depth	146.00	Feet		Field	#
Specific Conductance, Field	1998	umhos/cm	1	Field	#
Temperature	13.55	Deg. C		Field	#
Total Well Depth	148.50	Feet		Field	#
Volume in Water Column	169.15	Gallons		Field	#
Water Level After Purge	83.51	Feet		Field	#
Well Volumes Purged	1.61	Vol		Field	#
METALS					
Calcium, Total	161	mg/L	0.11	SW846 6010C	#
Magnesium, Total	25.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.34	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	87.8	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	174	mg/L	5	SM2320B-2011	#
Alkalinity, Total	181	mg/L	5	SM2320B-2011	#
Ammonia-N	0.419	mg/L	0.100	ASTM D6919-09	#
Chloride	315	mg/L	5.0	EPA 300.0	#
pH	8.20	pH_Units		S4500HB-11	#
Specific Conductance	1450	umhos/cm	5	SW846 9050A	#
Sulfate	49.3	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	842	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.65	mg/L	0.50	SW846 9060A	#
Turbidity	0.50	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	FFMP015W	Collected	02/01/2023 10:36
Lab Sample ID	3285699001	Lab Receipt	02/01/2023 14:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	63.97		Feet		Field	1	02/01/2023 10:36	BGS	D
Dissolved Oxygen	7.95		mg/L	0.01	Field	1	02/01/2023 10:36	BGS	D
Elev Top MW Casing above MSL	576.40		Feet		Field	1	02/01/2023 10:36	BGS	D
Flow Rate	3.00		gal/min		Field	1	02/01/2023 10:36	BGS	D
Ground Water Elevation	512.43		ft/MSL		Field	1	02/01/2023 10:36	BGS	D
Oxidation-Reduction Potential	284		mV		Field	1	02/01/2023 10:36	BGS	D
pH, Field (SM4500B)	5.62		pH_Units		Field	1	02/01/2023 10:36	BGS	D
Sample Depth	135.00		Feet		Field	1	02/01/2023 10:36	BGS	D
Specific Conductance, Field	829		umhos/cm	1	Field	1	02/01/2023 10:36	BGS	D
Temperature	13.57		Deg. C		Field	1	02/01/2023 10:36	BGS	D
Total Well Depth	149.90		Feet		Field	1	02/01/2023 10:36	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/01/2023 10:36	BGS	D
Volume in Water Column	126.32		Gallons		Field	1	02/01/2023 10:36	BGS	D
Water Level After Purge	100.64		Feet		Field	1	02/01/2023 10:36	BGS	D
Well Volumes Purged	1.43		Vol		Field	1	02/01/2023 10:36	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	38.4		mg/L	0.11	SW846 6010C	1	02/02/2023 15:13	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/02/2023 15:13	A1S	J1
Magnesium, Total	31.6		mg/L	0.11	SW846 6010C	1	02/02/2023 15:13	A1S	J1
Manganese, Total	0.018		mg/L	0.0056	SW846 6010C	1	02/02/2023 15:13	A1S	J1
Potassium, Total	2.5		mg/L	0.56	SW846 6010C	1	02/02/2023 15:13	A1S	J1
Sodium, Total	22.5		mg/L	0.56	SW846 6010C	1	02/02/2023 15:13	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:19	PDK	H

Results

Client Sample ID	FFMP015W	Collected	02/01/2023 10:36
Lab Sample ID	3285699001	Lab Receipt	02/01/2023 14:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.7%	62 – 133	02/10/2023 04:19	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	02/10/2023 04:19	
Dibromofluoromethane	1868-53-7	95.2%	78 – 116	02/10/2023 04:19	
Toluene-d8	2037-26-5	92.9%	76 – 127	02/10/2023 04:19	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	24		mg/L	5	SM2320B-2011	1	02/03/2023 03:47	NML	B
Alkalinity, Total	24	1	mg/L	5	SM2320B-2011	1	02/03/2023 03:47	NML	B
Ammonia-N	0.214	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 18:17	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	43.9		mg/L	2.0	EPA 300.0	2	02/02/2023 12:14	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/02/2023 12:14	J1W	B
Nitrate-N	44.5	E,3	mg/L	1.0	EPA 300.0	2	02/02/2023 12:14	J1W	B
pH	7.22	4	pH_Units		S4500HB-11	1	02/03/2023 03:47	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 14:26	MXF	G
Specific Conductance	615		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	23.1		mg/L	2.0	EPA 300.0	2	02/02/2023 12:14	J1W	B
Total Dissolved Solids	338		mg/L	25	S2540C-11	1	02/02/2023 08:36	SMS	B
Total Organic Carbon (TOC)	1.3		mg/L	0.50	SW846 9060A	1	02/02/2023 19:58	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/02/2023 00:25	NRB	B

Results

Client Sample ID	FFMP03AW	Collected	02/01/2023 11:57
Lab Sample ID	3285699002	Lab Receipt	02/01/2023 14:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	51.64		Feet		Field	1	02/01/2023 14:40	BGS	D
Dissolved Oxygen	1.35		mg/L	0.01	Field	1	02/01/2023 14:40	BGS	D
Elev Top MW Casing above MSL	590.90		Feet		Field	1	02/01/2023 14:40	BGS	D
Flow Rate	3.10		gal/min		Field	1	02/01/2023 14:40	BGS	D
Ground Water Elevation	539.26		ft/MSL		Field	1	02/01/2023 14:40	BGS	D
Oxidation-Reduction Potential	348		mV		Field	1	02/01/2023 14:40	BGS	D
pH, Field (SM4500B)	5.10		pH_Units		Field	1	02/01/2023 14:40	BGS	D
Sample Depth	130.00		Feet		Field	1	02/01/2023 14:40	BGS	D
Specific Conductance, Field	482		umhos/cm	1	Field	1	02/01/2023 14:40	BGS	D
Temperature	13.80		Deg. C		Field	1	02/01/2023 14:40	BGS	D
Total Well Depth	148.40		Feet		Field	1	02/01/2023 14:40	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/01/2023 14:40	BGS	D
Volume in Water Column	142.24		Gallons		Field	1	02/01/2023 14:40	BGS	D
Water Level After Purge	86.11		Feet		Field	1	02/01/2023 14:40	BGS	D
Well Volumes Purged	1.31		Vol		Field	1	02/01/2023 14:40	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	21.4		mg/L	0.11	SW846 6010C	1	02/02/2023 15:14	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/02/2023 15:14	A1S	J1
Magnesium, Total	16.6		mg/L	0.11	SW846 6010C	1	02/02/2023 15:14	A1S	J1
Manganese, Total	0.38		mg/L	0.0056	SW846 6010C	1	02/02/2023 15:14	A1S	J1
Potassium, Total	1.5		mg/L	0.56	SW846 6010C	1	02/02/2023 15:14	A1S	J1
Sodium, Total	14.0		mg/L	0.56	SW846 6010C	1	02/02/2023 15:14	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 04:42	PDK	H

Results

Client Sample ID	FFMP03AW	Collected	02/01/2023 11:57
Lab Sample ID	3285699002	Lab Receipt	02/01/2023 14:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.5%	62 – 133	02/10/2023 04:42	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	02/10/2023 04:42	
Dibromofluoromethane	1868-53-7	98%	78 – 116	02/10/2023 04:42	
Toluene-d8	2037-26-5	93.7%	76 – 127	02/10/2023 04:42	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	11		mg/L	5	SM2320B-2011	1	02/03/2023 04:01	NML	B
Alkalinity, Total	11	1	mg/L	5	SM2320B-2011	1	02/03/2023 04:01	NML	B
Ammonia-N	0.256	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 18:58	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/03/2023 12:49	KMS	A
Chloride	35.4		mg/L	2.0	EPA 300.0	2	02/02/2023 12:24	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/02/2023 12:24	J1W	B
Nitrate-N	22.5	E,3	mg/L	1.0	EPA 300.0	2	02/02/2023 12:24	J1W	B
pH	6.94	4	pH_Units		S4500HB-11	1	02/03/2023 04:01	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 15:00	MXF	G
Specific Conductance	357		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	2.8		mg/L	2.0	EPA 300.0	2	02/02/2023 12:24	J1W	B
Total Dissolved Solids	184		mg/L	25	S2540C-11	1	02/02/2023 08:36	SMS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/02/2023 19:58	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/02/2023 00:25	NRB	B

Results

Client Sample ID	FFMP30RW	Collected	02/01/2023 13:20
Lab Sample ID	3285699003	Lab Receipt	02/01/2023 14:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	33.21		Feet		Field	1	02/01/2023 13:20	BGS	D
Dissolved Oxygen	1.33		mg/L	0.01	Field	1	02/01/2023 13:20	BGS	D
Elev Top MW Casing above MSL	562.30		Feet		Field	1	02/01/2023 13:20	BGS	D
Flow Rate	2.55		gal/min		Field	1	02/01/2023 13:20	BGS	D
Ground Water Elevation	529.09		ft/MSL		Field	1	02/01/2023 13:20	BGS	D
Oxidation-Reduction Potential	301		mV		Field	1	02/01/2023 13:20	BGS	D
pH, Field (SM4500B)	5.36		pH_Units		Field	1	02/01/2023 13:20	BGS	D
Sample Depth	85.00		Feet		Field	1	02/01/2023 13:20	BGS	D
Specific Conductance, Field	1123		umhos/cm	1	Field	1	02/01/2023 13:20	BGS	D
Temperature	13.64		Deg. C		Field	1	02/01/2023 13:20	BGS	D
Total Well Depth	94.20		Feet		Field	1	02/01/2023 13:20	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/01/2023 13:20	BGS	D
Volume in Water Column	89.66		Gallons		Field	1	02/01/2023 13:20	BGS	D
Water Level After Purge	45.23		Feet		Field	1	02/01/2023 13:20	BGS	D
Well Volumes Purged	1.71		Vol		Field	1	02/01/2023 13:20	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	34.4		mg/L	0.11	SW846 6010C	1	02/02/2023 15:15	A1S	J1
Iron, Total	0.16		mg/L	0.067	SW846 6010C	1	02/02/2023 15:15	A1S	J1
Magnesium, Total	16.3		mg/L	0.11	SW846 6010C	1	02/02/2023 15:15	A1S	J1
Manganese, Total	1.8		mg/L	0.0056	SW846 6010C	1	02/02/2023 15:15	A1S	J1
Potassium, Total	4.3		mg/L	0.56	SW846 6010C	1	02/02/2023 15:15	A1S	J1
Sodium, Total	75.9		mg/L	0.56	SW846 6010C	1	02/02/2023 15:15	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:04	PDK	H

Results

Client Sample ID	FFMP30RW	Collected	02/01/2023 13:20
Lab Sample ID	3285699003	Lab Receipt	02/01/2023 14:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.4%	62 – 133	02/10/2023 05:04	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/10/2023 05:04	
Dibromofluoromethane	1868-53-7	96.6%	78 – 116	02/10/2023 05:04	
Toluene-d8	2037-26-5	95.7%	76 – 127	02/10/2023 05:04	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	28		mg/L	5	SM2320B-2011	1	02/10/2023 10:57	NML	B
Alkalinity, Total	28	1	mg/L	5	SM2320B-2011	1	02/10/2023 10:57	NML	B
Ammonia-N	0.414	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 19:12	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	183		mg/L	2.0	EPA 300.0	2	02/02/2023 13:06	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/02/2023 13:06	J1W	B
Nitrate-N	5.6		mg/L	1.0	EPA 300.0	2	02/02/2023 13:06	J1W	B
pH	7.04	4	pH_Units		S4500HB-11	1	02/03/2023 04:55	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 14:10	MXF	G
Specific Conductance	764		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	23.5		mg/L	2.0	EPA 300.0	2	02/02/2023 13:06	J1W	B
Total Dissolved Solids	408		mg/L	25	S2540C-11	1	02/02/2023 08:36	SMS	B
Total Organic Carbon (TOC)	0.61		mg/L	0.50	SW846 9060A	1	02/02/2023 19:58	PAG	E
Turbidity	1.8		NTU	0.30	SM2130B-2011	1	02/02/2023 00:25	NRB	B

Results

Client Sample ID	FFMP04AW	Collected	02/01/2023 13:28
Lab Sample ID	3285699004	Lab Receipt	02/01/2023 14:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	33.43		Feet		Field	1	02/01/2023 13:28	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	02/01/2023 13:28	BGS	D
Elev Top MW Casing above MSL	560.72		Feet		Field	1	02/01/2023 13:28	BGS	D
Flow Rate	4.54		gal/min		Field	1	02/01/2023 13:28	BGS	D
Ground Water Elevation	527.29		ft/MSL		Field	1	02/01/2023 13:28	BGS	D
Oxidation-Reduction Potential	100		mV		Field	1	02/01/2023 13:28	BGS	D
pH, Field (SM4500B)	6.93		pH_Units		Field	1	02/01/2023 13:28	BGS	D
Sample Depth	146.00		Feet		Field	1	02/01/2023 13:28	BGS	D
Specific Conductance, Field	1998		umhos/cm	1	Field	1	02/01/2023 13:28	BGS	D
Temperature	13.55		Deg. C		Field	1	02/01/2023 13:28	BGS	D
Total Well Depth	148.50		Feet		Field	1	02/01/2023 13:28	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/01/2023 13:28	BGS	D
Volume in Water Column	169.15		Gallons		Field	1	02/01/2023 13:28	BGS	D
Water Level After Purge	83.51		Feet		Field	1	02/01/2023 13:28	BGS	D
Well Volumes Purged	1.61		Vol		Field	1	02/01/2023 13:28	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	161		mg/L	0.11	SW846 6010C	1	02/03/2023 18:20	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/03/2023 18:20	A1S	J1
Magnesium, Total	25.9		mg/L	0.11	SW846 6010C	1	02/03/2023 18:20	A1S	J1
Manganese, Total	0.34		mg/L	0.0056	SW846 6010C	1	02/03/2023 18:20	A1S	J1
Potassium, Total	2.2		mg/L	0.56	SW846 6010C	1	02/03/2023 18:20	A1S	J1
Sodium, Total	87.8		mg/L	0.56	SW846 6010C	1	02/03/2023 18:20	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 05:27	PDK	H

Results

Client Sample ID	FFMP04AW	Collected	02/01/2023 13:28
Lab Sample ID	3285699004	Lab Receipt	02/01/2023 14:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.9%	62 – 133	02/10/2023 05:27	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	02/10/2023 05:27	
Dibromofluoromethane	1868-53-7	95.5%	78 – 116	02/10/2023 05:27	
Toluene-d8	2037-26-5	92%	76 – 127	02/10/2023 05:27	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	174		mg/L	5	SM2320B-2011	1	02/10/2023 11:10	NML	B
Alkalinity, Total	181	1	mg/L	5	SM2320B-2011	1	02/10/2023 11:10	NML	B
Ammonia-N	0.419	2	mg/L	0.100	ASTM D6919-09	10	02/16/2023 19:26	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	315		mg/L	5.0	EPA 300.0	5	02/02/2023 13:17	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	02/02/2023 13:17	J1W	B
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	02/02/2023 13:17	J1W	B
pH	8.20	4	pH_Units		S4500HB-11	1	02/03/2023 05:07	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 14:56	MXF	G
Specific Conductance	1450		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	49.3		mg/L	5.0	EPA 300.0	5	02/02/2023 13:17	J1W	B
Total Dissolved Solids	842		mg/L	25	S2540C-11	1	02/02/2023 08:36	SMS	B
Total Organic Carbon (TOC)	0.65		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	0.50		NTU	0.30	SM2130B-2011	1	02/02/2023 00:25	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3285699001	FFMP015W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3285699002	FFMP03AW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3285699003	FFMP30RW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3285699004	FFMP04AW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3285699001	FFMP015W	N/A	N/A	N/A		Field	943695
		SW846 3015A	940895	02/02/2023 11:55	JSE	SW846 6010C	940973
		N/A	N/A	N/A		SW846 8260B	945659
		N/A	N/A	N/A		ASTM D6919-09	948385
		N/A	N/A	N/A		EPA 300.0	940866
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	940667
		N/A	N/A	N/A		S4500HB-11	940764
		N/A	N/A	N/A		SM2130B-2011	940658
		N/A	N/A	N/A		SM2320B-2011	940764
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	940914
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3285699002	FFMP03AW	N/A	N/A	N/A		Field	943695
		SW846 3015A	940895	02/02/2023 11:55	JSE	SW846 6010C	940973
		N/A	N/A	N/A		SW846 8260B	945659
		N/A	N/A	N/A		ASTM D6919-09	948385
		N/A	N/A	N/A		EPA 300.0	940866
		N/A	N/A	N/A		EPA 410.4	941164
		N/A	N/A	N/A		S2540C-11	940667
		N/A	N/A	N/A		S4500HB-11	940764
		N/A	N/A	N/A		SM2130B-2011	940658
		N/A	N/A	N/A		SM2320B-2011	940764
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	940914
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3285699003	FFMP30RW	N/A	N/A	N/A		Field	943695
		SW846 3015A	940895	02/02/2023 11:55	JSE	SW846 6010C	940973
		N/A	N/A	N/A		SW846 8260B	945659
		N/A	N/A	N/A		ASTM D6919-09	948385
		N/A	N/A	N/A		EPA 300.0	940866
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	940667
		N/A	N/A	N/A		S4500HB-11	940764
		N/A	N/A	N/A		SM2130B-2011	940658
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	940914
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3285699004	FFMP04AW	N/A	N/A	N/A		Field	943695
		SW846 3015A	941022	02/02/2023 18:24	ANN	SW846 6010C	941519
		N/A	N/A	N/A		SW846 8260B	945659
		N/A	N/A	N/A		ASTM D6919-09	948385
		N/A	N/A	N/A		EPA 300.0	940866
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	940667
		N/A	N/A	N/A		S4500HB-11	940764
		N/A	N/A	N/A		SM2130B-2011	940658
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	943241
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115

2/17/2023 3:30 PM

ALS Environmental
34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5541 • Fax: 717-944-1430 • www.alsglobal.com
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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 3285699
Logged By: MJE
PM: SJB
1 of 1

ALS Qu

Client Name: Lancaster County Solid Waste MA
Address: 1299 Harrisburg Pike, P.O. Box 4424
Lancaster, PA 17604
Contact: Dan Brown
Phone#: (717) 735-0193
Project Name/#: Frey Farm Quarterly (GWMP)
Bill To: Lancaster County Solid Waste MA

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

Container Type	AG	AW	CG	----	----	PL	PL	PL	PL	
Container Size	40 ml	125 ml	40 ml	----	----	250 ml	125 ml	500 ml	500 ml	
Preservative	HCl	H2SO4	HCl	----	----	H2SO4	HNO3	None	None	

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	VOC - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	pH, Cl, SpC, F, SO4, TDS, NO3, Turb.	Alkalinity Bicarbonate	
					Enter Number of Containers Per Sample or Field Results Below.									
1. FFMP015W	02/01/23	1036	G	GW	2	1	2	X	X	1	1	1	1	
2. FFMP03AW	02/01/23	1157	G	GW	2	1	2	X	X	1	1	1	1	
3. FFMP30RW	02/01/23	1320	G	GW	2	1	2	X	X	1	1	1	1	
4. FFMP04AW	02/01/23	1328	G	GW	2	1	2	X	X	1	1	1	1	
5														
6														
7														
8														
9														
10														

Receipt Information (completed by Receiving Lab)

Cooler Temp: 9 Therm ID: 570
No. of Coolers: _____ Y N Initial
Custody Seals Present? [ ] [ ]

Temp By: KSB | WO Temp (°C): 9. | Therm ID: 570

Receipt Info Completed By: AWF
Cooler Custody Seal Intact Y N NA
Sample Custody Seal Intact Y N NA
Received on Ice Y N NA
Cooler & Samples Intact Y N
Correct Containers Provided Y N
Sample Label/COC Agree Y N
Adequate Sample Volumes Y N
CR6 Samples Filtered Y N NA
OP Samples Filtered Y N NA
VOA Headspace Present Y N NA
Voa Trip Blank Y N NA
NJ≤ 4 Days? Y N
Rad Screen (uCi) _____
Courier/Tracking #: _____

SDWA Compliance Y N
PWSID
WV Containers 0-6°C Y N NA
NONE= UNP

ALS Field Services: ☐Pickup ☐Labor
☐Composite_Sampling ☐Rental_Equipment
☐Other: _____

Project Comments:

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature]	2/1/23	1450	2 [signature]	2.1.23	1450
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ]
PWSID #
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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

Rev 8/04

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

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

Analytical Results Report For **Lancaster County Solid Waste Authority**

Project 1ST QTR 2023 GWMP-FORM 19Q
Workorder 3285977
Report ID 225523 on 2/17/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 02, 2023.

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 Susan Scherer (Project Coordinator) at (717) 944-5541.

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

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jordan Gallagher - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3285977001	FFMP017W	Ground Water	02/02/2023 09:58	02/02/2023 16:05	BGS	Analytical Laboratory Service
3285977002	FFMP019W	Ground Water	02/02/2023 11:15	02/02/2023 16:05	BGS	Analytical Laboratory Service
3285977003	FFMP029W	Ground Water	02/02/2023 11:50	02/02/2023 16:05	BGS	Analytical Laboratory Service
3285977004	FFMP035W	Ground Water	02/02/2023 12:59	02/02/2023 16:05	BGS	Analytical Laboratory Service
3285977005	FFMP036W	Ground Water	02/02/2023 13:31	02/02/2023 16:05	BGS	Analytical Laboratory Service
3285977006	FFMP005W	Ground Water	02/02/2023 14:22	02/02/2023 16:05	BGS	Analytical Laboratory Service
3285977007	FFMP26RW	Ground Water	02/02/2023 14:35	02/02/2023 16:05	BGS	Analytical Laboratory Service

Reference

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

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) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
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
#	Please reference the result in the Results Section for analyte-level flags.

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	Method ASTMD6919-09 is equivalent to Method ASTMD6919-17.
3	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.

Detected Results Summary

Client Sample ID	FFMP017W	Collected	02/02/2023 09:58
Lab Sample ID	3285977001	Lab Receipt	02/02/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	38.25	Feet		Field	#
Dissolved Oxygen	0.03	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	480.70	Feet		Field	#
Flow Rate	2.56	gal/min		Field	#
Ground Water Elevation	442.45	ft/MSL		Field	#
Oxidation-Reduction Potential	171	mV		Field	#
pH, Field (SM4500B)	6.01	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	1837	umhos/cm	1	Field	#
Temperature	12.80	Deg. C		Field	#
Total Well Depth	150.50	Feet		Field	#
Volume in Water Column	165.01	Gallons		Field	#
Water Level After Purge	44.12	Feet		Field	#
Well Volumes Purged	0.93	Vol		Field	#
METALS					
Calcium, Total	99.8	mg/L	0.11	SW846 6010C	#
Magnesium, Total	40.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	1.5	mg/L	0.0056	SW846 6010C	#
Potassium, Total	8.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	96.4	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	129	mg/L	5	SM2320B-2011	#
Alkalinity, Total	129	mg/L	5	SM2320B-2011	#
Ammonia-N	0.708	mg/L	0.100	ASTM D6919-09	#
Chloride	271	mg/L	5.0	EPA 300.0	#
Nitrate-N	3.9	mg/L	2.5	EPA 300.0	#
pH	8.24	pH_Units		S4500HB-11	#
Specific Conductance	1290	umhos/cm	5	SW846 9050A	#
Sulfate	77.7	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	710	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	2.8	mg/L	0.50	SW846 9060A	#

Detected Results Summary

Client Sample ID	FFMP019W	Collected	02/02/2023 11:15
Lab Sample ID	3285977002	Lab Receipt	02/02/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	26.72	Feet		Field	#
Dissolved Oxygen	0.12	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	471.95	Feet		Field	#
Flow Rate	3.81	gal/min		Field	#
Ground Water Elevation	445.23	ft/MSL		Field	#
Oxidation-Reduction Potential	132	mV		Field	#
pH, Field (SM4500B)	6.59	pH_Units		Field	#
Sample Depth	49.00	Feet		Field	#
Specific Conductance, Field	651	umhos/cm	1	Field	#
Temperature	13.89	Deg. C		Field	#
Total Well Depth	132.79	Feet		Field	#
Volume in Water Column	68.95	Gallons		Field	#
Water Level After Purge	37.95	Feet		Field	#
Well Volumes Purged	2.21	Vol		Field	#
METALS					
Calcium, Total	68.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	6.8	mg/L	0.11	SW846 6010C	#
Potassium, Total	1.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	12.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	63	mg/L	5	SM2320B-2011	#
Alkalinity, Total	63	mg/L	5	SM2320B-2011	#
Ammonia-N	0.211	mg/L	0.100	ASTM D6919-09	#
Chloride	91.0	mg/L	2.0	EPA 300.0	#
pH	8.04	pH_Units		S4500HB-11	#
Specific Conductance	472	umhos/cm	5	SW846 9050A	#
Sulfate	15.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	302	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.1	mg/L	0.50	SW846 9060A	#

Detected Results Summary

Client Sample ID	FFMP029W	Collected	02/02/2023 11:50
Lab Sample ID	3285977003	Lab Receipt	02/02/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	37.03	Feet		Field	#
Dissolved Oxygen	4.92	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.30	Feet		Field	#
Flow Rate	2.93	gal/min		Field	#
Ground Water Elevation	440.27	ft/MSL		Field	#
Oxidation-Reduction Potential	273	mV		Field	#
pH, Field (SM4500B)	5.16	pH_Units		Field	#
Sample Depth	55.00	Feet		Field	#
Specific Conductance, Field	414	umhos/cm	1	Field	#
Temperature	14.62	Deg. C		Field	#
Total Well Depth	60.50	Feet		Field	#
Volume in Water Column	34.50	Gallons		Field	#
Water Level After Purge	44.47	Feet		Field	#
Well Volumes Purged	3.82	Vol		Field	#
METALS					
Calcium, Total	13.8	mg/L	0.11	SW846 6010C	#
Magnesium, Total	10.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.036	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	23.4	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	9	mg/L	5	SM2320B-2011	#
Alkalinity, Total	9	mg/L	5	SM2320B-2011	#
Ammonia-N	0.218	mg/L	0.100	ASTM D6919-09	#
Chloride	70.3	mg/L	2.0	EPA 300.0	#
Nitrate-N	3.4	mg/L	1.0	EPA 300.0	#
pH	7.07	pH_Units		S4500HB-11	#
Specific Conductance	304	umhos/cm	5	SW846 9050A	#
Sulfate	3.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	170	mg/L	25	S2540C-11	#
Turbidity	0.40	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP035W	Collected	02/02/2023 12:59
Lab Sample ID	3285977004	Lab Receipt	02/02/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	42.13	Feet		Field	#
Dissolved Oxygen	0.40	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.56	Feet		Field	#
Flow Rate	0.52	gal/min		Field	#
Ground Water Elevation	435.43	ft/MSL		Field	#
Oxidation-Reduction Potential	96	mV		Field	#
pH, Field (SM4500B)	6.67	pH_Units		Field	#
Sample Depth	65.00	Feet		Field	#
Specific Conductance, Field	1023	umhos/cm	1	Field	#
Temperature	11.65	Deg. C		Field	#
Total Well Depth	71.80	Feet		Field	#
Volume in Water Column	43.61	Gallons		Field	#
Water Level After Purge	46.19	Feet		Field	#
Well Volumes Purged	0.60	Vol		Field	#
METALS					
Calcium, Total	87.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	15.3	mg/L	0.11	SW846 6010C	#
Potassium, Total	2.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	37.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	111	mg/L	5	SM2320B-2011	#
Alkalinity, Total	111	mg/L	5	SM2320B-2011	#
Ammonia-N	0.330	mg/L	0.100	ASTM D6919-09	#
Chloride	121	mg/L	2.0	EPA 300.0	#
Nitrate-N	4.4	mg/L	1.0	EPA 300.0	#
pH	8.24	pH_Units		S4500HB-11	#
Specific Conductance	746	umhos/cm	5	SW846 9050A	#
Sulfate	42.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	438	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.72	mg/L	0.50	SW846 9060A	#

Detected Results Summary

Client Sample ID	FFMP036W	Collected	02/02/2023 13:31
Lab Sample ID	3285977005	Lab Receipt	02/02/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	45.42	Feet		Field	#
Dissolved Oxygen	9.92	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	478.23	Feet		Field	#
Flow Rate	1.54	gal/min		Field	#
Ground Water Elevation	432.81	ft/MSL		Field	#
Oxidation-Reduction Potential	-101	mV		Field	#
pH, Field (SM4500B)	7.78	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	510	umhos/cm	1	Field	#
Temperature	12.27	Deg. C		Field	#
Total Well Depth	142.60	Feet		Field	#
Turbidity, Field	8	NTU	1	Field	#
Volume in Water Column	142.85	Gallons		Field	#
Water Level After Purge	67.08	Feet		Field	#
Well Volumes Purged	0.81	Vol		Field	#
METALS					
Calcium, Total	54.6	mg/L	0.11	SW846 6010C	#
Iron, Total	2.2	mg/L	0.067	SW846 6010C	#
Magnesium, Total	5.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.12	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	15.2	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	94	mg/L	5	SM2320B-2011	#
Alkalinity, Total	94	mg/L	5	SM2320B-2011	#
Ammonia-N	0.238	mg/L	0.100	ASTM D6919-09	#
Chloride	33.5	mg/L	2.0	EPA 300.0	#
pH	8.26	pH_Units		S4500HB-11	#
Specific Conductance	374	umhos/cm	5	SW846 9050A	#
Sulfate	33.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	210	mg/L	25	S2540C-11	#
Turbidity	6.4	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP005W	Collected	02/02/2023 14:22
Lab Sample ID	3285977006	Lab Receipt	02/02/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	52.02	Feet		Field	#
Elev Top MW Casing above MSL	537.40	Feet		Field	#
Flow Rate	5.07	gal/min		Field	#
Ground Water Elevation	485.38	ft/MSL		Field	#
Oxidation-Reduction Potential	507	mV		Field	#
pH, Field (SM4500B)	5.53	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	1343	umhos/cm	1	Field	#
Temperature	13.35	Deg. C		Field	#
Total Well Depth	149.70	Feet		Field	#
Volume in Water Column	143.59	Gallons		Field	#
Water Level After Purge	79.54	Feet		Field	#
Well Volumes Purged	2.12	Vol		Field	#
METALS					
Calcium, Total	86.0	mg/L	0.11	SW846 6010C	#
Magnesium, Total	21.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.22	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	63.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	59	mg/L	5	SM2320B-2011	#
Alkalinity, Total	59	mg/L	5	SM2320B-2011	#
Ammonia-N	0.508	mg/L	0.100	ASTM D6919-09	#
Chloride	189	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.4	mg/L	1.0	EPA 300.0	#
pH	7.90	pH_Units		S4500HB-11	#
Specific Conductance	965	umhos/cm	5	SW846 9050A	#
Sulfate	84.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	550	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.7	mg/L	0.50	SW846 9060A	#

Detected Results Summary

Client Sample ID	FFMP26RW	Collected	02/02/2023 14:35
Lab Sample ID	3285977007	Lab Receipt	02/02/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	61.74	Feet		Field	#
Dissolved Oxygen	0.30	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	547.40	Feet		Field	#
Flow Rate	9.68	gal/min		Field	#
Ground Water Elevation	485.66	ft/MSL		Field	#
Oxidation-Reduction Potential	361	mV		Field	#
pH, Field (SM4500B)	5.69	pH_Units		Field	#
Sample Depth	105.00	Feet		Field	#
Specific Conductance, Field	1115	umhos/cm	1	Field	#
Temperature	14.19	Deg. C		Field	#
Total Well Depth	118.30	Feet		Field	#
Volume in Water Column	83.14	Gallons		Field	#
Water Level After Purge	83.19	Feet		Field	#
Well Volumes Purged	4.66	Vol		Field	#
METALS					
Calcium, Total	76.4	mg/L	0.11	SW846 6010C	#
Magnesium, Total	16.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.95	mg/L	0.0056	SW846 6010C	#
Potassium, Total	9.8	mg/L	0.56	SW846 6010C	#
Sodium, Total	53.3	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	69	mg/L	5	SM2320B-2011	#
Alkalinity, Total	69	mg/L	5	SM2320B-2011	#
Ammonia-N	0.243	mg/L	0.100	ASTM D6919-09	#
Chloride	130	mg/L	2.0	EPA 300.0	#
pH	7.96	pH_Units		S4500HB-11	#
Specific Conductance	806	umhos/cm	5	SW846 9050A	#
Sulfate	113	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	472	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	2.3	mg/L	0.50	SW846 9060A	#
Turbidity	1.0	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	FFMP017W	Collected	02/02/2023 09:58
Lab Sample ID	3285977001	Lab Receipt	02/02/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	38.25		Feet		Field	1	02/02/2023 09:58	BGS	D
Dissolved Oxygen	0.03		mg/L	0.01	Field	1	02/02/2023 09:58	BGS	D
Elev Top MW Casing above MSL	480.70		Feet		Field	1	02/02/2023 09:58	BGS	D
Flow Rate	2.56		gal/min		Field	1	02/02/2023 09:58	BGS	D
Ground Water Elevation	442.45		ft/MSL		Field	1	02/02/2023 09:58	BGS	D
Oxidation-Reduction Potential	171		mV		Field	1	02/02/2023 09:58	BGS	D
pH, Field (SM4500B)	6.01		pH_Units		Field	1	02/02/2023 09:58	BGS	D
Sample Depth	135.00		Feet		Field	1	02/02/2023 09:58	BGS	D
Specific Conductance, Field	1837		umhos/cm	1	Field	1	02/02/2023 09:58	BGS	D
Temperature	12.80		Deg. C		Field	1	02/02/2023 09:58	BGS	D
Total Well Depth	150.50		Feet		Field	1	02/02/2023 09:58	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/02/2023 09:58	BGS	D
Volume in Water Column	165.01		Gallons		Field	1	02/02/2023 09:58	BGS	D
Water Level After Purge	44.12		Feet		Field	1	02/02/2023 09:58	BGS	D
Well Volumes Purged	0.93		Vol		Field	1	02/02/2023 09:58	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	99.8		mg/L	0.11	SW846 6010C	1	02/13/2023 12:09	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/13/2023 12:09	A1S	J1
Magnesium, Total	40.9		mg/L	0.11	SW846 6010C	1	02/13/2023 12:09	A1S	J1
Manganese, Total	1.5		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:09	A1S	J1
Potassium, Total	8.1		mg/L	0.56	SW846 6010C	1	02/13/2023 12:09	A1S	J1
Sodium, Total	96.4		mg/L	0.56	SW846 6010C	1	02/13/2023 12:09	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 14:22	TMP	H

Results

Client Sample ID	FFMP017W	Collected	02/02/2023 09:58
Lab Sample ID	3285977001	Lab Receipt	02/02/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.5%	62 – 133	02/10/2023 14:22	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	02/10/2023 14:22	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/10/2023 14:22	
Toluene-d8	2037-26-5	95.7%	76 – 127	02/10/2023 14:22	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	129		mg/L	5	SM2320B-2011	1	02/10/2023 19:28	NML	B
Alkalinity, Total	129	1	mg/L	5	SM2320B-2011	1	02/10/2023 19:28	NML	B
Ammonia-N	0.708	2	mg/L	0.100	ASTM D6919-09	10	02/17/2023 00:54	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	271		mg/L	5.0	EPA 300.0	5	02/03/2023 13:09	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	02/03/2023 13:09	J1W	B
Nitrate-N	3.9		mg/L	2.5	EPA 300.0	5	02/03/2023 13:09	J1W	B
pH	8.24	3	pH_Units		S4500HB-11	1	02/10/2023 19:28	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 13:32	MXF	G
Specific Conductance	1290		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	77.7		mg/L	5.0	EPA 300.0	5	02/03/2023 13:09	J1W	B
Total Dissolved Solids	710		mg/L	25	S2540C-11	1	02/06/2023 07:51	SMS	B
Total Organic Carbon (TOC)	2.8		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/03/2023 00:24	NRB	B

Results

Client Sample ID	FFMP019W	Collected	02/02/2023 11:15
Lab Sample ID	3285977002	Lab Receipt	02/02/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	26.72		Feet		Field	1	02/02/2023 11:15	BGS	D
Dissolved Oxygen	0.12		mg/L	0.01	Field	1	02/02/2023 11:15	BGS	D
Elev Top MW Casing above MSL	471.95		Feet		Field	1	02/02/2023 11:15	BGS	D
Flow Rate	3.81		gal/min		Field	1	02/02/2023 11:15	BGS	D
Ground Water Elevation	445.23		ft/MSL		Field	1	02/02/2023 11:15	BGS	D
Oxidation-Reduction Potential	132		mV		Field	1	02/02/2023 11:15	BGS	D
pH, Field (SM4500B)	6.59		pH_Units		Field	1	02/02/2023 11:15	BGS	D
Sample Depth	49.00		Feet		Field	1	02/02/2023 11:15	BGS	D
Specific Conductance, Field	651		umhos/cm	1	Field	1	02/02/2023 11:15	BGS	D
Temperature	13.89		Deg. C		Field	1	02/02/2023 11:15	BGS	D
Total Well Depth	132.79		Feet		Field	1	02/02/2023 11:15	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/02/2023 11:15	BGS	D
Volume in Water Column	68.95		Gallons		Field	1	02/02/2023 11:15	BGS	D
Water Level After Purge	37.95		Feet		Field	1	02/02/2023 11:15	BGS	D
Well Volumes Purged	2.21		Vol		Field	1	02/02/2023 11:15	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	68.2		mg/L	0.11	SW846 6010C	1	02/13/2023 12:10	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/13/2023 12:10	A1S	J1
Magnesium, Total	6.8		mg/L	0.11	SW846 6010C	1	02/13/2023 12:10	A1S	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	02/13/2023 12:10	A1S	J1
Potassium, Total	1.0		mg/L	0.56	SW846 6010C	1	02/13/2023 12:10	A1S	J1
Sodium, Total	12.5		mg/L	0.56	SW846 6010C	1	02/13/2023 12:10	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/11/2023 02:35	PDK	H

Results

Client Sample ID	FFMP019W	Collected	02/02/2023 11:15
Lab Sample ID	3285977002	Lab Receipt	02/02/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.3%	62 – 133	02/11/2023 02:35	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/11/2023 02:35	
Dibromofluoromethane	1868-53-7	97.9%	78 – 116	02/11/2023 02:35	
Toluene-d8	2037-26-5	90.3%	76 – 127	02/11/2023 02:35	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	63		mg/L	5	SM2320B-2011	1	02/10/2023 20:14	NML	B
Alkalinity, Total	63	1	mg/L	5	SM2320B-2011	1	02/10/2023 20:14	NML	B
Ammonia-N	0.211	2	mg/L	0.100	ASTM D6919-09	10	02/17/2023 01:07	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	91.0		mg/L	2.0	EPA 300.0	2	02/03/2023 13:20	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/03/2023 13:20	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/03/2023 13:20	J1W	B
pH	8.04	3	pH_Units		S4500HB-11	1	02/10/2023 20:14	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 12:32	MXF	G
Specific Conductance	472		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	15.2		mg/L	2.0	EPA 300.0	2	02/03/2023 13:20	J1W	B
Total Dissolved Solids	302		mg/L	25	S2540C-11	1	02/06/2023 07:51	SMS	B
Total Organic Carbon (TOC)	1.1		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/03/2023 00:24	NRB	B

Results

Client Sample ID	FFMP029W	Collected	02/02/2023 11:50
Lab Sample ID	3285977003	Lab Receipt	02/02/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	37.03		Feet		Field	1	02/02/2023 11:50	BGS	D
Dissolved Oxygen	4.92		mg/L	0.01	Field	1	02/02/2023 11:50	BGS	D
Elev Top MW Casing above MSL	477.30		Feet		Field	1	02/02/2023 11:50	BGS	D
Flow Rate	2.93		gal/min		Field	1	02/02/2023 11:50	BGS	D
Ground Water Elevation	440.27		ft/MSL		Field	1	02/02/2023 11:50	BGS	D
Oxidation-Reduction Potential	273		mV		Field	1	02/02/2023 11:50	BGS	D
pH, Field (SM4500B)	5.16		pH_Units		Field	1	02/02/2023 11:50	BGS	D
Sample Depth	55.00		Feet		Field	1	02/02/2023 11:50	BGS	D
Specific Conductance, Field	414		umhos/cm	1	Field	1	02/02/2023 11:50	BGS	D
Temperature	14.62		Deg. C		Field	1	02/02/2023 11:50	BGS	D
Total Well Depth	60.50		Feet		Field	1	02/02/2023 11:50	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/02/2023 11:50	BGS	D
Volume in Water Column	34.50		Gallons		Field	1	02/02/2023 11:50	BGS	D
Water Level After Purge	44.47		Feet		Field	1	02/02/2023 11:50	BGS	D
Well Volumes Purged	3.82		Vol		Field	1	02/02/2023 11:50	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	13.8		mg/L	0.11	SW846 6010C	1	02/13/2023 12:12	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/13/2023 12:12	A1S	J1
Magnesium, Total	10.6		mg/L	0.11	SW846 6010C	1	02/13/2023 12:12	A1S	J1
Manganese, Total	0.036		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:12	A1S	J1
Potassium, Total	2.1		mg/L	0.56	SW846 6010C	1	02/13/2023 12:12	A1S	J1
Sodium, Total	23.4		mg/L	0.56	SW846 6010C	1	02/13/2023 12:12	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:09	TMP	H

Results

Client Sample ID	FFMP029W	Collected	02/02/2023 11:50
Lab Sample ID	3285977003	Lab Receipt	02/02/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.1%	62 – 133	02/10/2023 15:09	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/10/2023 15:09	
Dibromofluoromethane	1868-53-7	101%	78 – 116	02/10/2023 15:09	
Toluene-d8	2037-26-5	95.4%	76 – 127	02/10/2023 15:09	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	9		mg/L	5	SM2320B-2011	1	02/10/2023 20:26	NML	B
Alkalinity, Total	9	1	mg/L	5	SM2320B-2011	1	02/10/2023 20:26	NML	B
Ammonia-N	0.218	2	mg/L	0.100	ASTM D6919-09	10	02/17/2023 01:21	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	70.3		mg/L	2.0	EPA 300.0	2	02/03/2023 13:30	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/03/2023 13:30	J1W	B
Nitrate-N	3.4		mg/L	1.0	EPA 300.0	2	02/03/2023 13:30	J1W	B
pH	7.07	3	pH_Units		S4500HB-11	1	02/10/2023 20:26	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 13:36	MXF	G
Specific Conductance	304		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	3.7		mg/L	2.0	EPA 300.0	2	02/03/2023 13:30	J1W	B
Total Dissolved Solids	170		mg/L	25	S2540C-11	1	02/06/2023 07:51	SMS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	0.40		NTU	0.30	SM2130B-2011	1	02/03/2023 00:24	NRB	B

Results

Client Sample ID	FFMP035W	Collected	02/02/2023 12:59
Lab Sample ID	3285977004	Lab Receipt	02/02/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	42.13		Feet		Field	1	02/02/2023 12:59	BGS	D
Dissolved Oxygen	0.40		mg/L	0.01	Field	1	02/02/2023 12:59	BGS	D
Elev Top MW Casing above MSL	477.56		Feet		Field	1	02/02/2023 12:59	BGS	D
Flow Rate	0.52		gal/min		Field	1	02/02/2023 12:59	BGS	D
Ground Water Elevation	435.43		ft/MSL		Field	1	02/02/2023 12:59	BGS	D
Oxidation-Reduction Potential	96		mV		Field	1	02/02/2023 12:59	BGS	D
pH, Field (SM4500B)	6.67		pH_Units		Field	1	02/02/2023 12:59	BGS	D
Sample Depth	65.00		Feet		Field	1	02/02/2023 12:59	BGS	D
Specific Conductance, Field	1023		umhos/cm	1	Field	1	02/02/2023 12:59	BGS	D
Temperature	11.65		Deg. C		Field	1	02/02/2023 12:59	BGS	D
Total Well Depth	71.80		Feet		Field	1	02/02/2023 12:59	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/02/2023 12:59	BGS	D
Volume in Water Column	43.61		Gallons		Field	1	02/02/2023 12:59	BGS	D
Water Level After Purge	46.19		Feet		Field	1	02/02/2023 12:59	BGS	D
Well Volumes Purged	0.60		Vol		Field	1	02/02/2023 12:59	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	87.2		mg/L	0.11	SW846 6010C	1	02/13/2023 12:13	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/13/2023 12:13	A1S	J1
Magnesium, Total	15.3		mg/L	0.11	SW846 6010C	1	02/13/2023 12:13	A1S	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	02/13/2023 12:13	A1S	J1
Potassium, Total	2.6		mg/L	0.56	SW846 6010C	1	02/13/2023 12:13	A1S	J1
Sodium, Total	37.6		mg/L	0.56	SW846 6010C	1	02/13/2023 12:13	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:31	TMP	H

Results

Client Sample ID	FFMP035W	Collected	02/02/2023 12:59
Lab Sample ID	3285977004	Lab Receipt	02/02/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.9%	62 – 133	02/10/2023 15:31	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	02/10/2023 15:31	
Dibromofluoromethane	1868-53-7	102%	78 – 116	02/10/2023 15:31	
Toluene-d8	2037-26-5	96%	76 – 127	02/10/2023 15:31	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	111		mg/L	5	SM2320B-2011	1	02/10/2023 20:36	NML	B
Alkalinity, Total	111	1	mg/L	5	SM2320B-2011	1	02/10/2023 20:36	NML	B
Ammonia-N	0.330	2	mg/L	0.100	ASTM D6919-09	10	02/17/2023 01:35	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	121		mg/L	2.0	EPA 300.0	2	02/03/2023 13:41	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/03/2023 13:41	J1W	B
Nitrate-N	4.4		mg/L	1.0	EPA 300.0	2	02/03/2023 13:41	J1W	B
pH	8.24	3	pH_Units		S4500HB-11	1	02/10/2023 20:36	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 13:58	MXF	G
Specific Conductance	746		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	42.3		mg/L	2.0	EPA 300.0	2	02/03/2023 13:41	J1W	B
Total Dissolved Solids	438		mg/L	25	S2540C-11	1	02/06/2023 07:51	SMS	B
Total Organic Carbon (TOC)	0.72		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/03/2023 00:24	NRB	B

Results

Client Sample ID	FFMP036W	Collected	02/02/2023 13:31
Lab Sample ID	3285977005	Lab Receipt	02/02/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	45.42		Feet		Field	1	02/02/2023 13:36	BGS	D
Dissolved Oxygen	9.92		mg/L	0.01	Field	1	02/02/2023 13:36	BGS	D
Elev Top MW Casing above MSL	478.23		Feet		Field	1	02/02/2023 13:36	BGS	D
Flow Rate	1.54		gal/min		Field	1	02/02/2023 13:36	BGS	D
Ground Water Elevation	432.81		ft/MSL		Field	1	02/02/2023 13:36	BGS	D
Oxidation-Reduction Potential	-101		mV		Field	1	02/02/2023 13:36	BGS	D
pH, Field (SM4500B)	7.78		pH_Units		Field	1	02/02/2023 13:36	BGS	D
Sample Depth	135.00		Feet		Field	1	02/02/2023 13:36	BGS	D
Specific Conductance, Field	510		umhos/cm	1	Field	1	02/02/2023 13:36	BGS	D
Temperature	12.27		Deg. C		Field	1	02/02/2023 13:36	BGS	D
Total Well Depth	142.60		Feet		Field	1	02/02/2023 13:36	BGS	D
Turbidity, Field	8		NTU	1	Field	1	02/02/2023 13:36	BGS	D
Volume in Water Column	142.85		Gallons		Field	1	02/02/2023 13:36	BGS	D
Water Level After Purge	67.08		Feet		Field	1	02/02/2023 13:36	BGS	D
Well Volumes Purged	0.81		Vol		Field	1	02/02/2023 13:36	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	54.6		mg/L	0.11	SW846 6010C	1	02/13/2023 12:14	A1S	J1
Iron, Total	2.2		mg/L	0.067	SW846 6010C	1	02/13/2023 12:14	A1S	J1
Magnesium, Total	5.4		mg/L	0.11	SW846 6010C	1	02/13/2023 12:14	A1S	J1
Manganese, Total	0.12		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:14	A1S	J1
Potassium, Total	1.0		mg/L	0.56	SW846 6010C	1	02/13/2023 12:14	A1S	J1
Sodium, Total	15.2		mg/L	0.56	SW846 6010C	1	02/13/2023 12:14	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 15:54	TMP	H

Results

Client Sample ID	FFMP036W	Collected	02/02/2023 13:31
Lab Sample ID	3285977005	Lab Receipt	02/02/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.8%	62 – 133	02/10/2023 15:54	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	02/10/2023 15:54	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/10/2023 15:54	
Toluene-d8	2037-26-5	95.9%	76 – 127	02/10/2023 15:54	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	94		mg/L	5	SM2320B-2011	1	02/10/2023 20:46	NML	B
Alkalinity, Total	94	1	mg/L	5	SM2320B-2011	1	02/10/2023 20:46	NML	B
Ammonia-N	0.238	2	mg/L	0.100	ASTM D6919-09	10	02/17/2023 01:48	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	33.5		mg/L	2.0	EPA 300.0	2	02/03/2023 13:51	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/03/2023 13:51	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/03/2023 13:51	J1W	B
pH	8.26	3	pH_Units		S4500HB-11	1	02/10/2023 20:46	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 13:03	MXF	G
Specific Conductance	374		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	33.8		mg/L	2.0	EPA 300.0	2	02/03/2023 13:51	J1W	B
Total Dissolved Solids	210		mg/L	25	S2540C-11	1	02/06/2023 07:51	SMS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	6.4		NTU	0.30	SM2130B-2011	1	02/03/2023 00:24	NRB	B

Results

Client Sample ID	FFMP005W	Collected	02/02/2023 14:22
Lab Sample ID	3285977006	Lab Receipt	02/02/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	52.02		Feet		Field	1	02/02/2023 14:22	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	02/02/2023 14:22	BGS	D
Elev Top MW Casing above MSL	537.40		Feet		Field	1	02/02/2023 14:22	BGS	D
Flow Rate	5.07		gal/min		Field	1	02/02/2023 14:22	BGS	D
Ground Water Elevation	485.38		ft/MSL		Field	1	02/02/2023 14:22	BGS	D
Oxidation-Reduction Potential	507		mV		Field	1	02/02/2023 14:22	BGS	D
pH, Field (SM4500B)	5.53		pH_Units		Field	1	02/02/2023 14:22	BGS	D
Sample Depth	135.00		Feet		Field	1	02/02/2023 14:22	BGS	D
Specific Conductance, Field	1343		umhos/cm	1	Field	1	02/02/2023 14:22	BGS	D
Temperature	13.35		Deg. C		Field	1	02/02/2023 14:22	BGS	D
Total Well Depth	149.70		Feet		Field	1	02/02/2023 14:22	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/02/2023 14:22	BGS	D
Volume in Water Column	143.59		Gallons		Field	1	02/02/2023 14:22	BGS	D
Water Level After Purge	79.54		Feet		Field	1	02/02/2023 14:22	BGS	D
Well Volumes Purged	2.12		Vol		Field	1	02/02/2023 14:22	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	86.0		mg/L	0.11	SW846 6010C	1	02/13/2023 12:15	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/13/2023 12:15	A1S	J1
Magnesium, Total	21.8		mg/L	0.11	SW846 6010C	1	02/13/2023 12:15	A1S	J1
Manganese, Total	0.22		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:15	A1S	J1
Potassium, Total	3.5		mg/L	0.56	SW846 6010C	1	02/13/2023 12:15	A1S	J1
Sodium, Total	63.7		mg/L	0.56	SW846 6010C	1	02/13/2023 12:15	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:17	TMP	H

Results

Client Sample ID	FFMP005W	Collected	02/02/2023 14:22
Lab Sample ID	3285977006	Lab Receipt	02/02/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.4%	62 – 133	02/10/2023 16:17	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/10/2023 16:17	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/10/2023 16:17	
Toluene-d8	2037-26-5	95.1%	76 – 127	02/10/2023 16:17	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	59		mg/L	5	SM2320B-2011	1	02/10/2023 20:57	NML	B
Alkalinity, Total	59	1	mg/L	5	SM2320B-2011	1	02/10/2023 20:57	NML	B
Ammonia-N	0.508	2	mg/L	0.100	ASTM D6919-09	10	02/17/2023 02:02	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	189		mg/L	2.0	EPA 300.0	2	02/03/2023 14:02	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/03/2023 14:02	J1W	B
Nitrate-N	1.4		mg/L	1.0	EPA 300.0	2	02/03/2023 14:02	J1W	B
pH	7.90	3	pH_Units		S4500HB-11	1	02/10/2023 20:57	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 12:36	MXF	G
Specific Conductance	965		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	84.3		mg/L	2.0	EPA 300.0	2	02/03/2023 14:02	J1W	B
Total Dissolved Solids	550		mg/L	25	S2540C-11	1	02/06/2023 07:51	SMS	B
Total Organic Carbon (TOC)	1.7		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/03/2023 00:24	NRB	B

Results

Client Sample ID	FFMP26RW	Collected	02/02/2023 14:35
Lab Sample ID	3285977007	Lab Receipt	02/02/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	61.74		Feet		Field	1	02/02/2023 14:35	BGS	D
Dissolved Oxygen	0.30		mg/L	0.01	Field	1	02/02/2023 14:35	BGS	D
Elev Top MW Casing above MSL	547.40		Feet		Field	1	02/02/2023 14:35	BGS	D
Flow Rate	9.68		gal/min		Field	1	02/02/2023 14:35	BGS	D
Ground Water Elevation	485.66		ft/MSL		Field	1	02/02/2023 14:35	BGS	D
Oxidation-Reduction Potential	361		mV		Field	1	02/02/2023 14:35	BGS	D
pH, Field (SM4500B)	5.69		pH_Units		Field	1	02/02/2023 14:35	BGS	D
Sample Depth	105.00		Feet		Field	1	02/02/2023 14:35	BGS	D
Specific Conductance, Field	1115		umhos/cm	1	Field	1	02/02/2023 14:35	BGS	D
Temperature	14.19		Deg. C		Field	1	02/02/2023 14:35	BGS	D
Total Well Depth	118.30		Feet		Field	1	02/02/2023 14:35	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/02/2023 14:35	BGS	D
Volume in Water Column	83.14		Gallons		Field	1	02/02/2023 14:35	BGS	D
Water Level After Purge	83.19		Feet		Field	1	02/02/2023 14:35	BGS	D
Well Volumes Purged	4.66		Vol		Field	1	02/02/2023 14:35	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	76.4		mg/L	0.11	SW846 6010C	1	02/13/2023 12:18	A1S	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/13/2023 12:18	A1S	J1
Magnesium, Total	16.3		mg/L	0.11	SW846 6010C	1	02/13/2023 12:18	A1S	J1
Manganese, Total	0.95		mg/L	0.0056	SW846 6010C	1	02/13/2023 12:18	A1S	J1
Potassium, Total	9.8		mg/L	0.56	SW846 6010C	1	02/13/2023 12:18	A1S	J1
Sodium, Total	53.3		mg/L	0.56	SW846 6010C	1	02/13/2023 12:18	A1S	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/10/2023 16:39	TMP	H

Results

Client Sample ID	FFMP26RW	Collected	02/02/2023 14:35
Lab Sample ID	3285977007	Lab Receipt	02/02/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.9%	62 – 133	02/10/2023 16:39	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/10/2023 16:39	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/10/2023 16:39	
Toluene-d8	2037-26-5	94.2%	76 – 127	02/10/2023 16:39	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	69		mg/L	5	SM2320B-2011	1	02/10/2023 21:10	NML	B
Alkalinity, Total	69	1	mg/L	5	SM2320B-2011	1	02/10/2023 21:10	NML	B
Ammonia-N	0.243	2	mg/L	0.100	ASTM D6919-09	10	02/17/2023 02:16	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2023 13:51	KMS	A
Chloride	130		mg/L	2.0	EPA 300.0	2	02/03/2023 14:54	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/03/2023 14:54	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/03/2023 14:54	J1W	B
pH	7.96	3	pH_Units		S4500HB-11	1	02/10/2023 21:10	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/13/2023 13:01	MXF	G
Specific Conductance	806		umhos/cm	5	SW846 9050A	1	02/07/2023 11:55	JXL	B
Sulfate	113		mg/L	2.0	EPA 300.0	2	02/03/2023 14:54	J1W	B
Total Dissolved Solids	472		mg/L	25	S2540C-11	1	02/06/2023 07:51	SMS	B
Total Organic Carbon (TOC)	2.3		mg/L	0.50	SW846 9060A	1	02/07/2023 04:38	PAG	E
Turbidity	1.0		NTU	0.30	SM2130B-2011	1	02/03/2023 00:24	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3285977001	FFMP017W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3285977002	FFMP019W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3285977003	FFMP029W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3285977004	FFMP035W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3285977005	FFMP036W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3285977006	FFMP005W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3285977007	FFMP26RW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3285977001	FFMP017W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	945661
		N/A	N/A	N/A		ASTM D6919-09	948386
		N/A	N/A	N/A		EPA 300.0	941162
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	941096
		N/A	N/A	N/A		S4500HB-11	944977
		N/A	N/A	N/A		SM2130B-2011	941085
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3285977002	FFMP019W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	946365
		N/A	N/A	N/A		ASTM D6919-09	948386
		N/A	N/A	N/A		EPA 300.0	941162
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	941096
		N/A	N/A	N/A		S4500HB-11	944977
		N/A	N/A	N/A		SM2130B-2011	941085
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3285977003	FFMP029W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	945661
		N/A	N/A	N/A		ASTM D6919-09	948386
		N/A	N/A	N/A		EPA 300.0	941162
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	941096
		N/A	N/A	N/A		S4500HB-11	944977
		N/A	N/A	N/A		SM2130B-2011	941085
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3285977004	FFMP035W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	945661
		N/A	N/A	N/A		ASTM D6919-09	948386
		N/A	N/A	N/A		EPA 300.0	941162
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	941096
		N/A	N/A	N/A		S4500HB-11	944977
		N/A	N/A	N/A		SM2130B-2011	941085
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3285977005	FFMP036W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	945661
		N/A	N/A	N/A		ASTM D6919-09	948386
		N/A	N/A	N/A		EPA 300.0	941162
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	941096
		N/A	N/A	N/A		S4500HB-11	944977
		N/A	N/A	N/A		SM2130B-2011	941085
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3285977006	FFMP005W	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	945661
		N/A	N/A	N/A		ASTM D6919-09	948386
		N/A	N/A	N/A		EPA 300.0	941162
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	941096
		N/A	N/A	N/A		S4500HB-11	944977
		N/A	N/A	N/A		SM2130B-2011	941085
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115
3285977007	FFMP26RW	N/A	N/A	N/A		Field	943695
		SW846 3015A	942373	02/05/2023 23:04	ANN	SW846 6010C	944983
		N/A	N/A	N/A		SW846 8260B	945661
		N/A	N/A	N/A		ASTM D6919-09	948386
		N/A	N/A	N/A		EPA 300.0	941162
		N/A	N/A	N/A		EPA 410.4	943579
		N/A	N/A	N/A		S2540C-11	941096
		N/A	N/A	N/A		S4500HB-11	944977
		N/A	N/A	N/A		SM2130B-2011	941085
		N/A	N/A	N/A		SM2320B-2011	944977
		N/A	N/A	N/A		SW846 9050A	943239
		N/A	N/A	N/A		SW846 9060A	943245
		SW846 9066	945965	02/10/2023 14:36	MXF	SW846 9066	946115

2/17/2023 1:46 PM

ALS Environmental
34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5541 • Fax: 717-944-1430 • www.alsglobal.com
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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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CO
AL

3285977
Logged By: KSB
PM: SJB

1 of 1

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

Client Name: Lancaster County Solid Waste MA
Address: 1299 Harrisburg Pike, P.O. Box 4424
Lancaster, PA 17604
Contact: Dan Brown
Phone#: (717) 735-0193
Project Name/#: Frey Farm Quarterly (GWMP)
Bill To: Lancaster County Solid Waste MA

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

Container Type	AG	AW	CG	----	----	PL	PL	PL	PL
Container Size	40 ml	125 ml	40 ml	----	----	250 ml	125 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	----	----	H2SO4	HNO3	None	None

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	VOC - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	pH, Cl, SpC, F, SO4, TDS, NO3, Turb,	Alkalinity Bicarbonate	
					Enter Number of Containers Per Sample or Field Results Below.									
1. FFMP017W	02/02/23	0958	G	GW	2	1	2	X	X	1	2	1	1	
2. FFMP019W	02/02/23	1115	G	GW	2	1	2	X	X	1	2	1	1	
3. FFMP029W	02/02/23	1150	G	GW	2	1	2	X	X	1	2	1	1	
4. FFMP035W	02/02/23	1259	G	GW	2	1	2	X	X	1	2	1	1	
5. FFMP036W	02/02/23	1331	G	GW	2	1	2	X	X	1	2	1	1	
6. FFMP005W	02/02/23	1422	G	GW	2	1	2	X	X	1	2	1	1	
7. FFMP26RW	02/02/23	1435	G	GW	2	1	2	X	X	1	2	1	1	
8											↳ AWF 2.3.23			
9														
10														

(Receiving Lab)
Cooler Temp: 7 Therm ID: 570
No. of Coolers: _____ Y N Initial
Custody Seals Present? [ ] [ ]
(if present) Seals Intact? [ ] [ ]

Temp By: KSB | WO Temp (°C): 7. | Therm ID: 570

AWF

Receipt Info Completed By:			
Cooler Custody Seal Intact	Y	N	NA
Sample Custody Seal Intact	Y	N	NA
Received on Ice	Y	N	NA
Cooler & Samples Intact	Y	N	
Correct Containers Provided	Y	N	
Sample Label/COC Agree	Y	N	
Adequate Sample Volumes	Y	N	
CR6 Samples Filtered	Y	N	NA
OP Samples Filtered	Y	N	NA
VOA Headspace Present	Y	N	NA
Voa Trip Blank	Y	N	NA
NJ≤ 4 Days?	Y	N	
Rad Screen (uCi)			
Courier/Tracking #:			
SDWA Compliance	Y	N	
PWSID			
WV Containers 0-6°C	Y	N	NA

NONE=UNP

ALS Field Services: ☐Pickup ☐Labor ☐Composite_Sampling ☐Rental_Equipment ☐Other: _____

Project Comments:

LOGGED BY(signature): DATE: TIME:
REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] DAY ALS	2-2-23	1605	2	2.2.23	165
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ]
State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] PWSID #
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type-

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OI=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater

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

Rev 8/04

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