



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 19, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP015W

X	Well	Spring	Stream	Other
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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: 61.4 ft

Measured from: Land Surface X TOC

Casing Stickup: 1.90 ft

Elevation of Water Level: 515 ft./MSL

Sampling Depth: 135 ft

Volume of Water Column:	128.51	gal
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Total Well Depth: 148.9 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 ☒ No ☐

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 8/1/2022

Sample Collection Time: 9:59

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 ☒ No ☐ If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3255833001 Final Lab Analysis CompletionDate: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP015W

Sample Date 8/1/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	18	SM20-2320B
CALCIUM, TOTAL	13.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	32.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	23.2	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	74	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	34.9 E	EPA 300
pH-FIELD (SU)	5.41	FIELD
pH-LAB (SU)	6.45	SM20-4500HB
POTASSIUM, TOTAL	2.7	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	17.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	750	FIELD
SPEC. COND., LAB (umhos/cm)	518	SW846 9050A
SULFATE	32.4	EPA 300
ALKALINITY	18	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	342	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.4	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 8/1/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



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QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP033W

☒ Well ☐ Spring ☐ Stream ☐ Other

☐ Upgradient/Upstream ☒ 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: 20.41 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 0.49 ft

Elevation of Water Level: 496.11 ft./MSL

Sampling Depth: 79 ft

Volume of Water Column: 111.02 gal

Total Well Depth: 96 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 1.1

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

Spring Flow Rate: ☐ gpm

Sample Date (mm/dd/yy): 8/1/2022

Sample Collection Time: 11:24

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3255833002 Final Lab Analysis Completion Date: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP033W

Sample Date 8/1/2022

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	0.337	D6919-09
BICARBONATE ALKALINITY	36	SM20-2320B
CALCIUM, TOTAL	26.6	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	60.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	7400	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	8.8	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	400	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	11.2 E	EPA 300
pH-FIELD (SU)	5.27	FIELD
pH-LAB (SU)	6.51	SM20-4500HB
POTASSIUM, TOTAL	1.9	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	11.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	590	FIELD
SPEC. COND., LAB (umhos/cm)	391	SW846 9050A
SULFATE	6	EPA 300
ALKALINITY	36	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	324	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.54	SW846 9060A
TOTAL PHENOLICS (ug/l)	9	SW846 9066
TURBIDITY (N.T.U.)	15	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 8/1/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



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QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

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General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP034W ☒ Well ☐ Spring ☐ Stream ☐ Other
☐ Upgradient/Upstream ☒ Downgradient/Downstream

Location (County): Lancaster County

Municipality: _____

Sampling Point: Latitude: _____ ° _____ ' _____ " Longitude: _____ ° _____ ' _____ "

Depth to Water Level: 11.08 ft Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: _____ ft Elevation of Water Level: 461.80 ft./MSL

Sampling Depth: 25.85 ft Volume of Water Column: _____ gal

Total Well Depth: 121 ft Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No Well Volumes Purged: 0.7

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 8/1/2022 Sample Collection Time: 13:25

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3255833003 Final Lab Analysis Completion Date: 8/25/2022

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP034W

Sample Date 8/1/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	38	SM20-2320B
CALCIUM, TOTAL	51.9	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	198	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	4400	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	18.4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	97	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	9.4	EPA 300
pH-FIELD (SU)	5.69	FIELD
pH-LAB (SU)	7.17	SM20-4500HB
POTASSIUM, TOTAL	3.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	36.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1299	FIELD
SPEC. COND., LAB (umhos/cm)	935	SW846 9050A
SULFATE	29.5	EPA 300
ALKALINITY	38	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	660	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.91	SW846 9060A
TOTAL PHENOLICS (ug/l)	20	SW846 9066
TURBIDITY (N.T.U.)	89	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

^T Please indicate detection limit if analyte is not detected.

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

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP034W

Sample Date 8/1/2022

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

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

T Please indicate detection limit if analyte is not detected.



**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**

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**FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

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SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP036W

☒ Well ☐ Spring ☐ Stream ☐ Other

☐ Upgradient/Upstream ☒ 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: 45.93 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 1.91 ft

Elevation of Water Level: 432.30 ft./MSL

Sampling Depth: 135 ft

Volume of Water Column: 138.16 gal

Total Well Depth: 140 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 0.8

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/1/2022

Sample Collection Time: 15:09

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3255833004 Final Lab Analysis Completion Date: 8/25/2022

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP036W

Sample Date 8/1/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	90	SM20-2320B
CALCIUM, TOTAL	36.6	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	32.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	2600	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	3.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	130	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	8.03	FIELD
pH-LAB (SU)	8.06	SM20-4500HB
POTASSIUM, TOTAL	1.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	10.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	515	FIELD
SPEC. COND., LAB (umhos/cm)	356	SW846 9050A
SULFATE	30	EPA 300
ALKALINITY	90	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	224	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.8	SW846 9060A
TOTAL PHENOLICS (ug/l)	10	SW846 9066
TURBIDITY (N.T.U.)	16	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

^T Please indicate detection limit if analyte is not detected.

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I.D. No 101389

Monitoring Point No. FFMP036W

Sample Date 8/1/2022

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

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

T Please indicate detection limit if analyte is not detected.

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SECTION B. FACILITY INFORMATION

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Monitoring Point Number: FFMP03AW

☒ Well ☐ Spring ☐ Stream ☐ Other

☐ Upgradient/Upstream ☒ Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 24.05 "

Longitude: 76 ° 27 ' 30.58 "

Depth to Water Level: 51.98 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 1.20 ft

Elevation of Water Level: 538.92 ft./MSL

Sampling Depth: 130 ft

Volume of Water Column: 139.84 gal

Total Well Depth: 147.2 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 0.9

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 8/2/2022

Sample Collection Time: 10:44

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256028001 Final Lab Analysis CompletionDate: 8/22/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP03AW

Sample Date 8/2/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	16	SM20-2320B
CALCIUM, TOTAL	19.5	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	36.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	160	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	14.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	360	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	22.1 E	EPA 300
pH-FIELD (SU)	4.07	FIELD
pH-LAB (SU)	6.33	SM20-4500HB
POTASSIUM, TOTAL	1.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	13.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	550	FIELD
SPEC. COND., LAB (umhos/cm)	351	SW846 9050A
SULFATE	2.1	EPA 300
ALKALINITY	16	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	286	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.55	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 8/2/2022

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.



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 19, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: 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: 36.49 ft

Measured from: Land Surface X TOC

Casing Stickup: 2.20 ft

Elevation of Water Level: 525.81 ft./MSL

Sampling Depth: 85 ft

Volume of Water Column:	78.59	gal
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Total Well Depth: 90 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 ☒ No ☐

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 8/2/2022

Sample Collection Time: 12:07

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 ☒ No ☐ If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256028002 Final Lab Analysis CompletionDate: 8/22/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP30RW

Sample Date 8/2/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	31	SM20-2320B
CALCIUM, TOTAL	37.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	204	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	260	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	15.7	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	2300	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	5.2	EPA 300
pH-FIELD (SU)	6.44	FIELD
pH-LAB (SU)	6.64	SM20-4500HB
POTASSIUM, TOTAL	5.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	95.6	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1246	FIELD
SPEC. COND., LAB (umhos/cm)	882	SW846 9050A
SULFATE	24.4	EPA 300
ALKALINITY	31	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	512	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.84	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	5.1	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. FFMP30RW

Sample Date 8/2/2022

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.

I.D. No 101389

Monitoring Point No. FFMP04AW

Sample Date 8/2/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	191	SM20-2320B
CALCIUM, TOTAL	146	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	321	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	24	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	310	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	8.05	FIELD
pH-LAB (SU)	7.94	SM20-4500HB
POTASSIUM, TOTAL	2.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	81.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	2285	FIELD
SPEC. COND., LAB (umhos/cm)	1500	SW846 9050A
SULFATE	48.6	EPA 300
ALKALINITY	191	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	1050	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SW846 9060A
TOTAL PHENOLICS (ug/l)	10	SW846 9066
TURBIDITY (N.T.U.)	0.45	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP04AW

Sample Date 8/2/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

**FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 19, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP26RW

☒ Well ☐ Spring ☐ Stream ☐ Other

☐ Upgradient/Upstream ☒ Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 11.03 "

Longitude: 76 ° 27 ' 20.3 "

Depth to Water Level: 79.75 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 3.30 ft

Elevation of Water Level: 467.65 ft./MSL

Sampling Depth: 105 ft

Volume of Water Column: 50.30 gal

Total Well Depth: 114 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 1.2

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

Spring Flow Rate: ☐ gpm

Sample Date (mm/dd/yy): 8/2/2022

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256028004 Final Lab Analysis CompletionDate: 8/22/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP26RW

Sample Date 8/2/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	54	SM20-2320B
CALCIUM, TOTAL	69.5	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)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	18	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	650	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1.2	EPA 300
pH-FIELD (SU)	6.53	FIELD
pH-LAB (SU)	7.22	SM20-4500HB
POTASSIUM, TOTAL	7.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	56.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1388	FIELD
SPEC. COND., LAB (umhos/cm)	907	SW846 9050A
SULFATE	86.5	EPA 300
ALKALINITY	54	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	590	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.8	SW846 9060A
TOTAL PHENOLICS (ug/l)	30	SW846 9066
TURBIDITY (N.T.U.)	1.1	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP26RW

Sample Date 8/2/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

**FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

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General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP017W

☒ Well ☐ Spring ☐ Stream ☐ Other

☐ Upgradient/Upstream ☒ Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 8.5 "

Longitude: 76 ° 27 ' 6.17 "

Depth to Water Level: 39.96 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 2.00 ft

Elevation of Water Level: 440.74 ft./MSL

Sampling Depth: 135 ft

Volume of Water Column: 162.34 gal

Total Well Depth: 150.5 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 1.0

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

Spring Flow Rate: ☐ gpm

Sample Date (mm/dd/yy): 8/3/2022

Sample Collection Time: 9:40

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256290001 Final Lab Analysis CompletionDate: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP017W

Sample Date 8/3/2022

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	0.22	D6919-09
BICARBONATE ALKALINITY	122	SM20-2320B
CALCIUM, TOTAL	92.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	17	EPA 410.4
CHLORIDE	296	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	37.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	1200	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.3	EPA 300
pH-FIELD (SU)	7.1	FIELD
pH-LAB (SU)	7.55	SM20-4500HB
POTASSIUM, TOTAL	6.9	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	87.4	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1838	FIELD
SPEC. COND., LAB (umhos/cm)	1380	SW846 9050A
SULFATE	75.8	EPA 300
ALKALINITY	122	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	896	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	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. FFMP017W

Sample Date 8/3/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

**FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

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General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP005W

☒ Well ☐ Spring ☐ Stream ☐ Other

☐ Upgradient/Upstream ☒ Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 10.67 "

Longitude: 76 ° 27 ' 21.3 "

Depth to Water Level: 70.23 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 1.70 ft

Elevation of Water Level: 467.17 ft./MSL

Sampling Depth: 135 ft

Volume of Water Column: 117.15 gal

Total Well Depth: 150 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 1.0

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

Spring Flow Rate: ☐ gpm

Sample Date (mm/dd/yy): 8/3/2022

Sample Collection Time: 11:13

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256290002 Final Lab Analysis CompletionDate: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP005W

Sample Date 8/3/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	56	SM20-2320B
CALCIUM, TOTAL	74.8	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	182	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	18.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	180	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1.4	EPA 300
pH-FIELD (SU)	6.7	FIELD
pH-LAB (SU)	7.17	SM20-4500HB
POTASSIUM, TOTAL	3.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	48.6	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1209	FIELD
SPEC. COND., LAB (umhos/cm)	937	SW846 9050A
SULFATE	66.7	EPA 300
ALKALINITY	56	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	694	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.6	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 8/3/2022

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.



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 19, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: 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: 27.98 ft

Measured from: Land Surface X TOC

Casing Stickup: 1.79 ft

Elevation of Water Level: 443.97 ft./MSL

Sampling Depth: 49 ft

Volume of Water Column: 68.41 gal

Total Well Depth: 132.79 ft

Sampling Method: X Pumped Bailed Grab

Well Purged: X Yes No

Well Volumes Purged: 2.3

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 8/3/2022

Sample Collection Time: 12:22

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 ☒ No ☐ If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256290003 Final Lab Analysis CompletionDate: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP019W

Sample Date 8/3/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	64	SM20-2320B
CALCIUM, TOTAL	59.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	87.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	5.6	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)	7.57	FIELD
pH-LAB (SU)	7.84	SM20-4500HB
POTASSIUM, TOTAL	0.83	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	10.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	643	FIELD
SPEC. COND., LAB (umhos/cm)	510	SW846 9050A
SULFATE	14.9	EPA 300
ALKALINITY	64	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	436	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.7	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. FFMP019W

Sample Date 8/3/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

**FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

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General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP018W

☒ Well ☐ Spring ☐ Stream ☐ Other

☐ Upgradient/Upstream ☒ Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 11.62 "

Longitude: 76 ° 27 ' 5.68 "

Depth to Water Level: 27.28 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 2.46 ft

Elevation of Water Level: 444.92 ft./MSL

Sampling Depth: 40 ft

Volume of Water Column: 15.76 gal

Total Well Depth: 51.43 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 3.6

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

Spring Flow Rate: ☐ gpm

Sample Date (mm/dd/yy): 8/3/2022

Sample Collection Time: 12:54

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256290004 Final Lab Analysis Completion Date: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP018W

Sample Date 8/3/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	21	SM20-2320B
CALCIUM, TOTAL	30.6	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	111	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	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	120	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	4.2	EPA 300
pH-FIELD (SU)	6.26	FIELD
pH-LAB (SU)	7.07	SM20-4500HB
POTASSIUM, TOTAL	4.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	33.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	747	FIELD
SPEC. COND., LAB (umhos/cm)	579	SW846 9050A
SULFATE	36.9	EPA 300
ALKALINITY	21	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	380	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.4	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. FFMP018W

Sample Date 8/3/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

**FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

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General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP029W

☒ Well ☐ Spring ☐ Stream ☐ Other

☐ Upgradient/Upstream ☒ Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 12.93 "

Longitude: 76 ° 27 ' 0.67 "

Depth to Water Level: 30.19 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 2.00 ft

Elevation of Water Level: 447.11 ft./MSL

Sampling Depth: 55 ft

Volume of Water Column: 41.58 gal

Total Well Depth: 58.5 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 2.4

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

Spring Flow Rate: ☐ gpm

Sample Date (mm/dd/yy): 8/3/2022

Sample Collection Time: 13:58

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256290005 Final Lab Analysis CompletionDate: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP029W

Sample Date 8/3/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	12	SM20-2320B
CALCIUM, TOTAL	13.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	66.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	9.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	26	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.5	EPA 300
pH-FIELD (SU)	6.45	FIELD
pH-LAB (SU)	6.77	SM20-4500HB
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	19.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	412	FIELD
SPEC. COND., LAB (umhos/cm)	317	SW846 9050A
SULFATE	6	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	252	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.8	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. FFMP029W

Sample Date 8/3/2022

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.

I.D. No 101389

Monitoring Point No. FFMP02DW

Sample Date 8/4/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	106	SM20-2320B
CALCIUM, TOTAL	128	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	408	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	780	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	20.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	440	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	5.9	EPA 300
pH-FIELD (SU)	7.16	FIELD
pH-LAB (SU)	8.18	SM20-4500HB
POTASSIUM, TOTAL	1.9	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	139	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	2408	FIELD
SPEC. COND., LAB (umhos/cm)	1800	SW846 9050A
SULFATE	33.1	EPA 300
ALKALINITY	106	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	1130	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.2	SW846 9060A
TOTAL PHENOLICS (ug/l)	8	SW846 9066
TURBIDITY (N.T.U.)	9.7	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 8/4/2022

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.

I.D. No 101389

Monitoring Point No. FFMP02SW

Sample Date 8/4/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	19	SM20-2320B
CALCIUM, TOTAL	20.9	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	106	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	210	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	7.8	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	23	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	13.9	EPA 300
pH-FIELD (SU)	5.37	FIELD
pH-LAB (SU)	7.15	SM20-4500HB
POTASSIUM, TOTAL	4.8	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	68.2	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	770	FIELD
SPEC. COND., LAB (umhos/cm)	647	SW846 9050A
SULFATE	41.6	EPA 300
ALKALINITY	19	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	368	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.9	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	13	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 8/4/2022

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.

I.D. No 101389

Monitoring Point No. FFMP035W

Sample Date 8/4/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	76	SM20-2320B
CALCIUM, TOTAL	56.2	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)	68	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	13.7	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	9.6	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	5.2	EPA 300
pH-FIELD (SU)	6.38	FIELD
pH-LAB (SU)	7.98	SM20-4500HB
POTASSIUM, TOTAL	3.7	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	36.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	967	FIELD
SPEC. COND., LAB (umhos/cm)	743	SW846 9050A
SULFATE	35.5	EPA 300
ALKALINITY	76	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	476	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	2.1	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	4.3	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP035W

Sample Date 8/4/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

**FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form 19, reference the item number and identify the date prepared. The "date prepared/revised" on any attached sheets needs to match the "date prepared/revised" on this page.

General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP031W

☒ Well ☐ Spring ☐ Stream ☐ Other

☒ 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: 66.62 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 2.38 ft

Elevation of Water Level: 546.04 ft./MSL

Sampling Depth: 130 ft

Volume of Water Column: 107.77 gal

Total Well Depth: 140 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 0.9

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

Spring Flow Rate: ☐ gpm

Sample Date (mm/dd/yy): 8/4/2022

Sample Collection Time: 12:31

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256290009 Final Lab Analysis CompletionDate: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP031W

Sample Date 8/4/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	77	SM20-2320B
CALCIUM, TOTAL	43.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	20.1	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	4100	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	3.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	340	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	8.13	FIELD
pH-LAB (SU)	8.19	SM20-4500HB
POTASSIUM, TOTAL	1.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	466	FIELD
SPEC. COND., LAB (umhos/cm)	341	SW846 9050A
SULFATE	45	EPA 300
ALKALINITY	77	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	192	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.95	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	30	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 8/4/2022

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.

I.D. No 101389

Monitoring Point No. FFMP002W

Sample Date 8/4/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	D6919-09
BICARBONATE ALKALINITY	5 ND	SM20-2320B
CALCIUM, TOTAL	17.8	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	15.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1300	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	6.7	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	240	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	18.4 E	EPA 300
pH-FIELD (SU)	5.34	FIELD
pH-LAB (SU)	5.59	SM20-4500HB
POTASSIUM, TOTAL	2.7	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	12.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	367	FIELD
SPEC. COND., LAB (umhos/cm)	266	SW846 9050A
SULFATE	11.4	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	188	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.78	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.49	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

Remaining quarterly samples only require total metals analysis.

I.D. No 101389

Monitoring Point No. FFMP002W

Sample Date 8/4/2022

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

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

T Please indicate detection limit if analyte is not detected.

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT**



Date Prepared/Revised
10/13/2022

DEP USE ONLY

Date Received

**FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

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General Reference: Section 273.284

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP032W

☒ Well ☐ Spring ☐ Stream ☐ Other

☒ 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: 49.39 ft

Measured from: ☐ Land Surface ☒ TOC

Casing Stickup: 2.06 ft

Elevation of Water Level: 544.70 ft./MSL

Sampling Depth: 62 ft

Volume of Water Column: 37.61 gal

Total Well Depth: 75 ft

Sampling Method: ☒ Pumped ☐ Bailed ☐ Grab

Well Purged: ☒ Yes ☐ No

Well Volumes Purged: 0.3

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

Spring Flow Rate: ☐ gpm

Sample Date (mm/dd/yy): 8/4/2022

Sample Collection Time: 13:49

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 ☒ No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3256290011 Final Lab Analysis CompletionDate: 8/25/2022

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP032W

Sample Date 8/4/2022

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	0.396	D6919-09
BICARBONATE ALKALINITY	69	SM20-2320B
CALCIUM, TOTAL	15.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	18.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	4500	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	5.4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	450	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	7.06	FIELD
pH-LAB (SU)	8.09	SM20-4500HB
POTASSIUM, TOTAL	1.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	12.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	292	FIELD
SPEC. COND., LAB (umhos/cm)	210	SW846 9050A
SULFATE	2 ND	EPA 300
ALKALINITY	69	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	104	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	64	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 8/4/2022

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 3rd QTR 2022 GWMP-FORM 19Q

Workorder 3255833

Report ID 189849 on 8/25/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 01, 2022.

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.

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

Susan Scherer

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

Susan Scherer
Project Coordinator

(ALS Digital Signature)



Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3255833001	FFMP015W	Ground Water	08/01/2022 09:59	08/01/2022 16:25	BGS	Analytical Laboratory Service
3255833002	FFMP033W	Ground Water	08/01/2022 11:24	08/01/2022 16:25	BGS	Analytical Laboratory Service
3255833003	FFMP034W	Ground Water	08/01/2022 13:25	08/01/2022 16:25	BGS	Analytical Laboratory Service
3255833004	FFMP036W	Ground Water	08/01/2022 15:09	08/01/2022 16:25	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	Reporting Detection Limit
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	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.
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.
4	The QC sample type MSD for method 420.4/9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 145 and the control limits were 90 to 110.
5	The QC sample type MS for method 420.4/9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 149 and the control limits were 90 to 110.



Detected Results Summary

Client Sample ID	FFMP015W	Collected	08/01/2022 09:59		
Lab Sample ID	3255833001	Lab Receipt	08/01/2022 16:25		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	61.40	Feet		Field	#
Dissolved Oxygen	8.00	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	576.40	Feet		Field	#
Flow Rate	2.03	gal/min		Field	#
Ground Water Elevation	515.00	ft/MSL		Field	#
Oxidation-Reduction Potential	286	mV		Field	#
pH, Field (SM4500B)	5.41	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	750	umhos/cm	1	Field	#
Temperature	15.85	Deg. C		Field	#
Total Well Depth	149.90	Feet		Field	#
Turbidity, Field	2	NTU	1	Field	#
Volume in Water Column	130.10	Gallons		Field	#
Water Level After Purge	121.31	Feet		Field	#
Well Volumes Purged	1.25	Vol		Field	#
METALS					
Calcium, Total	13.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	23.2	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.074	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	17.8	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	18	mg/L	5	SM2320B-2011	#
Alkalinity, Total	18	mg/L	5	SM2320B-2011	#
Chloride	32.7	mg/L	2.0	EPA 300.0	#
Nitrate-N	34.9	mg/L	1.0	EPA 300.0	#
pH	6.45	pH_Units		S4500HB-11	#
Specific Conductance	518	umhos/cm	1	SW846 9050A	#
Sulfate	32.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	342	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.4	mg/L	0.50	SW846 9060A	#



Detected Results Summary

Client Sample ID	FFMP033W	Collected	08/01/2022 11:24		
Lab Sample ID	3255833002	Lab Receipt	08/01/2022 16:25		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	20.41	Feet		Field	#
Dissolved Oxygen	1.04	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	516.52	Feet		Field	#
Flow Rate	1.71	gal/min		Field	#
Ground Water Elevation	496.11	ft/MSL		Field	#
Oxidation-Reduction Potential	99	mV		Field	#
pH, Field (SM4500B)	5.27	pH_Units		Field	#
Sample Depth	79.00	Feet		Field	#
Specific Conductance, Field	590	umhos/cm	1	Field	#
Temperature	15.46	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Turbidity, Field	12	NTU	1	Field	#
Volume in Water Column	117.00	Gallons		Field	#
Water Level After Purge	34.46	Feet		Field	#
Well Volumes Purged	1.10	Vol		Field	#
METALS					
Calcium, Total	26.6	mg/L	0.11	SW846 6010C	#
Iron, Total	7.4	mg/L	0.067	SW846 6010C	#
Magnesium, Total	8.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.40	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.9	mg/L	0.56	SW846 6010C	#
Sodium, Total	11.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	36	mg/L	5	SM2320B-2011	#
Alkalinity, Total	36	mg/L	5	SM2320B-2011	#
Ammonia-N	0.337	mg/L	0.100	ASTM D6919-09	#
Chloride	60.5	mg/L	2.0	EPA 300.0	#
Nitrate-N	11.2	mg/L	1.0	EPA 300.0	#
pH	6.51	pH_Units		S4500HB-11	#
Phenolics	0.009	mg/L	0.004	SW846 9066	#
Specific Conductance	391	umhos/cm	1	SW846 9050A	#
Sulfate	6.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	324	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.54	mg/L	0.50	SW846 9060A	#
Turbidity	15	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP034W	Collected	08/01/2022 13:25		
Lab Sample ID	3255833003	Lab Receipt	08/01/2022 16:25		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	11.08	Feet		Field	#
Dissolved Oxygen	2.28	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	472.88	Feet		Field	#
Flow Rate	1.25	gal/min		Field	#
Ground Water Elevation	461.80	ft/MSL		Field	#
Oxidation-Reduction Potential	145	mV		Field	#
pH, Field (SM4500B)	5.69	pH_Units		Field	#
Sample Depth	25.85	Feet		Field	#
Specific Conductance, Field	1299	umhos/cm	1	Field	#
Temperature	13.83	Deg. C		Field	#
Total Well Depth	121.00	Feet		Field	#
Turbidity, Field	3	NTU	1	Field	#
Volume in Water Column	161.58	Gallons		Field	#
Water Level After Purge	17.42	Feet		Field	#
Well Volumes Purged	0.70	Vol		Field	#
METALS					
Calcium, Total	51.9	mg/L	0.11	SW846 6010C	#
Iron, Total	4.4	mg/L	0.067	SW846 6010C	#
Magnesium, Total	18.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.097	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	36.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	38	mg/L	5	SM2320B-2011	#
Alkalinity, Total	38	mg/L	5	SM2320B-2011	#
Chloride	198	mg/L	10.0	EPA 300.0	#
Nitrate-N	9.4	mg/L	1.0	EPA 300.0	#
pH	7.17	pH_Units		S4500HB-11	#
Phenolics	0.02	mg/L	0.004	SW846 9066	#
Specific Conductance	935	umhos/cm	1	SW846 9050A	#
Sulfate	29.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	660	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.91	mg/L	0.50	SW846 9060A	#
Turbidity	89	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID		FFMP036W		Collected	08/01/2022 15:09
Lab Sample ID		3255833004		Lab Receipt	08/01/2022 16:25
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	45.93	Feet		Field	#
Elev Top MW Casing above MSL	478.23	Feet		Field	#
Flow Rate	1.59	gal/min		Field	#
Ground Water Elevation	432.30	ft/MSL		Field	#
Oxidation-Reduction Potential	-249	mV		Field	#
pH, Field (SM4500B)	8.03	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	515	umhos/cm	1	Field	#
Temperature	16.18	Deg. C		Field	#
Total Well Depth	142.60	Feet		Field	#
Turbidity, Field	3	NTU	1	Field	#
Volume in Water Column	142.10	Gallons		Field	#
Water Level After Purge	76.89	Feet		Field	#
Well Volumes Purged	0.78	Vol		Field	#
METALS					
Calcium, Total	36.6	mg/L	0.11	SW846 6010C	#
Iron, Total	2.6	mg/L	0.067	SW846 6010C	#
Magnesium, Total	3.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.13	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	10.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	90	mg/L	5	SM2320B-2011	#
Alkalinity, Total	90	mg/L	5	SM2320B-2011	#
Chloride	32.9	mg/L	2.0	EPA 300.0	#
pH	8.06	pH_Units		S4500HB-11	#
Phenolics	0.01	mg/L	0.004	SW846 9066	#
Specific Conductance	356	umhos/cm	1	SW846 9050A	#
Sulfate	30.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	224	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.80	mg/L	0.50	SW846 9060A	#
Turbidity	16	NTU	0.30	SM2130B-2011	#



Results

Client Sample ID	FFMP015W	Collected	08/01/2022 09:59
Lab Sample ID	3255833001	Lab Receipt	08/01/2022 16:25

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	61.40		Feet		Field	1	08/01/2022 09:59	BGS	D
Dissolved Oxygen	8.00		mg/L	0.01	Field	1	08/01/2022 09:59	BGS	D
Elev Top MW Casing above MSL	576.40		Feet		Field	1	08/01/2022 09:59	BGS	D
Flow Rate	2.03		gal/min		Field	1	08/01/2022 09:59	BGS	D
Ground Water Elevation	515.00		ft/MSL		Field	1	08/01/2022 09:59	BGS	D
Oxidation-Reduction Potential	286		mV		Field	1	08/01/2022 09:59	BGS	D
pH, Field (SM4500B)	5.41		pH_Units		Field	1	08/01/2022 09:59	BGS	D
Sample Depth	135.00		Feet		Field	1	08/01/2022 09:59	BGS	D
Specific Conductance, Field	750		umhos/cm	1	Field	1	08/01/2022 09:59	BGS	D
Temperature	15.85		Deg. C		Field	1	08/01/2022 09:59	BGS	D
Total Well Depth	149.90		Feet		Field	1	08/01/2022 09:59	BGS	D
Turbidity, Field	2		NTU	1	Field	1	08/01/2022 09:59	BGS	D
Volume in Water Column	130.10		Gallons		Field	1	08/01/2022 09:59	BGS	D
Water Level After Purge	121.31		Feet		Field	1	08/01/2022 09:59	BGS	D
Well Volumes Purged	1.25		Vol		Field	1	08/01/2022 09:59	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	13.2		mg/L	0.11	SW846 6010C	1	08/18/2022 04:00	SRT	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/25/2022 16:11	SRT	J2
Magnesium, Total	23.2		mg/L	0.11	SW846 6010C	1	08/18/2022 04:00	SRT	J1
Manganese, Total	0.074		mg/L	0.0056	SW846 6010C	1	08/25/2022 16:11	SRT	J2
Potassium, Total	2.7		mg/L	0.56	SW846 6010C	1	08/25/2022 16:11	SRT	J2
Sodium, Total	17.8		mg/L	0.56	SW846 6010C	1	08/18/2022 04:00	SRT	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	08/03/2022 02:35	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:35	PDK	H



Results

Client Sample ID	FFMP015W	Collected	08/01/2022 09:59
Lab Sample ID	3255833001	Lab Receipt	08/01/2022 16:25

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			87.6%	62 – 133		08/03/2022 02:35		
4-Bromofluorobenzene	460-00-4			101%	79 – 114		08/03/2022 02:35		
Dibromofluoromethane	1868-53-7			91%	78 – 116		08/03/2022 02:35		
Toluene-d8	2037-26-5			93%	76 – 127		08/03/2022 02:35		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	18		mg/L	5	SM2320B-2011	1	08/09/2022 14:42	BXD	B
Alkalinity, Total	18	1	mg/L	5	SM2320B-2011	1	08/09/2022 14:42	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/02/2022 19:41	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/04/2022 12:32	KMS	A
Chloride	32.7		mg/L	2.0	EPA 300.0	2	08/02/2022 18:26	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/02/2022 18:26	GJB	B
Nitrate-N	34.9	E,2	mg/L	1.0	EPA 300.0	2	08/02/2022 18:26	GJB	B
pH	6.45	3	pH_Units		S4500HB-11	1	08/09/2022 14:42	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/04/2022 12:10	AKH	G
Specific Conductance	518		umhos/cm	1	SW846 9050A	1	08/08/2022 16:15	BXD	B
Sulfate	32.4		mg/L	2.0	EPA 300.0	2	08/02/2022 18:26	GJB	B
Total Dissolved Solids	342		mg/L	25	S2540C-11	1	08/03/2022 08:14	SMS	B
Total Organic Carbon (TOC)	1.4		mg/L	0.50	SW846 9060A	1	08/02/2022 21:32	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	08/03/2022 07:13	LXZ	B



Results

Client Sample ID	FFMP033W	Collected	08/01/2022 11:24
Lab Sample ID	3255833002	Lab Receipt	08/01/2022 16:25

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	20.41		Feet		Field	1	08/01/2022 11:36	BGS	D
Dissolved Oxygen	1.04		mg/L	0.01	Field	1	08/01/2022 11:36	BGS	D
Elev Top MW Casing above MSL	516.52		Feet		Field	1	08/01/2022 11:36	BGS	D
Flow Rate	1.71		gal/min		Field	1	08/01/2022 11:36	BGS	D
Ground Water Elevation	496.11		ft/MSL		Field	1	08/01/2022 11:36	BGS	D
Oxidation-Reduction Potential	99		mV		Field	1	08/01/2022 11:36	BGS	D
pH, Field (SM4500B)	5.27		pH_Units		Field	1	08/01/2022 11:36	BGS	D
Sample Depth	79.00		Feet		Field	1	08/01/2022 11:36	BGS	D
Specific Conductance, Field	590		umhos/cm	1	Field	1	08/01/2022 11:36	BGS	D
Temperature	15.46		Deg. C		Field	1	08/01/2022 11:36	BGS	D
Total Well Depth	100.00		Feet		Field	1	08/01/2022 11:36	BGS	D
Turbidity, Field	12		NTU	1	Field	1	08/01/2022 11:36	BGS	D
Volume in Water Column	117.00		Gallons		Field	1	08/01/2022 11:36	BGS	D
Water Level After Purge	34.46		Feet		Field	1	08/01/2022 11:36	BGS	D
Well Volumes Purged	1.10		Vol		Field	1	08/01/2022 11:36	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	26.6		mg/L	0.11	SW846 6010C	1	08/18/2022 04:03	SRT	J1
Iron, Total	7.4		mg/L	0.067	SW846 6010C	1	08/25/2022 16:15	SRT	J2
Magnesium, Total	8.8		mg/L	0.11	SW846 6010C	1	08/18/2022 04:03	SRT	J1
Manganese, Total	0.40		mg/L	0.0056	SW846 6010C	1	08/25/2022 16:15	SRT	J2
Potassium, Total	1.9		mg/L	0.56	SW846 6010C	1	08/25/2022 16:15	SRT	J2
Sodium, Total	11.9		mg/L	0.56	SW846 6010C	1	08/18/2022 04:03	SRT	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	08/03/2022 02:58	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 02:58	PDK	H



Results

Client Sample ID	FFMP033W	Collected	08/01/2022 11:24
Lab Sample ID	3255833002	Lab Receipt	08/01/2022 16:25

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			87.3%	62 – 133		08/03/2022 02:58		
4-Bromofluorobenzene	460-00-4			98.5%	79 – 114		08/03/2022 02:58		
Dibromofluoromethane	1868-53-7			92.4%	78 – 116		08/03/2022 02:58		
Toluene-d8	2037-26-5			93.8%	76 – 127		08/03/2022 02:58		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	36		mg/L	5	SM2320B-2011	1	08/09/2022 14:53	BXD	B
Alkalinity, Total	36	1	mg/L	5	SM2320B-2011	1	08/09/2022 14:53	BXD	B
Ammonia-N	0.337		mg/L	0.100	ASTM D6919-09	10	08/02/2022 22:15	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/04/2022 12:32	KMS	A
Chloride	60.5		mg/L	2.0	EPA 300.0	2	08/02/2022 18:36	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/02/2022 18:36	GJB	B
Nitrate-N	11.2	E,2	mg/L	1.0	EPA 300.0	2	08/02/2022 18:36	GJB	B
pH	6.51	3	pH_Units		S4500HB-11	1	08/09/2022 14:53	BXD	B
Phenolics	0.009		mg/L	0.004	SW846 9066	1	08/04/2022 12:14	AKH	G
Specific Conductance	391		umhos/cm	1	SW846 9050A	1	08/19/2022 15:43	BXD	B
Sulfate	6.0		mg/L	2.0	EPA 300.0	2	08/02/2022 18:36	GJB	B
Total Dissolved Solids	324		mg/L	25	S2540C-11	1	08/03/2022 08:14	SMS	B
Total Organic Carbon (TOC)	0.54		mg/L	0.50	SW846 9060A	1	08/02/2022 21:32	PAG	E
Turbidity	15		NTU	0.30	SM2130B-2011	1	08/03/2022 07:13	LXZ	B



Results

Client Sample ID	FFMP034W	Collected	08/01/2022 13:25
Lab Sample ID	3255833003	Lab Receipt	08/01/2022 16:25

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	11.08		Feet		Field	1	08/01/2022 13:25	BGS	D
Dissolved Oxygen	2.28		mg/L	0.01	Field	1	08/01/2022 13:25	BGS	D
Elev Top MW Casing above MSL	472.88		Feet		Field	1	08/01/2022 13:25	BGS	D
Flow Rate	1.25		gal/min		Field	1	08/01/2022 13:25	BGS	D
Ground Water Elevation	461.80		ft/MSL		Field	1	08/01/2022 13:25	BGS	D
Oxidation-Reduction Potential	145		mV		Field	1	08/01/2022 13:25	BGS	D
pH, Field (SM4500B)	5.69		pH_Units		Field	1	08/01/2022 13:25	BGS	D
Sample Depth	25.85		Feet		Field	1	08/01/2022 13:25	BGS	D
Specific Conductance, Field	1299		umhos/cm	1	Field	1	08/01/2022 13:25	BGS	D
Temperature	13.83		Deg. C		Field	1	08/01/2022 13:25	BGS	D
Total Well Depth	121.00		Feet		Field	1	08/01/2022 13:25	BGS	D
Turbidity, Field	3		NTU	1	Field	1	08/01/2022 13:25	BGS	D
Volume in Water Column	161.58		Gallons		Field	1	08/01/2022 13:25	BGS	D
Water Level After Purge	17.42		Feet		Field	1	08/01/2022 13:25	BGS	D
Well Volumes Purged	0.70		Vol		Field	1	08/01/2022 13:25	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	51.9		mg/L	0.11	SW846 6010C	1	08/18/2022 04:07	SRT	J1
Iron, Total	4.4		mg/L	0.067	SW846 6010C	1	08/25/2022 16:18	SRT	J2
Magnesium, Total	18.4		mg/L	0.11	SW846 6010C	1	08/18/2022 04:07	SRT	J1
Manganese, Total	0.097		mg/L	0.0056	SW846 6010C	1	08/25/2022 16:18	SRT	J2
Potassium, Total	3.1		mg/L	0.56	SW846 6010C	1	08/25/2022 16:18	SRT	J2
Sodium, Total	36.7		mg/L	0.56	SW846 6010C	1	08/18/2022 04:07	SRT	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	08/03/2022 03:20	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:20	PDK	H



Results

Client Sample ID	FFMP034W	Collected	08/01/2022 13:25
Lab Sample ID	3255833003	Lab Receipt	08/01/2022 16:25

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			87.8%	62 – 133		08/03/2022 03:20		
4-Bromofluorobenzene	460-00-4			98.6%	79 – 114		08/03/2022 03:20		
Dibromofluoromethane	1868-53-7			92%	78 – 116		08/03/2022 03:20		
Toluene-d8	2037-26-5			92.4%	76 – 127		08/03/2022 03:20		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	38		mg/L	5	SM2320B-2011	1	08/09/2022 15:04	BXD	B
Alkalinity, Total	38	1	mg/L	5	SM2320B-2011	1	08/09/2022 15:04	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/02/2022 21:47	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/04/2022 12:32	KMS	A
Chloride	198		mg/L	10.0	EPA 300.0	10	08/10/2022 21:19	M1D	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/02/2022 18:47	GJB	B
Nitrate-N	9.4		mg/L	1.0	EPA 300.0	2	08/02/2022 18:47	GJB	B
pH	7.17	3	pH_Units		S4500HB-11	1	08/09/2022 15:04	BXD	B
Phenolics	0.02		mg/L	0.004	SW846 9066	1	08/04/2022 12:17	AKH	G
Specific Conductance	935		umhos/cm	1	SW846 9050A	1	08/19/2022 15:43	BXD	B
Sulfate	29.5		mg/L	2.0	EPA 300.0	2	08/02/2022 18:47	GJB	B
Total Dissolved Solids	660		mg/L	25	S2540C-11	1	08/03/2022 08:14	SMS	B
Total Organic Carbon (TOC)	0.91		mg/L	0.50	SW846 9060A	1	08/02/2022 21:32	PAG	E
Turbidity	89		NTU	0.30	SM2130B-2011	1	08/03/2022 07:13	LXZ	B



Results

Client Sample ID	FFMP036W	Collected	08/01/2022 15:09
Lab Sample ID	3255833004	Lab Receipt	08/01/2022 16:25

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	45.93		Feet		Field	1	08/01/2022 15:09	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	08/01/2022 15:09	BGS	D
Elev Top MW Casing above MSL	478.23		Feet		Field	1	08/01/2022 15:09	BGS	D
Flow Rate	1.59		gal/min		Field	1	08/01/2022 15:09	BGS	D
Ground Water Elevation	432.30		ft/MSL		Field	1	08/01/2022 15:09	BGS	D
Oxidation-Reduction Potential	-249		mV		Field	1	08/01/2022 15:09	BGS	D
pH, Field (SM4500B)	8.03		pH_Units		Field	1	08/01/2022 15:09	BGS	D
Sample Depth	135.00		Feet		Field	1	08/01/2022 15:09	BGS	D
Specific Conductance, Field	515		umhos/cm	1	Field	1	08/01/2022 15:09	BGS	D
Temperature	16.18		Deg. C		Field	1	08/01/2022 15:09	BGS	D
Total Well Depth	142.60		Feet		Field	1	08/01/2022 15:09	BGS	D
Turbidity, Field	3		NTU	1	Field	1	08/01/2022 15:09	BGS	D
Volume in Water Column	142.10		Gallons		Field	1	08/01/2022 15:09	BGS	D
Water Level After Purge	76.89		Feet		Field	1	08/01/2022 15:09	BGS	D
Well Volumes Purged	0.78		Vol		Field	1	08/01/2022 15:09	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	36.6		mg/L	0.11	SW846 6010C	1	08/18/2022 04:10	SRT	J1
Iron, Total	2.6		mg/L	0.067	SW846 6010C	1	08/25/2022 16:37	SRT	J2
Magnesium, Total	3.6		mg/L	0.11	SW846 6010C	1	08/18/2022 04:10	SRT	J1
Manganese, Total	0.13		mg/L	0.0056	SW846 6010C	1	08/25/2022 16:37	SRT	J2
Potassium, Total	1.2		mg/L	0.56	SW846 6010C	1	08/25/2022 16:37	SRT	J2
Sodium, Total	10.9		mg/L	0.56	SW846 6010C	1	08/18/2022 04:10	SRT	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	08/03/2022 03:42	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/03/2022 03:42	PDK	H



Results

Client Sample ID	FFMP036W	Collected	08/01/2022 15:09
Lab Sample ID	3255833004	Lab Receipt	08/01/2022 16:25

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			86.2%	62 – 133		08/03/2022 03:42		
4-Bromofluorobenzene	460-00-4			103%	79 – 114		08/03/2022 03:42		
Dibromofluoromethane	1868-53-7			90.2%	78 – 116		08/03/2022 03:42		
Toluene-d8	2037-26-5			91.3%	76 – 127		08/03/2022 03:42		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	90		mg/L	5	SM2320B-2011	1	08/09/2022 15:13	BXD	B
Alkalinity, Total	90	1	mg/L	5	SM2320B-2011	1	08/09/2022 15:13	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/02/2022 19:13	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/04/2022 12:32	KMS	A
Chloride	32.9		mg/L	2.0	EPA 300.0	2	08/02/2022 18:57	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/02/2022 18:57	GJB	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	08/02/2022 18:57	GJB	B
pH	8.06	3	pH_Units		S4500HB-11	1	08/09/2022 15:13	BXD	B
Phenolics	0.01	4,5	mg/L	0.004	SW846 9066	1	08/04/2022 12:20	AKH	G
Specific Conductance	356		umhos/cm	1	SW846 9050A	1	08/19/2022 15:43	BXD	B
Sulfate	30.0		mg/L	2.0	EPA 300.0	2	08/02/2022 18:57	GJB	B
Total Dissolved Solids	224		mg/L	25	S2540C-11	1	08/03/2022 08:14	SMS	B
Total Organic Carbon (TOC)	0.80		mg/L	0.50	SW846 9060A	1	08/02/2022 21:32	PAG	E
Turbidity	16		NTU	0.30	SM2130B-2011	1	08/03/2022 07:13	LXZ	B



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3255833001	FFMP015W	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 6010C	SW846 3015	
		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	420.4/9066	
3255833002	FFMP033W	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 6010C	SW846 3015	
		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	420.4/9066	
3255833003	FFMP034W	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	



Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3255833004	FFMP036W	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 6010C	SW846 3015	
		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	420.4/9066	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3255833001	FFMP015W	N/A	N/A	N/A		Field	869647
		SW846 3015	872952	08/22/2022 19:46	ANN	SW846 6010C	874032
		SW846 3015	868316	08/04/2022 00:07	ANN	SW846 6010C	871997
		N/A	N/A	N/A		SW846 8260B	868336
		N/A	N/A	N/A		ASTM D6919-09	868242
		N/A	N/A	N/A		EPA 300.0	868202
		N/A	N/A	N/A		EPA 410.4	868761
		N/A	N/A	N/A		S2540C-11	868135
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868361
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	869745
		N/A	N/A	N/A		SW846 9060A	868237
		420.4/9066	868576	08/04/2022 07:23	AKH	SW846 9066	868754
3255833002	FFMP033W	N/A	N/A	N/A		Field	869647
		SW846 3015	872952	08/22/2022 19:46	ANN	SW846 6010C	874032
		SW846 3015	868316	08/04/2022 00:07	ANN	SW846 6010C	871997
		N/A	N/A	N/A		SW846 8260B	868336
		N/A	N/A	N/A		ASTM D6919-09	868246
		N/A	N/A	N/A		EPA 300.0	868202
		N/A	N/A	N/A		EPA 410.4	868761
		N/A	N/A	N/A		S2540C-11	868135
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868361
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	872767
		N/A	N/A	N/A		SW846 9060A	868237
		420.4/9066	868576	08/04/2022 07:23	AKH	SW846 9066	868754
3255833003	FFMP034W	N/A	N/A	N/A		Field	869647
		SW846 3015	868316	08/04/2022 00:07	ANN	SW846 6010C	871997
		SW846 3015	872952	08/22/2022 19:46	ANN	SW846 6010C	874032
		N/A	N/A	N/A		SW846 8260B	868336
		N/A	N/A	N/A		ASTM D6919-09	868246
		N/A	N/A	N/A		EPA 300.0	868202
		N/A	N/A	N/A		EPA 300.0	869973
		N/A	N/A	N/A		EPA 410.4	868761
		N/A	N/A	N/A		S2540C-11	868135
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868361
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	872767
		N/A	N/A	N/A		SW846 9060A	868237
		420.4/9066	868576	08/04/2022 07:23	AKH	SW846 9066	868754
3255833004	FFMP036W	N/A	N/A	N/A		Field	869647
		SW846 3015	872952	08/22/2022 19:46	ANN	SW846 6010C	874032
		SW846 3015	868316	08/04/2022 00:07	ANN	SW846 6010C	871997
		N/A	N/A	N/A		SW846 8260B	868336
		N/A	N/A	N/A		ASTM D6919-09	868242
		N/A	N/A	N/A		EPA 300.0	868202
		N/A	N/A	N/A		EPA 410.4	868761
		N/A	N/A	N/A		S2540C-11	868135
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868361
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	872767
		N/A	N/A	N/A		SW846 9060A	868237
		420.4/9066	868578	08/04/2022 07:17	AKH	SW846 9066	868754



34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5541 • Fax: 717-944-1430 • www.alsglobal.com

301 Filling Mill Road • Middletown, PA 17057 • 717-944-5541 • Fax: 717-944-1430

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 (GWMF)

Bill To: Lancaster County Solid Waste MA

TAT ☒ Normal-Standard TAT is 10-12 business days.

☐ Rush-Subject to ALS approval and surcharges.

Date Required: Approved By: _____

Email? ☒ Y ☒ N dbrown@LCSWMA.com

Fax? ☒ Y ☒ N No: (717) 397-9973

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

1. FFMP015W Sample Date 08/01/22 Time 0959

2. FFMP033W Sample Date 08/01/22 Time 1124

3. FFMP034W Sample Date 08/01/22 Time 1325

4. FFMP036W Sample Date 08/01/22 Time 1509

5. Sample Date Time

6. Sample Date Time

7. Sample Date Time

8. Sample Date Time

9. Sample Date Time

10. Sample Date Time

Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):

Date Time

Received By / Company Name

3. Relinquished By / Company Name

5. Sample Date Time

7. Sample Date Time

9. Sample Date Time

10. Sample Date Time

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

ALS ENVIRONMENTAL CORPORATION

Generated by ALS

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

3255833
Logged By: SLS
PM: SJB



3255833

Logged By: SLS
PM: SJB



1 of 1

Receiving Lab)

Cooler Temp: 5 Therm ID: 569

No. of Containers: V N Initial

Temp Taken By: _____

WO Temp (°C): _____

Therm ID: _____

Receipt Info Completed By: _____

Cooler Custody Seal Intact _____

Sample Custody Seal Intact _____

Received on Ice _____

Cooler & Samples Intact _____

Correct Containers Provided _____

Sample Label/COC Agree _____

Adequate Sample Volumes _____

VOA Headspace Present _____

Voa Trip Blank _____

NUS 4 Days? _____

Rad Screen (uCi) _____

Courier/Tracking #: _____

SDWA Compliance _____

PWSID _____

WV Containers 0-6°C _____

ALS Field Services: ☐ Pickup ☐ Labor

☐ Composite Sampling ☐ Rental Equipment

☐ Other:

Standard _____

CLP-like _____

USACE _____

Navy _____

USACE _____

Reportable to PADEP? _____

Yes _____

PWSID # _____

EDDS: Format Type _____

State Samples Collected In _____

NY _____

NJ _____

PA _____

NC _____



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 3rd QTR 2022 GWMP-FORM 19Q

Workorder 3256028

Report ID 189041 on 8/23/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 02, 2022.

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.

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

Susan Scherer

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

Susan Scherer
Project Coordinator

(ALS Digital Signature)



Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3256028001	FFMP03AW	Ground Water	08/02/2022 10:44	08/02/2022 16:20	BGS	Analytical Laboratory Service
3256028002	FFMP30RW	Ground Water	08/02/2022 12:07	08/02/2022 16:20	BGS	Analytical Laboratory Service
3256028003	FFMP04AW	Ground Water	08/02/2022 13:22	08/02/2022 16:20	BGS	Analytical Laboratory Service
3256028004	FFMP26RW	Ground Water	08/02/2022 14:22	08/02/2022 16:20	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	Reporting Detection Limit
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 QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Benzene. The % Recovery was reported as 126 and the control limits were 80 to 124.
2	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Benzene. The % Recovery was reported as 126 and the control limits were 80 to 124.
3	The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte Benzene. The % Recovery was reported as 127 and the control limits were 80 to 124.
4	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 131 and the control limits were 63 to 128.
5	The QC sample type MSD for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 132 and the control limits were 63 to 128.
6	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
7	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.
8	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.
9	The QC sample type MSD for method 420.4/9066 was outside the control limits for the analyte Phenolics. The RPD was reported as 11.6 and the upper control limit is 10.
10	The QC sample type MS for method 420.4/9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 127 and the control limits were 90 to 110.
11	The QC sample type MSD for method 420.4/9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 113 and the control limits were 90 to 110.
12	The concentration of this analyte was greater than 4 times the concentration of the spike added to the matrix spike. According to protocol, the calculation for percent recovery of the matrix spike is not valid.



Detected Results Summary

Client Sample ID	FFMP03AW	Collected	08/02/2022 10:44		
Lab Sample ID	3256028001	Lab Receipt	08/02/2022 16:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	51.98	Feet		Field	#
Dissolved Oxygen	0.93	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	590.90	Feet		Field	#
Flow Rate	1.76	gal/min		Field	#
Ground Water Elevation	538.92	ft/MSL		Field	#
Oxidation-Reduction Potential	391	mV		Field	#
pH, Field (SM4500B)	4.07	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	550	umhos/cm	1	Field	#
Temperature	14.86	Deg. C		Field	#
Total Well Depth	148.40	Feet		Field	#
Volume in Water Column	141.74	Gallons		Field	#
Water Level After Purge	85.95	Feet		Field	#
Well Volumes Purged	0.87	Vol		Field	#
METALS					
Calcium, Total	19.5	mg/L	0.11	SW846 6010C	#
Iron, Total	0.16	mg/L	0.067	SW846 6010C	#
Magnesium, Total	14.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.36	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.1	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	16	mg/L	5	SM2320B-2011	#
Alkalinity, Total	16	mg/L	5	SM2320B-2011	#
Chloride	36.2	mg/L	2.0	EPA 300.0	#
Nitrate-N	22.1	mg/L	1.0	EPA 300.0	#
pH	6.33	pH_Units		S4500HB-11	#
Specific Conductance	351	umhos/cm	1	SW846 9050A	#
Sulfate	2.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	286	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.55	mg/L	0.50	SW846 9060A	#



Detected Results Summary

Client Sample ID	FFMP30RW	Collected	08/02/2022 12:07		
Lab Sample ID	3256028002	Lab Receipt	08/02/2022 16:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	36.49	Feet		Field	#
Dissolved Oxygen	1.40	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	562.30	Feet		Field	#
Flow Rate	1.97	gal/min		Field	#
Ground Water Elevation	525.81	ft/MSL		Field	#
Oxidation-Reduction Potential	199	mV		Field	#
pH, Field (SM4500B)	6.44	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	1246	umhos/cm	1	Field	#
Temperature	14.05	Deg. C		Field	#
Total Well Depth	94.20	Feet		Field	#
Turbidity, Field	4	NTU	1	Field	#
Volume in Water Column	84.83	Gallons		Field	#
Water Level After Purge	59.39	Feet		Field	#
Well Volumes Purged	1.39	Vol		Field	#
METALS					
Calcium, Total	37.4	mg/L	0.11	SW846 6010C	#
Iron, Total	0.26	mg/L	0.067	SW846 6010C	#
Magnesium, Total	15.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	2.3	mg/L	0.0056	SW846 6010C	#
Potassium, Total	5.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	95.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	31	mg/L	5	SM2320B-2011	#
Alkalinity, Total	31	mg/L	5	SM2320B-2011	#
Chloride	204	mg/L	10.0	EPA 300.0	#
Nitrate-N	5.2	mg/L	1.0	EPA 300.0	#
pH	6.64	pH_Units		S4500HB-11	#
Specific Conductance	882	umhos/cm	1	SW846 9050A	#
Sulfate	24.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	512	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.84	mg/L	0.50	SW846 9060A	#
Turbidity	5.1	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP04AW	Collected	08/02/2022 13:22		
Lab Sample ID	3256028003	Lab Receipt	08/02/2022 16:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	36.84	Feet		Field	#
Dissolved Oxygen	0.02	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	560.72	Feet		Field	#
Flow Rate	1.92	gal/min		Field	#
Ground Water Elevation	523.88	ft/MSL		Field	#
Oxidation-Reduction Potential	19	mV		Field	#
pH, Field (SM4500B)	8.05	pH_Units		Field	#
Sample Depth	146.00	Feet		Field	#
Specific Conductance, Field	2285	umhos/cm	1	Field	#
Temperature	14.52	Deg. C		Field	#
Total Well Depth	148.50	Feet		Field	#
Volume in Water Column	164.14	Gallons		Field	#
Water Level After Purge	80.75	Feet		Field	#
Well Volumes Purged	0.70	Vol		Field	#
METALS					
Calcium, Total	146	mg/L	0.11	SW846 6010C	#
Magnesium, Total	24.0	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.31	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	81.1	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	191	mg/L	5	SM2320B-2011	#
Alkalinity, Total	191	mg/L	5	SM2320B-2011	#
Chloride	321	mg/L	10.0	EPA 300.0	#
pH	7.94	pH_Units		S4500HB-11	#
Phenolics	0.01	mg/L	0.004	SW846 9066	#
Specific Conductance	1500	umhos/cm	1	SW846 9050A	#
Sulfate	48.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	1050	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.1	mg/L	0.50	SW846 9060A	#
Turbidity	0.45	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP26RW	Collected	08/02/2022 14:22		
Lab Sample ID	3256028004	Lab Receipt	08/02/2022 16:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	79.75	Feet		Field	#
Dissolved Oxygen	0.01	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	547.40	Feet		Field	#
Flow Rate	1.10	gal/min		Field	#
Ground Water Elevation	467.65	ft/MSL		Field	#
Oxidation-Reduction Potential	286	mV		Field	#
pH, Field (SM4500B)	6.53	pH_Units		Field	#
Sample Depth	105.00	Feet		Field	#
Specific Conductance, Field	1388	umhos/cm	1	Field	#
Temperature	15.59	Deg. C		Field	#
Total Well Depth	118.30	Feet		Field	#
Volume in Water Column	56.67	Gallons		Field	#
Water Level After Purge	86.73	Feet		Field	#
Well Volumes Purged	1.16	Vol		Field	#
METALS					
Calcium, Total	69.5	mg/L	0.11	SW846 6010C	#
Magnesium, Total	18.0	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.65	mg/L	0.0056	SW846 6010C	#
Potassium, Total	7.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	56.8	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	54	mg/L	5	SM2320B-2011	#
Alkalinity, Total	54	mg/L	5	SM2320B-2011	#
Chloride	183	mg/L	10.0	EPA 300.0	#
Nitrate-N	1.2	mg/L	1.0	EPA 300.0	#
pH	7.22	pH_Units		S4500HB-11	#
Phenolics	0.03	mg/L	0.004	SW846 9066	#
Specific Conductance	907	umhos/cm	1	SW846 9050A	#
Sulfate	86.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	590	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.8	mg/L	0.50	SW846 9060A	#
Turbidity	1.1	NTU	0.30	SM2130B-2011	#



Results

Client Sample ID	FFMP03AW	Collected	08/02/2022 10:44
Lab Sample ID	3256028001	Lab Receipt	08/02/2022 16:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	51.98		Feet		Field	1	08/02/2022 10:44	BGS	D
Dissolved Oxygen	0.93		mg/L	0.01	Field	1	08/02/2022 10:44	BGS	D
Elev Top MW Casing above MSL	590.90		Feet		Field	1	08/02/2022 10:44	BGS	D
Flow Rate	1.76		gal/min		Field	1	08/02/2022 10:44	BGS	D
Ground Water Elevation	538.92		ft/MSL		Field	1	08/02/2022 10:44	BGS	D
Oxidation-Reduction Potential	391		mV		Field	1	08/02/2022 10:44	BGS	D
pH, Field (SM4500B)	4.07		pH_Units		Field	1	08/02/2022 10:44	BGS	D
Sample Depth	130.00		Feet		Field	1	08/02/2022 10:44	BGS	D
Specific Conductance, Field	550		umhos/cm	1	Field	1	08/02/2022 10:44	BGS	D
Temperature	14.86		Deg. C		Field	1	08/02/2022 10:44	BGS	D
Total Well Depth	148.40		Feet		Field	1	08/02/2022 10:44	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	08/02/2022 10:44	BGS	D
Volume in Water Column	141.74		Gallons		Field	1	08/02/2022 10:44	BGS	D
Water Level After Purge	85.95		Feet		Field	1	08/02/2022 10:44	BGS	D
Well Volumes Purged	0.87		Vol		Field	1	08/02/2022 10:44	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	19.5		mg/L	0.11	SW846 6010C	1	08/20/2022 13:59	SRT	J1
Iron, Total	0.16		mg/L	0.067	SW846 6010C	1	08/20/2022 13:59	SRT	J1
Magnesium, Total	14.1		mg/L	0.11	SW846 6010C	1	08/20/2022 13:59	SRT	J1
Manganese, Total	0.36		mg/L	0.0056	SW846 6010C	1	08/20/2022 13:59	SRT	J1
Potassium, Total	1.5		mg/L	0.56	SW846 6010C	1	08/20/2022 13:59	SRT	J1
Sodium, Total	13.1		mg/L	0.56	SW846 6010C	1	08/20/2022 13:59	SRT	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	08/04/2022 04:28	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
1,1-Dichloroethene	ND	ND,4,5	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
Benzene	ND	ND,1,2,3	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:28	PDK	H



Results

Client Sample ID	FFMP03AW	Collected	08/02/2022 10:44
Lab Sample ID	3256028001	Lab Receipt	08/02/2022 16:20

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			88%	62 – 133		08/04/2022 04:28		
4-Bromofluorobenzene	460-00-4			99.9%	79 – 114		08/04/2022 04:28		
Dibromofluoromethane	1868-53-7			91.8%	78 – 116		08/04/2022 04:28		
Toluene-d8	2037-26-5			93.3%	76 – 127		08/04/2022 04:28		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	16		mg/L	5	SM2320B-2011	1	08/03/2022 17:47	BXD	B
Alkalinity, Total	16	6	mg/L	5	SM2320B-2011	1	08/03/2022 17:47	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/04/2022 08:48	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/04/2022 12:32	KMS	A
Chloride	36.2		mg/L	2.0	EPA 300.0	2	08/03/2022 20:12	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/03/2022 20:12	GJB	B
Nitrate-N	22.1	E,7	mg/L	1.0	EPA 300.0	2	08/03/2022 20:12	GJB	B
pH	6.33	8	pH_Units		S4500HB-11	1	08/03/2022 17:47	BXD	B
Phenolics	ND	ND,9,10, 11	mg/L	0.004	SW846 9066	1	08/04/2022 20:13	AKH	G
Specific Conductance	351		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	2.1		mg/L	2.0	EPA 300.0	2	08/03/2022 20:12	GJB	B
Total Dissolved Solids	286		mg/L	25	S2540C-11	1	08/05/2022 07:56	SMS	B
Total Organic Carbon (TOC)	0.55		mg/L	0.50	SW846 9060A	1	08/04/2022 09:07	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	08/03/2022 07:13	LXZ	B



Results

Client Sample ID	FFMP30RW	Collected	08/02/2022 12:07
Lab Sample ID	3256028002	Lab Receipt	08/02/2022 16:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	36.49		Feet		Field	1	08/02/2022 12:07	BGS	D
Dissolved Oxygen	1.40		mg/L	0.01	Field	1	08/02/2022 12:07	BGS	D
Elev Top MW Casing above MSL	562.30		Feet		Field	1	08/02/2022 12:07	BGS	D
Flow Rate	1.97		gal/min		Field	1	08/02/2022 12:07	BGS	D
Ground Water Elevation	525.81		ft/MSL		Field	1	08/02/2022 12:07	BGS	D
Oxidation-Reduction Potential	199		mV		Field	1	08/02/2022 12:07	BGS	D
pH, Field (SM4500B)	6.44		pH_Units		Field	1	08/02/2022 12:07	BGS	D
Sample Depth	85.00		Feet		Field	1	08/02/2022 12:07	BGS	D
Specific Conductance, Field	1246		umhos/cm	1	Field	1	08/02/2022 12:07	BGS	D
Temperature	14.05		Deg. C		Field	1	08/02/2022 12:07	BGS	D
Total Well Depth	94.20		Feet		Field	1	08/02/2022 12:07	BGS	D
Turbidity, Field	4		NTU	1	Field	1	08/02/2022 12:07	BGS	D
Volume in Water Column	84.83		Gallons		Field	1	08/02/2022 12:07	BGS	D
Water Level After Purge	59.39		Feet		Field	1	08/02/2022 12:07	BGS	D
Well Volumes Purged	1.39		Vol		Field	1	08/02/2022 12:07	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	37.4		mg/L	0.11	SW846 6010C	1	08/20/2022 14:03	SRT	J1
Iron, Total	0.26		mg/L	0.067	SW846 6010C	1	08/20/2022 14:03	SRT	J1
Magnesium, Total	15.7		mg/L	0.11	SW846 6010C	1	08/20/2022 14:03	SRT	J1
Manganese, Total	2.3		mg/L	0.0056	SW846 6010C	1	08/20/2022 14:03	SRT	J1
Potassium, Total	5.4		mg/L	0.56	SW846 6010C	1	08/20/2022 14:03	SRT	J1
Sodium, Total	95.6		mg/L	0.56	SW846 6010C	1	08/20/2022 14:03	SRT	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	08/04/2022 04:50	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
Benzene	ND	ND,1	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 04:50	PDK	H



Results

Client Sample ID	FFMP30RW	Collected	08/02/2022 12:07
Lab Sample ID	3256028002	Lab Receipt	08/02/2022 16:20

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			87.2%	62 – 133		08/04/2022 04:50		
4-Bromofluorobenzene	460-00-4			102%	79 – 114		08/04/2022 04:50		
Dibromofluoromethane	1868-53-7			89.1%	78 – 116		08/04/2022 04:50		
Toluene-d8	2037-26-5			92.2%	76 – 127		08/04/2022 04:50		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	31		mg/L	5	SM2320B-2011	1	08/03/2022 17:58	BXD	B
Alkalinity, Total	31	6	mg/L	5	SM2320B-2011	1	08/03/2022 17:58	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/04/2022 09:02	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/04/2022 12:32	KMS	A
Chloride	204		mg/L	10.0	EPA 300.0	10	08/11/2022 00:03	M1D	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/03/2022 20:23	GJB	B
Nitrate-N	5.2		mg/L	1.0	EPA 300.0	2	08/03/2022 20:23	GJB	B
pH	6.64	8	pH_Units		S4500HB-11	1	08/03/2022 17:58	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/04/2022 20:23	AKH	G
Specific Conductance	882		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	24.4		mg/L	2.0	EPA 300.0	2	08/03/2022 20:23	GJB	B
Total Dissolved Solids	512		mg/L	25	S2540C-11	1	08/05/2022 07:56	SMS	B
Total Organic Carbon (TOC)	0.84		mg/L	0.50	SW846 9060A	1	08/04/2022 09:07	PAG	E
Turbidity	5.1		NTU	0.30	SM2130B-2011	1	08/03/2022 07:13	LXZ	B



Results

Client Sample ID	FFMP04AW	Collected	08/02/2022 13:22
Lab Sample ID	3256028003	Lab Receipt	08/02/2022 16:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	36.84		Feet		Field	1	08/02/2022 14:17	BGS	D
Dissolved Oxygen	0.02		mg/L	0.01	Field	1	08/02/2022 14:17	BGS	D
Elev Top MW Casing above MSL	560.72		Feet		Field	1	08/02/2022 14:17	BGS	D
Flow Rate	1.92		gal/min		Field	1	08/02/2022 14:17	BGS	D
Ground Water Elevation	523.88		ft/MSL		Field	1	08/02/2022 14:17	BGS	D
Oxidation-Reduction Potential	19		mV		Field	1	08/02/2022 14:17	BGS	D
pH, Field (SM4500B)	8.05		pH_Units		Field	1	08/02/2022 14:17	BGS	D
Sample Depth	146.00		Feet		Field	1	08/02/2022 14:17	BGS	D
Specific Conductance, Field	2285		umhos/cm	1	Field	1	08/02/2022 14:17	BGS	D
Temperature	14.52		Deg. C		Field	1	08/02/2022 14:17	BGS	D
Total Well Depth	148.50		Feet		Field	1	08/02/2022 14:17	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	08/02/2022 14:17	BGS	D
Volume in Water Column	164.14		Gallons		Field	1	08/02/2022 14:17	BGS	D
Water Level After Purge	80.75		Feet		Field	1	08/02/2022 14:17	BGS	D
Well Volumes Purged	0.70		Vol		Field	1	08/02/2022 14:17	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	146		mg/L	0.11	SW846 6010C	1	08/20/2022 14:07	SRT	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/20/2022 14:07	SRT	J1
Magnesium, Total	24.0		mg/L	0.11	SW846 6010C	1	08/20/2022 14:07	SRT	J1
Manganese, Total	0.31		mg/L	0.0056	SW846 6010C	1	08/20/2022 14:07	SRT	J1
Potassium, Total	2.4		mg/L	0.56	SW846 6010C	1	08/20/2022 14:07	SRT	J1
Sodium, Total	81.1		mg/L	0.56	SW846 6010C	1	08/20/2022 14:07	SRT	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	08/04/2022 05:12	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
Benzene	ND	ND,1	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:12	PDK	H



Results

Client Sample ID	FFMP04AW	Collected	08/02/2022 13:22
Lab Sample ID	3256028003	Lab Receipt	08/02/2022 16:20

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			86.5%	62 – 133		08/04/2022 05:12		
4-Bromofluorobenzene	460-00-4			101%	79 – 114		08/04/2022 05:12		
Dibromofluoromethane	1868-53-7			91%	78 – 116		08/04/2022 05:12		
Toluene-d8	2037-26-5			92.1%	76 – 127		08/04/2022 05:12		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	191		mg/L	5	SM2320B-2011	1	08/03/2022 18:09	BXD	B
Alkalinity, Total	191	6	mg/L	5	SM2320B-2011	1	08/03/2022 18:09	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/04/2022 02:09	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/04/2022 14:01	KMS	A
Chloride	321		mg/L	10.0	EPA 300.0	10	08/11/2022 00:15	M1D	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/03/2022 20:33	GJB	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	08/03/2022 20:33	GJB	B
pH	7.94	8	pH_Units		S4500HB-11	1	08/03/2022 18:09	BXD	B
Phenolics	0.01		mg/L	0.004	SW846 9066	1	08/04/2022 20:26	AKH	G
Specific Conductance	1500		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	48.6		mg/L	2.0	EPA 300.0	2	08/03/2022 20:33	GJB	B
Total Dissolved Solids	1050		mg/L	25	S2540C-11	1	08/05/2022 07:56	SMS	B
Total Organic Carbon (TOC)	1.1		mg/L	0.50	SW846 9060A	1	08/04/2022 09:07	PAG	E
Turbidity	0.45		NTU	0.30	SM2130B-2011	1	08/03/2022 07:13	LXZ	B



Results

Client Sample ID	FFMP26RW	Collected	08/02/2022 14:22
Lab Sample ID	3256028004	Lab Receipt	08/02/2022 16:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	79.75		Feet		Field	1	08/02/2022 14:22	BGS	D
Dissolved Oxygen	0.01		mg/L	0.01	Field	1	08/02/2022 14:22	BGS	D
Elev Top MW Casing above MSL	547.40		Feet		Field	1	08/02/2022 14:22	BGS	D
Flow Rate	1.10		gal/min		Field	1	08/02/2022 14:22	BGS	D
Ground Water Elevation	467.65		ft/MSL		Field	1	08/02/2022 14:22	BGS	D
Oxidation-Reduction Potential	286		mV		Field	1	08/02/2022 14:22	BGS	D
pH, Field (SM4500B)	6.53		pH_Units		Field	1	08/02/2022 14:22	BGS	D
Sample Depth	105.00		Feet		Field	1	08/02/2022 14:22	BGS	D
Specific Conductance, Field	1388		umhos/cm	1	Field	1	08/02/2022 14:22	BGS	D
Temperature	15.59		Deg. C		Field	1	08/02/2022 14:22	BGS	D
Total Well Depth	118.30		Feet		Field	1	08/02/2022 14:22	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	08/02/2022 14:22	BGS	D
Volume in Water Column	56.67		Gallons		Field	1	08/02/2022 14:22	BGS	D
Water Level After Purge	86.73		Feet		Field	1	08/02/2022 14:22	BGS	D
Well Volumes Purged	1.16		Vol		Field	1	08/02/2022 14:22	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	69.5		mg/L	0.11	SW846 6010C	1	08/20/2022 14:10	SRT	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/20/2022 14:10	SRT	J1
Magnesium, Total	18.0		mg/L	0.11	SW846 6010C	1	08/20/2022 14:10	SRT	J1
Manganese, Total	0.65		mg/L	0.0056	SW846 6010C	1	08/20/2022 14:10	SRT	J1
Potassium, Total	7.3		mg/L	0.56	SW846 6010C	1	08/20/2022 14:10	SRT	J1
Sodium, Total	56.8		mg/L	0.56	SW846 6010C	1	08/20/2022 14:10	SRT	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	08/04/2022 05:35	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
Benzene	ND	ND,1	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 05:35	PDK	H



Results

Client Sample ID	FFMP26RW	Collected	08/02/2022 14:22
Lab Sample ID	3256028004	Lab Receipt	08/02/2022 16:20

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			85.2%	62 – 133		08/04/2022 05:35		
4-Bromofluorobenzene	460-00-4			100%	79 – 114		08/04/2022 05:35		
Dibromofluoromethane	1868-53-7			87.9%	78 – 116		08/04/2022 05:35		
Toluene-d8	2037-26-5			91.9%	76 – 127		08/04/2022 05:35		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	54		mg/L	5	SM2320B-2011	1	08/09/2022 20:17	BXD	B
Alkalinity, Total	54	6	mg/L	5	SM2320B-2011	1	08/09/2022 20:17	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/04/2022 08:34	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/04/2022 12:32	KMS	A
Chloride	183		mg/L	10.0	EPA 300.0	10	08/11/2022 14:11	M1D	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/03/2022 20:44	GJB	B
Nitrate-N	1.2		mg/L	1.0	EPA 300.0	2	08/03/2022 20:44	GJB	B
pH	7.22	8	pH_Units		S4500HB-11	1	08/09/2022 20:17	BXD	B
Phenolics	0.03		mg/L	0.004	SW846 9066	1	08/04/2022 20:30	AKH	G
Specific Conductance	907		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	86.5	12	mg/L	2.0	EPA 300.0	2	08/03/2022 20:44	GJB	B
Total Dissolved Solids	590		mg/L	25	S2540C-11	1	08/05/2022 07:56	SMS	B
Total Organic Carbon (TOC)	1.8		mg/L	0.50	SW846 9060A	1	08/04/2022 09:07	PAG	E
Turbidity	1.1		NTU	0.30	SM2130B-2011	1	08/03/2022 07:13	LXZ	B



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3256028001	FFMP03AW	Field	N/A	
		SW846 6010C	SW846 3015	
		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	420.4/9066	
3256028002	FFMP30RW	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	
3256028003	FFMP04AW	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	
3256028004	FFMP26RW	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3256028001	FFMP03AW	N/A	N/A	N/A	ANN	Field	869647
		SW846 3015	868343	08/04/2022 00:00		SW846 6010C	872900
		N/A	N/A	N/A		SW846 8260B	868650
		N/A	N/A	N/A		ASTM D6919-09	868597
		N/A	N/A	N/A		EPA 300.0	868520
		N/A	N/A	N/A		EPA 410.4	868761
		N/A	N/A	N/A		S2540C-11	868686
		N/A	N/A	N/A		S4500HB-11	868495
		N/A	N/A	N/A		SM2130B-2011	868362
		N/A	N/A	N/A		SM2320B-2011	868495
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868608
		420.4/9066	868576	08/04/2022 07:23		SW846 9066	868754
3256028002	FFMP30RW	N/A	N/A	N/A	ANN	Field	869647
		SW846 3015	868343	08/04/2022 00:00		SW846 6010C	872900
		N/A	N/A	N/A		SW846 8260B	868650
		N/A	N/A	N/A		ASTM D6919-09	868597
		N/A	N/A	N/A		EPA 300.0	868520
		N/A	N/A	N/A		EPA 300.0	869973
		N/A	N/A	N/A		EPA 410.4	868761
		N/A	N/A	N/A		S2540C-11	868686
		N/A	N/A	N/A		S4500HB-11	868495
		N/A	N/A	N/A		SM2130B-2011	868362
		N/A	N/A	N/A		SM2320B-2011	868495
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868608
		420.4/9066	868576	08/04/2022 07:23		SW846 9066	868754
3256028003	FFMP04AW	N/A	N/A	N/A	ANN	Field	869647
		SW846 3015	868343	08/04/2022 00:00		SW846 6010C	872900
		N/A	N/A	N/A		SW846 8260B	868650
		N/A	N/A	N/A		ASTM D6919-09	868584
		N/A	N/A	N/A		EPA 300.0	869973
		N/A	N/A	N/A		EPA 300.0	868520
		N/A	N/A	N/A		EPA 410.4	868792
		N/A	N/A	N/A		S2540C-11	868686
		N/A	N/A	N/A		S4500HB-11	868495
		N/A	N/A	N/A		SM2130B-2011	868362
		N/A	N/A	N/A		SM2320B-2011	868495
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868608
		420.4/9066	868576	08/04/2022 07:23		SW846 9066	868754
3256028004	FFMP26RW	N/A	N/A	N/A	ANN	Field	869647
		SW846 3015	868343	08/04/2022 00:00		SW846 6010C	872900
		N/A	N/A	N/A		SW846 8260B	868650
		N/A	N/A	N/A		ASTM D6919-09	868597
		N/A	N/A	N/A		EPA 300.0	869973
		N/A	N/A	N/A		EPA 300.0	868520
		N/A	N/A	N/A		EPA 410.4	868761
		N/A	N/A	N/A		S2540C-11	868686
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868362
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868608
		420.4/9066	868576	08/04/2022 07:23		SW846 9066	868754



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

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 3rd QTR 2022 GWMP-FORM 19Q

Workorder 3256290

Report ID 190031 on 8/26/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 03, 2022.

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.

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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

Susan Scherer

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

Susan Scherer
Project Coordinator

(ALS Digital Signature)



Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3256290001	FFMP017W	Ground Water	08/03/2022 09:40	08/03/2022 15:20	BGS	Analytical Laboratory Service
3256290002	FFMP005W	Ground Water	08/03/2022 11:13	08/03/2022 15:20	BGS	Analytical Laboratory Service
3256290003	FFMP019W	Ground Water	08/03/2022 12:22	08/03/2022 15:20	BGS	Analytical Laboratory Service
3256290004	FFMP018W	Ground Water	08/03/2022 12:54	08/03/2022 15:20	BGS	Analytical Laboratory Service
3256290005	FFMP029W	Ground Water	08/03/2022 13:58	08/03/2022 15:20	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	Reporting Detection Limit
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 | 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. |
| 3 | The QC sample type MS for method 420.4/9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 149 and the control limits were 90 to 110. |
| 4 | The QC sample type MSD for method 420.4/9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 111 and the control limits were 90 to 110. |
| 5 | The QC sample type MSD for method 420.4/9066 was outside the control limits for the analyte Phenolics. The RPD was reported as 29.6 and the upper control limit is 10. |
| 6 | The QC type LLCCV for method SW846 6010C was outside the control limits for the analyte Potassium. The % recovery was reported as 67.2 and the control limits were 70 to 130. |



Detected Results Summary

Client Sample ID	FFMP017W	Collected	08/03/2022 09:40		
Lab Sample ID	3256290001	Lab Receipt	08/03/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	39.96	Feet		Field	#
Dissolved Oxygen	0.43	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	480.70	Feet		Field	#
Flow Rate	1.87	gal/min		Field	#
Ground Water Elevation	440.74	ft/MSL		Field	#
Oxidation-Reduction Potential	184	mV		Field	#
pH, Field (SM4500B)	7.10	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	1838	umhos/cm	1	Field	#
Temperature	13.00	Deg. C		Field	#
Total Well Depth	150.50	Feet		Field	#
Volume in Water Column	162.49	Gallons		Field	#
Water Level After Purge	46.58	Feet		Field	#
Well Volumes Purged	1.03	Vol		Field	#
METALS					
Calcium, Total	92.3	mg/L	0.11	SW846 6010C	#
Magnesium, Total	37.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	1.2	mg/L	0.0056	SW846 6010C	#
Potassium, Total	6.9	mg/L	0.56	SW846 6010C	#
Sodium, Total	87.4	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	122	mg/L	5	SM2320B-2011	#
Alkalinity, Total	122	mg/L	5	SM2320B-2011	#
Ammonia-N	0.220	mg/L	0.100	ASTM D6919-09	#
Chemical Oxygen Demand (COD)	17	mg/L	15	EPA 410.4	#
Chloride	296	mg/L	10.0	EPA 300.0	#
Nitrate-N	3.3	mg/L	1.0	EPA 300.0	#
pH	7.55	pH_Units		S4500HB-11	#
Specific Conductance	1380	umhos/cm	1	SW846 9050A	#
Sulfate	75.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	896	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	3.0	mg/L	0.50	SW846 9060A	#



Detected Results Summary

Client Sample ID	FFMP005W	Collected	08/03/2022 11:13		
Lab Sample ID	3256290002	Lab Receipt	08/03/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	70.23	Feet		Field	#
Elev Top MW Casing above MSL	537.40	Feet		Field	#
Flow Rate	1.75	gal/min		Field	#
Ground Water Elevation	467.17	ft/MSL		Field	#
Oxidation-Reduction Potential	492	mV		Field	#
pH, Field (SM4500B)	6.70	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	1209	umhos/cm	1	Field	#
Temperature	13.81	Deg. C		Field	#
Total Well Depth	149.70	Feet		Field	#
Volume in Water Column	116.82	Gallons		Field	#
Water Level After Purge	91.90	Feet		Field	#
Well Volumes Purged	1.05	Vol		Field	#
METALS					
Calcium, Total	74.8	mg/L	0.11	SW846 6010C	#
Magnesium, Total	18.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.18	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	48.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	56	mg/L	5	SM2320B-2011	#
Alkalinity, Total	56	mg/L	5	SM2320B-2011	#
Chloride	182	mg/L	10.0	EPA 300.0	#
Nitrate-N	1.4	mg/L	1.0	EPA 300.0	#
pH	7.17	pH_Units		S4500HB-11	#
Specific Conductance	937	umhos/cm	1	SW846 9050A	#
Sulfate	66.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	694	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.6	mg/L	0.50	SW846 9060A	#



Detected Results Summary

Client Sample ID	FFMP019W	Collected	08/03/2022 12:22		
Lab Sample ID	3256290003	Lab Receipt	08/03/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	27.98	Feet		Field	#
Dissolved Oxygen	0.16	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	471.95	Feet		Field	#
Flow Rate	3.93	gal/min		Field	#
Ground Water Elevation	443.97	ft/MSL		Field	#
Oxidation-Reduction Potential	103	mV		Field	#
pH, Field (SM4500B)	7.57	pH_Units		Field	#
Sample Depth	49.00	Feet		Field	#
Specific Conductance, Field	643	umhos/cm	1	Field	#
Temperature	14.29	Deg. C		Field	#
Total Well Depth	132.79	Feet		Field	#
Volume in Water Column	68.13	Gallons		Field	#
Water Level After Purge	38.23	Feet		Field	#
Well Volumes Purged	2.31	Vol		Field	#
METALS					
Calcium, Total	59.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	5.6	mg/L	0.11	SW846 6010C	#
Potassium, Total	0.83	mg/L	0.56	SW846 6010C	#
Sodium, Total	10.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	64	mg/L	5	SM2320B-2011	#
Alkalinity, Total	64	mg/L	5	SM2320B-2011	#
Chloride	87.7	mg/L	2.0	EPA 300.0	#
pH	7.84	pH_Units		S4500HB-11	#
Specific Conductance	510	umhos/cm	1	SW846 9050A	#
Sulfate	14.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	436	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.70	mg/L	0.50	SW846 9060A	#



Detected Results Summary

Client Sample ID	FFMP018W	Collected	08/03/2022 12:54		
Lab Sample ID	3256290004	Lab Receipt	08/03/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	27.28	Feet		Field	#
Dissolved Oxygen	3.77	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	472.20	Feet		Field	#
Flow Rate	3.55	gal/min		Field	#
Ground Water Elevation	444.92	ft/MSL		Field	#
Oxidation-Reduction Potential	229	mV		Field	#
pH, Field (SM4500B)	6.26	pH_Units		Field	#
Sample Depth	40.00	Feet		Field	#
Specific Conductance, Field	747	umhos/cm	1	Field	#
Temperature	15.07	Deg. C		Field	#
Total Well Depth	51.46	Feet		Field	#
Volume in Water Column	15.72	Gallons		Field	#
Water Level After Purge	29.25	Feet		Field	#
Well Volumes Purged	3.62	Vol		Field	#
METALS					
Calcium, Total	30.6	mg/L	0.11	SW846 6010C	#
Magnesium, Total	16.0	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.12	mg/L	0.0056	SW846 6010C	#
Potassium, Total	4.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	33.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	21	mg/L	5	SM2320B-2011	#
Alkalinity, Total	21	mg/L	5	SM2320B-2011	#
Chloride	111	mg/L	5.0	EPA 300.0	#
Nitrate-N	4.2	mg/L	1.0	EPA 300.0	#
pH	7.07	pH_Units		S4500HB-11	#
Specific Conductance	579	umhos/cm	1	SW846 9050A	#
Sulfate	36.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	380	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.4	mg/L	0.50	SW846 9060A	#



Detected Results Summary

Client Sample ID	FFMP029W	Collected	08/03/2022 13:58		
Lab Sample ID	3256290005	Lab Receipt	08/03/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	30.19	Feet		Field	#
Dissolved Oxygen	5.65	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.30	Feet		Field	#
Flow Rate	2.15	gal/min		Field	#
Ground Water Elevation	447.11	ft/MSL		Field	#
Oxidation-Reduction Potential	252	mV		Field	#
pH, Field (SM4500B)	6.45	pH_Units		Field	#
Sample Depth	55.00	Feet		Field	#
Specific Conductance, Field	412	umhos/cm	1	Field	#
Temperature	14.82	Deg. C		Field	#
Total Well Depth	60.50	Feet		Field	#
Volume in Water Column	44.56	Gallons		Field	#
Water Level After Purge	45.44	Feet		Field	#
Well Volumes Purged	2.41	Vol		Field	#
METALS					
Calcium, Total	13.3	mg/L	0.11	SW846 6010C	#
Magnesium, Total	9.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.026	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	19.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	12	mg/L	5	SM2320B-2011	#
Alkalinity, Total	12	mg/L	5	SM2320B-2011	#
Chloride	66.6	mg/L	2.0	EPA 300.0	#
Nitrate-N	3.5	mg/L	1.0	EPA 300.0	#
pH	6.77	pH_Units		S4500HB-11	#
Specific Conductance	317	umhos/cm	1	SW846 9050A	#
Sulfate	6.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	252	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.8	mg/L	0.50	SW846 9060A	#



Results

Client Sample ID	FFMP017W	Collected	08/03/2022 09:40
Lab Sample ID	3256290001	Lab Receipt	08/03/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	39.96		Feet		Field	1	08/03/2022 09:40	BGS	D
Dissolved Oxygen	0.43		mg/L	0.01	Field	1	08/03/2022 09:40	BGS	D
Elev Top MW Casing above MSL	480.70		Feet		Field	1	08/03/2022 09:40	BGS	D
Flow Rate	1.87		gal/min		Field	1	08/03/2022 09:40	BGS	D
Ground Water Elevation	440.74		ft/MSL		Field	1	08/03/2022 09:40	BGS	D
Oxidation-Reduction Potential	184		mV		Field	1	08/03/2022 09:40	BGS	D
pH, Field (SM4500B)	7.10		pH_Units		Field	1	08/03/2022 09:40	BGS	D
Sample Depth	135.00		Feet		Field	1	08/03/2022 09:40	BGS	D
Specific Conductance, Field	1838		umhos/cm	1	Field	1	08/03/2022 09:40	BGS	D
Temperature	13.00		Deg. C		Field	1	08/03/2022 09:40	BGS	D
Total Well Depth	150.50		Feet		Field	1	08/03/2022 09:40	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	08/03/2022 09:40	BGS	D
Volume in Water Column	162.49		Gallons		Field	1	08/03/2022 09:40	BGS	D
Water Level After Purge	46.58		Feet		Field	1	08/03/2022 09:40	BGS	D
Well Volumes Purged	1.03		Vol		Field	1	08/03/2022 09:40	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	92.3		mg/L	0.11	SW846 6010C	1	08/25/2022 20:10	RMD	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/25/2022 20:10	RMD	J1
Magnesium, Total	37.1		mg/L	0.11	SW846 6010C	1	08/25/2022 20:10	RMD	J1
Manganese, Total	1.2		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:10	RMD	J1
Potassium, Total	6.9	6	mg/L	0.56	SW846 6010C	1	08/25/2022 20:10	RMD	J1
Sodium, Total	87.4		mg/L	0.56	SW846 6010C	1	08/25/2022 20:10	RMD	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	08/04/2022 19:21	VLM	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 19:21	VLM	H



Results

Client Sample ID	FFMP017W	Collected	08/03/2022 09:40
Lab Sample ID	3256290001	Lab Receipt	08/03/2022 15:20

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			96.8%	62 – 133		08/04/2022 19:21		
4-Bromofluorobenzene	460-00-4			99.3%	79 – 114		08/04/2022 19:21		
Dibromofluoromethane	1868-53-7			103%	78 – 116		08/04/2022 19:21		
Toluene-d8	2037-26-5			86.5%	76 – 127		08/04/2022 19:21		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	122		mg/L	5	SM2320B-2011	1	08/10/2022 04:27	BXD	B
Alkalinity, Total	122	1	mg/L	5	SM2320B-2011	1	08/10/2022 04:27	BXD	B
Ammonia-N	0.220		mg/L	0.100	ASTM D6919-09	10	08/05/2022 09:17	NML	A
Chemical Oxygen Demand (COD)	17		mg/L	15	EPA 410.4	1	08/08/2022 12:09	KMS	A
Chloride	296		mg/L	10.0	EPA 300.0	10	08/11/2022 17:27	M1D	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/04/2022 12:59	GJB	B
Nitrate-N	3.3		mg/L	1.0	EPA 300.0	2	08/04/2022 12:59	GJB	B
pH	7.55	2	pH_Units		S4500HB-11	1	08/10/2022 04:27	BXD	B
Phenolics	ND	ND,3,4,5	mg/L	0.004	SW846 9066	1	08/04/2022 17:47	AKH	G
Specific Conductance	1380		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	75.8		mg/L	2.0	EPA 300.0	2	08/04/2022 12:59	GJB	B
Total Dissolved Solids	896		mg/L	25	S2540C-11	1	08/08/2022 08:03	SMS	B
Total Organic Carbon (TOC)	3.0		mg/L	0.50	SW846 9060A	1	08/05/2022 05:16	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	08/04/2022 06:25	LXZ	B



Results

Client Sample ID	FFMP005W	Collected	08/03/2022 11:13
Lab Sample ID	3256290002	Lab Receipt	08/03/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	70.23		Feet		Field	1	08/03/2022 11:13	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	08/03/2022 11:13	BGS	D
Elev Top MW Casing above MSL	537.40		Feet		Field	1	08/03/2022 11:13	BGS	D
Flow Rate	1.75		gal/min		Field	1	08/03/2022 11:13	BGS	D
Ground Water Elevation	467.17		ft/MSL		Field	1	08/03/2022 11:13	BGS	D
Oxidation-Reduction Potential	492		mV		Field	1	08/03/2022 11:13	BGS	D
pH, Field (SM4500B)	6.70		pH_Units		Field	1	08/03/2022 11:13	BGS	D
Sample Depth	135.00		Feet		Field	1	08/03/2022 11:13	BGS	D
Specific Conductance, Field	1209		umhos/cm	1	Field	1	08/03/2022 11:13	BGS	D
Temperature	13.81		Deg. C		Field	1	08/03/2022 11:13	BGS	D
Total Well Depth	149.70		Feet		Field	1	08/03/2022 11:13	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	08/03/2022 11:13	BGS	D
Volume in Water Column	116.82		Gallons		Field	1	08/03/2022 11:13	BGS	D
Water Level After Purge	91.90		Feet		Field	1	08/03/2022 11:13	BGS	D
Well Volumes Purged	1.05		Vol		Field	1	08/03/2022 11:13	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	74.8		mg/L	0.11	SW846 6010C	1	08/25/2022 20:13	RMD	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/25/2022 20:13	RMD	J1
Magnesium, Total	18.3		mg/L	0.11	SW846 6010C	1	08/25/2022 20:13	RMD	J1
Manganese, Total	0.18		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:13	RMD	J1
Potassium, Total	3.3	6	mg/L	0.56	SW846 6010C	1	08/25/2022 20:13	RMD	J1
Sodium, Total	48.6		mg/L	0.56	SW846 6010C	1	08/25/2022 20:13	RMD	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	08/04/2022 20:27	VLM	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:27	VLM	H



Results

Client Sample ID	FFMP005W	Collected	08/03/2022 11:13
Lab Sample ID	3256290002	Lab Receipt	08/03/2022 15:20

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			94.2%	62 – 133		08/04/2022 20:27		
4-Bromofluorobenzene	460-00-4			99.7%	79 – 114		08/04/2022 20:27		
Dibromofluoromethane	1868-53-7			103%	78 – 116		08/04/2022 20:27		
Toluene-d8	2037-26-5			86.4%	76 – 127		08/04/2022 20:27		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	56		mg/L	5	SM2320B-2011	1	08/10/2022 04:38	BXD	B
Alkalinity, Total	56	1	mg/L	5	SM2320B-2011	1	08/10/2022 04:38	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/05/2022 12:32	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:09	KMS	A
Chloride	182		mg/L	10.0	EPA 300.0	10	08/11/2022 17:39	M1D	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/04/2022 13:10	GJB	B
Nitrate-N	1.4		mg/L	1.0	EPA 300.0	2	08/04/2022 13:10	GJB	B
pH	7.17	2	pH_Units		S4500HB-11	1	08/10/2022 04:38	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/04/2022 18:17	AKH	G
Specific Conductance	937		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	66.7		mg/L	2.0	EPA 300.0	2	08/04/2022 13:10	GJB	B
Total Dissolved Solids	694		mg/L	25	S2540C-11	1	08/08/2022 08:03	SMS	B
Total Organic Carbon (TOC)	1.6		mg/L	0.50	SW846 9060A	1	08/05/2022 05:16	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	08/04/2022 06:25	LXZ	B



Results

Client Sample ID	FFMP019W	Collected	08/03/2022 12:22
Lab Sample ID	3256290003	Lab Receipt	08/03/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	27.98		Feet		Field	1	08/03/2022 12:22	BGS	D
Dissolved Oxygen	0.16		mg/L	0.01	Field	1	08/03/2022 12:22	BGS	D
Elev Top MW Casing above MSL	471.95		Feet		Field	1	08/03/2022 12:22	BGS	D
Flow Rate	3.93		gal/min		Field	1	08/03/2022 12:22	BGS	D
Ground Water Elevation	443.97		ft/MSL		Field	1	08/03/2022 12:22	BGS	D
Oxidation-Reduction Potential	103		mV		Field	1	08/03/2022 12:22	BGS	D
pH, Field (SM4500B)	7.57		pH_Units		Field	1	08/03/2022 12:22	BGS	D
Sample Depth	49.00		Feet		Field	1	08/03/2022 12:22	BGS	D
Specific Conductance, Field	643		umhos/cm	1	Field	1	08/03/2022 12:22	BGS	D
Temperature	14.29		Deg. C		Field	1	08/03/2022 12:22	BGS	D
Total Well Depth	132.79		Feet		Field	1	08/03/2022 12:22	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	08/03/2022 12:22	BGS	D
Volume in Water Column	68.13		Gallons		Field	1	08/03/2022 12:22	BGS	D
Water Level After Purge	38.23		Feet		Field	1	08/03/2022 12:22	BGS	D
Well Volumes Purged	2.31		Vol		Field	1	08/03/2022 12:22	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	59.2		mg/L	0.11	SW846 6010C	1	08/25/2022 20:17	RMD	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/25/2022 20:17	RMD	J1
Magnesium, Total	5.6		mg/L	0.11	SW846 6010C	1	08/25/2022 20:17	RMD	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	08/25/2022 20:17	RMD	J1
Potassium, Total	0.83	6	mg/L	0.56	SW846 6010C	1	08/25/2022 20:17	RMD	J1
Sodium, Total	10.5		mg/L	0.56	SW846 6010C	1	08/25/2022 20:17	RMD	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	08/04/2022 20:50	VLM	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 20:50	VLM	H



Results

Client Sample ID	FFMP019W	Collected	08/03/2022 12:22
Lab Sample ID	3256290003	Lab Receipt	08/03/2022 15:20

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		08/04/2022 20:50		
4-Bromofluorobenzene	460-00-4			97.5%	79 – 114		08/04/2022 20:50		
Dibromofluoromethane	1868-53-7			102%	78 – 116		08/04/2022 20:50		
Toluene-d8	2037-26-5			85.4%	76 – 127		08/04/2022 20:50		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	64		mg/L	5	SM2320B-2011	1	08/10/2022 04:47	BXD	B
Alkalinity, Total	64	1	mg/L	5	SM2320B-2011	1	08/10/2022 04:47	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/05/2022 11:36	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:09	KMS	A
Chloride	87.7		mg/L	2.0	EPA 300.0	2	08/04/2022 19:57	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/04/2022 19:57	GJB	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	08/04/2022 19:57	GJB	B
pH	7.84	2	pH_Units		S4500HB-11	1	08/10/2022 04:47	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/04/2022 18:20	AKH	G
Specific Conductance	510		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	14.9		mg/L	2.0	EPA 300.0	2	08/04/2022 19:57	GJB	B
Total Dissolved Solids	436		mg/L	25	S2540C-11	1	08/08/2022 08:03	SMS	B
Total Organic Carbon (TOC)	0.70		mg/L	0.50	SW846 9060A	1	08/05/2022 05:16	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	08/04/2022 06:25	LXZ	B



Results

Client Sample ID	FFMP018W	Collected	08/03/2022 12:54
Lab Sample ID	3256290004	Lab Receipt	08/03/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	27.28		Feet		Field	1	08/03/2022 12:54	BGS	D
Dissolved Oxygen	3.77		mg/L	0.01	Field	1	08/03/2022 12:54	BGS	D
Elev Top MW Casing above MSL	472.20		Feet		Field	1	08/03/2022 12:54	BGS	D
Flow Rate	3.55		gal/min		Field	1	08/03/2022 12:54	BGS	D
Ground Water Elevation	444.92		ft/MSL		Field	1	08/03/2022 12:54	BGS	D
Oxidation-Reduction Potential	229		mV		Field	1	08/03/2022 12:54	BGS	D
pH, Field (SM4500B)	6.26		pH_Units		Field	1	08/03/2022 12:54	BGS	D
Sample Depth	40.00		Feet		Field	1	08/03/2022 12:54	BGS	D
Specific Conductance, Field	747		umhos/cm	1	Field	1	08/03/2022 12:54	BGS	D
Temperature	15.07		Deg. C		Field	1	08/03/2022 12:54	BGS	D
Total Well Depth	51.46		Feet		Field	1	08/03/2022 12:54	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	08/03/2022 12:54	BGS	D
Volume in Water Column	15.72		Gallons		Field	1	08/03/2022 12:54	BGS	D
Water Level After Purge	29.25		Feet		Field	1	08/03/2022 12:54	BGS	D
Well Volumes Purged	3.62		Vol		Field	1	08/03/2022 12:54	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	30.6		mg/L	0.11	SW846 6010C	1	08/25/2022 20:21	RMD	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/25/2022 20:21	RMD	J1
Magnesium, Total	16.0		mg/L	0.11	SW846 6010C	1	08/25/2022 20:21	RMD	J1
Manganese, Total	0.12		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:21	RMD	J1
Potassium, Total	4.1	6	mg/L	0.56	SW846 6010C	1	08/25/2022 20:21	RMD	J1
Sodium, Total	33.5		mg/L	0.56	SW846 6010C	1	08/25/2022 20:21	RMD	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	08/04/2022 21:13	VLM	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:13	VLM	H



Results

Client Sample ID	FFMP018W	Collected	08/03/2022 12:54
Lab Sample ID	3256290004	Lab Receipt	08/03/2022 15:20

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			95.8%	62 – 133		08/04/2022 21:13		
4-Bromofluorobenzene	460-00-4			97.9%	79 – 114		08/04/2022 21:13		
Dibromofluoromethane	1868-53-7			102%	78 – 116		08/04/2022 21:13		
Toluene-d8	2037-26-5			84.9%	76 – 127		08/04/2022 21:13		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	21		mg/L	5	SM2320B-2011	1	08/10/2022 05:28	BXD	B
Alkalinity, Total	21	1	mg/L	5	SM2320B-2011	1	08/10/2022 05:28	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/05/2022 12:04	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:09	KMS	A
Chloride	111		mg/L	5.0	EPA 300.0	5	08/11/2022 17:50	M1D	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/04/2022 20:07	GJB	B
Nitrate-N	4.2		mg/L	1.0	EPA 300.0	2	08/04/2022 20:07	GJB	B
pH	7.07	2	pH_Units		S4500HB-11	1	08/10/2022 05:28	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/04/2022 18:23	AKH	G
Specific Conductance	579		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	36.9		mg/L	2.0	EPA 300.0	2	08/04/2022 20:07	GJB	B
Total Dissolved Solids	380		mg/L	25	S2540C-11	1	08/08/2022 08:03	SMS	B
Total Organic Carbon (TOC)	1.4		mg/L	0.50	SW846 9060A	1	08/05/2022 05:16	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	08/04/2022 06:25	LXZ	B



Results

Client Sample ID	FFMP029W	Collected	08/03/2022 13:58
Lab Sample ID	3256290005	Lab Receipt	08/03/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	30.19		Feet		Field	1	08/03/2022 13:58	BGS	D
Dissolved Oxygen	5.65		mg/L	0.01	Field	1	08/03/2022 13:58	BGS	D
Elev Top MW Casing above MSL	477.30		Feet		Field	1	08/03/2022 13:58	BGS	D
Flow Rate	2.15		gal/min		Field	1	08/03/2022 13:58	BGS	D
Ground Water Elevation	447.11		ft/MSL		Field	1	08/03/2022 13:58	BGS	D
Oxidation-Reduction Potential	252		mV		Field	1	08/03/2022 13:58	BGS	D
pH, Field (SM4500B)	6.45		pH_Units		Field	1	08/03/2022 13:58	BGS	D
Sample Depth	55.00		Feet		Field	1	08/03/2022 13:58	BGS	D
Specific Conductance, Field	412		umhos/cm	1	Field	1	08/03/2022 13:58	BGS	D
Temperature	14.82		Deg. C		Field	1	08/03/2022 13:58	BGS	D
Total Well Depth	60.50		Feet		Field	1	08/03/2022 13:58	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	08/03/2022 13:58	BGS	D
Volume in Water Column	44.56		Gallons		Field	1	08/03/2022 13:58	BGS	D
Water Level After Purge	45.44		Feet		Field	1	08/03/2022 13:58	BGS	D
Well Volumes Purged	2.41		Vol		Field	1	08/03/2022 13:58	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	13.3		mg/L	0.11	SW846 6010C	1	08/25/2022 20:32	RMD	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/25/2022 20:32	RMD	J1
Magnesium, Total	9.1		mg/L	0.11	SW846 6010C	1	08/25/2022 20:32	RMD	J1
Manganese, Total	0.026		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:32	RMD	J1
Potassium, Total	2.1	6	mg/L	0.56	SW846 6010C	1	08/25/2022 20:32	RMD	J1
Sodium, Total	19.9		mg/L	0.56	SW846 6010C	1	08/25/2022 20:32	RMD	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	08/04/2022 21:35	VLM	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/04/2022 21:35	VLM	H



Results

Client Sample ID	FFMP029W	Collected	08/03/2022 13:58
Lab Sample ID	3256290005	Lab Receipt	08/03/2022 15:20

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			98.2%	62 – 133		08/04/2022 21:35		
4-Bromofluorobenzene	460-00-4			102%	79 – 114		08/04/2022 21:35		
Dibromofluoromethane	1868-53-7			103%	78 – 116		08/04/2022 21:35		
Toluene-d8	2037-26-5			85.5%	76 – 127		08/04/2022 21:35		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	12		mg/L	5	SM2320B-2011	1	08/10/2022 05:39	BXD	B
Alkalinity, Total	12	1	mg/L	5	SM2320B-2011	1	08/10/2022 05:39	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/05/2022 11:23	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:09	KMS	A
Chloride	66.6		mg/L	2.0	EPA 300.0	2	08/04/2022 13:20	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/04/2022 13:20	GJB	B
Nitrate-N	3.5		mg/L	1.0	EPA 300.0	2	08/04/2022 13:20	GJB	B
pH	6.77	2	pH_Units		S4500HB-11	1	08/10/2022 05:39	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/04/2022 18:27	AKH	G
Specific Conductance	317		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	6.0		mg/L	2.0	EPA 300.0	2	08/04/2022 13:20	GJB	B
Total Dissolved Solids	252		mg/L	25	S2540C-11	1	08/08/2022 08:03	SMS	B
Total Organic Carbon (TOC)	1.8		mg/L	0.50	SW846 9060A	1	08/05/2022 05:16	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	08/04/2022 06:25	LXZ	B



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3256290001	FFMP017W	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	
3256290002	FFMP005W	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	
3256290003	FFMP019W	Field	N/A	
		SW846 6010C	SW846 3015	
		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	420.4/9066	
3256290004	FFMP018W	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	



Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3256290005	FFMP029W	Field	N/A	
		SW846 6010C	SW846 3015	
		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	420.4/9066	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3256290001	FFMP017W	N/A	N/A	N/A		Field	869647
		SW846 3015	868782	07/29/1900 09:34	JSE	SW846 6010C	874056
		N/A	N/A	N/A		SW846 8260B	868859
		N/A	N/A	N/A		ASTM D6919-09	868825
		N/A	N/A	N/A		EPA 300.0	868812
		N/A	N/A	N/A		EPA 300.0	869973
		N/A	N/A	N/A		EPA 410.4	869641
		N/A	N/A	N/A		S2540C-11	869064
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868679
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868851
		420.4/9066	868750	08/04/2022 07:17	AKH	SW846 9066	868754
3256290002	FFMP005W	N/A	N/A	N/A		Field	869647
		SW846 3015	868782	07/29/1900 09:34	JSE	SW846 6010C	874056
		N/A	N/A	N/A		SW846 8260B	868859
		N/A	N/A	N/A		ASTM D6919-09	868827
		N/A	N/A	N/A		EPA 300.0	868812
		N/A	N/A	N/A		EPA 300.0	869973
		N/A	N/A	N/A		EPA 410.4	869641
		N/A	N/A	N/A		S2540C-11	869064
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868679
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868851
		420.4/9066	868750	08/04/2022 07:17	AKH	SW846 9066	868754
3256290003	FFMP019W	N/A	N/A	N/A		Field	869647
		SW846 3015	868782	07/29/1900 09:34	JSE	SW846 6010C	874056
		N/A	N/A	N/A		SW846 8260B	868859
		N/A	N/A	N/A		ASTM D6919-09	868827
		N/A	N/A	N/A		EPA 300.0	868812
		N/A	N/A	N/A		EPA 410.4	869641
		N/A	N/A	N/A		S2540C-11	869064
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868679
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868851
		420.4/9066	868750	08/04/2022 07:17	AKH	SW846 9066	868754
3256290004	FFMP018W	N/A	N/A	N/A		Field	869647
		SW846 3015	868782	07/29/1900 09:34	JSE	SW846 6010C	874056
		N/A	N/A	N/A		SW846 8260B	868859
		N/A	N/A	N/A		ASTM D6919-09	868827
		N/A	N/A	N/A		EPA 300.0	868812
		N/A	N/A	N/A		EPA 300.0	869973
		N/A	N/A	N/A		EPA 410.4	869641
		N/A	N/A	N/A		S2540C-11	869064
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868679
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868851
		420.4/9066	868750	08/04/2022 07:17	AKH	SW846 9066	868754



Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3256290005	FFMP029W	N/A	N/A	N/A	JSE	Field	869647
		SW846 3015	868782	07/29/1900 09:34		SW846 6010C	874056
		N/A	N/A	N/A		SW846 8260B	868859
		N/A	N/A	N/A		ASTM D6919-09	868827
		N/A	N/A	N/A		EPA 300.0	868812
		N/A	N/A	N/A		EPA 410.4	869641
		N/A	N/A	N/A		S2540C-11	869064
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	868679
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	868851
		420.4/9066	868750	08/04/2022 07:17	AKH	SW846 9066	868754



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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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3256290
Logged By: SLS
PH: 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	Container Type: AG	AW	CG	PL	PL	PL	PL	PL
Address: 1299 Harrisburg Pike, P.O. Box 4424	Container Size: 40 ml	125 ml	40 ml	250 ml	125 ml	500 ml	500 ml	500 ml
Lancaster, PA 17604	Preservative: HCl	H2SO4	HCl	H2SO4	HNO3	None	None	None

Contact: Dan Brown

Phone#: (717) 735-0193

Project Name#: Frey Farm Quarterly (GWMP)

Bill To: Lancaster County Solid Waste MA

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

Date Required: Approved By: _____

Email? ☒ Y ☐ N dbrown@LCSWMA.com

Fax? ☒ Y ☐ N No.: (717) 397-9973

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1. FFMP017W	08/03/22	0940
2. FFMP005W	08/03/22	1113
3. FFMP019W	08/03/22	1222
4. FFMP018W	08/03/22	1254
5. FFMP029W	08/03/22	1358
6		
7		
8		
9		
10		

Enter Number of Containers Per Sample or Field Results Below.									
Field Measurements	VOC - Form 19Q	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	pH, Cl, SpC, F, SO4, TDS, NO3, Turb.	Alkalinity Bicarbonate				
TOC	1	1	1	1	1	1	1	1	1
Q-OH	2	2	2	2	2	2	2	2	2
Sample Depth for AUX Data	1	1	1	1	1	1	1	1	1
Matrix	G	GW	G	GW	G	GW	G	GW	G
1. FFMP017W	2	2	2	2	2	2	2	2	2
2. FFMP005W	2	2	2	2	2	2	2	2	2
3. FFMP019W	2	2	2	2	2	2	2	2	2
4. FFMP018W	2	2	2	2	2	2	2	2	2
5. FFMP029W	2	2	2	2	2	2	2	2	2
6									
7									
8									
9									
10									

Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1. <i>John Stowell</i>	8/3/22	1500	2. <i>John Stowell</i>	8/3/22	1500
3			4		
5			6		
7			8		
9			10		

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

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

Rev 8/04

WJL



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

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 3rd QTR 2022 GWMP-FORM 19Q

Workorder 3256664

Report ID 190032 on 8/26/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Aug 04, 2022.

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.

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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

Susan Scherer

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

Susan Scherer
Project Coordinator

(ALS Digital Signature)



Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3256290006	FFMP02DW	Ground Water	08/04/2022 09:36	08/04/2022 15:20	CBC	Collected By Client
3256290007	FFMP02SW	Ground Water	08/04/2022 10:00	08/04/2022 15:20	CBC	Collected By Client
3256290008	FFMP035W	Ground Water	08/04/2022 11:08	08/04/2022 15:20	CBC	Collected By Client
3256290009	FFMP031W	Ground Water	08/04/2022 12:31	08/04/2022 15:20	CBC	Collected By Client
3256290010	FFMP002W	Ground Water	08/04/2022 13:16	08/04/2022 15:20	CBC	Collected By Client
3256290011	FFMP032W	Ground Water	08/04/2022 13:49	08/04/2022 15:20	CBC	Collected By Client
3256290012	FIELD BLANK	Ground Water	08/04/2022 13:40	08/04/2022 15:20	CBC	Collected By Client
3256290013	TRIP BLANK	Ground Water	08/04/2022 15:20	08/04/2022 15:20	CBC	Collected By Client



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	Reporting Detection Limit
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	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.
3	The QC sample type MS for method 420.4/9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 139 and the control limits were 90 to 110.
4	The QC sample type MSD for method 420.4/9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 147 and the control limits were 90 to 110.
5	The QC type LLCCV for method SW846 6010C was outside the control limits for the analyte Potassium. The % recovery was reported as 67.2 and the control limits were 70 to 130.
6	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.



Detected Results Summary

Client Sample ID		FFMP02DW		Collected		08/04/2022 09:36	
Lab Sample ID		3256290006		Lab Receipt		08/04/2022 15:20	
Compound	Result	Units	RDL	Method	Flag		
FIELD PARAMETERS							
Depth to Water Level	26.53	Feet		Field	#		
Dissolved Oxygen	0.08	mg/L	0.01	Field	#		
Elev Top MW Casing above MSL	509.60	Feet		Field	#		
Flow Rate	1.95	gal/min		Field	#		
Ground Water Elevation	483.07	ft/MSL		Field	#		
Oxidation-Reduction Potential	13	mV		Field	#		
pH, Field (SM4500B)	7.16	pH_Units		Field	#		
Sample Depth	120.00	Feet		Field	#		
Specific Conductance, Field	2408	umhos/cm	1	Field	#		
Temperature	20.39	Deg. C		Field	#		
Total Well Depth	153.00	Feet		Field	#		
Turbidity, Field	12	NTU	1	Field	#		
Volume in Water Column	185.91	Gallons		Field	#		
Water Level After Purge	39.91	Feet		Field	#		
Well Volumes Purged	0.68	Vol		Field	#		
METALS							
Calcium, Total	128	mg/L	0.11	SW846 6010C	#		
Iron, Total	0.78	mg/L	0.067	SW846 6010C	#		
Magnesium, Total	20.5	mg/L	0.11	SW846 6010C	#		
Manganese, Total	0.44	mg/L	0.0056	SW846 6010C	#		
Potassium, Total	1.9	mg/L	0.56	SW846 6010C	#		
Sodium, Total	139	mg/L	0.56	SW846 6010C	#		
WET CHEMISTRY							
Alkalinity, Bicarbonate	106	mg/L	5	SM2320B-2011	#		
Alkalinity, Total	106	mg/L	5	SM2320B-2011	#		
Chloride	408	mg/L	5.0	EPA 300.0	#		
Nitrate-N	5.9	mg/L	2.5	EPA 300.0	#		
pH	8.18	pH_Units		S4500HB-11	#		
Phenolics	0.008	mg/L	0.004	SW846 9066	#		
Specific Conductance	1800	umhos/cm	1	SW846 9050A	#		
Sulfate	33.1	mg/L	5.0	EPA 300.0	#		
Total Dissolved Solids	1130	mg/L	25	S2540C-11	#		
Total Organic Carbon (TOC)	1.2	mg/L	0.50	SW846 9060A	#		
Turbidity	9.7	NTU	0.30	SM2130B-2011	#		



Detected Results Summary

Client Sample ID	FFMP02SW	Collected	08/04/2022 10:00		
Lab Sample ID	3256290007	Lab Receipt	08/04/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	15.52	Feet		Field	#
Dissolved Oxygen	3.30	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	509.90	Feet		Field	#
Flow Rate	1.00	gal/min		Field	#
Ground Water Elevation	494.38	ft/MSL		Field	#
Oxidation-Reduction Potential	236	mV		Field	#
pH, Field (SM4500B)	5.37	pH_Units		Field	#
Sample Depth	18.00	Feet		Field	#
Specific Conductance, Field	770	umhos/cm	1	Field	#
Temperature	19.99	Deg. C		Field	#
Total Well Depth	22.70	Feet		Field	#
Turbidity, Field	23	NTU	1	Field	#
Volume in Water Column	4.67	Gallons		Field	#
Water Level After Purge	17.70	Feet		Field	#
Well Volumes Purged	1.29	Vol		Field	#
METALS					
Calcium, Total	20.9	mg/L	0.11	SW846 6010C	#
Iron, Total	0.21	mg/L	0.067	SW846 6010C	#
Magnesium, Total	7.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.023	mg/L	0.0056	SW846 6010C	#
Potassium, Total	4.8	mg/L	0.56	SW846 6010C	#
Sodium, Total	68.2	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	19	mg/L	5	SM2320B-2011	#
Alkalinity, Total	19	mg/L	5	SM2320B-2011	#
Chloride	106	mg/L	2.0	EPA 300.0	#
Nitrate-N	13.9	mg/L	1.0	EPA 300.0	#
pH	7.15	pH_Units		S4500HB-11	#
Specific Conductance	647	umhos/cm	1	SW846 9050A	#
Sulfate	41.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	368	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.9	mg/L	0.50	SW846 9060A	#
Turbidity	13	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP035W	Collected	08/04/2022 11:08		
Lab Sample ID	3256290008	Lab Receipt	08/04/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	42.86	Feet		Field	#
Dissolved Oxygen	4.80	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.56	Feet		Field	#
Flow Rate	0.65	gal/min		Field	#
Ground Water Elevation	434.70	ft/MSL		Field	#
Oxidation-Reduction Potential	127	mV		Field	#
pH, Field (SM4500B)	6.38	pH_Units		Field	#
Sample Depth	65.00	Feet		Field	#
Specific Conductance, Field	967	umhos/cm	1	Field	#
Temperature	17.85	Deg. C		Field	#
Total Well Depth	71.80	Feet		Field	#
Turbidity, Field	2	NTU	1	Field	#
Volume in Water Column	42.54	Gallons		Field	#
Water Level After Purge	53.84	Feet		Field	#
Well Volumes Purged	0.76	Vol		Field	#
METALS					
Calcium, Total	56.2	mg/L	0.11	SW846 6010C	#
Iron, Total	0.068	mg/L	0.067	SW846 6010C	#
Magnesium, Total	13.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0096	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	36.1	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	76	mg/L	5	SM2320B-2011	#
Alkalinity, Total	76	mg/L	5	SM2320B-2011	#
Chloride	130	mg/L	5.0	EPA 300.0	#
Nitrate-N	5.2	mg/L	1.0	EPA 300.0	#
pH	7.98	pH_Units		S4500HB-11	#
Specific Conductance	743	umhos/cm	1	SW846 9050A	#
Sulfate	35.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	476	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	2.1	mg/L	0.50	SW846 9060A	#
Turbidity	4.3	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP031W	Collected	08/04/2022 12:31		
Lab Sample ID	3256290009	Lab Receipt	08/04/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	66.62	Feet		Field	#
Elev Top MW Casing above MSL	612.66	Feet		Field	#
Flow Rate	1.62	gal/min		Field	#
Ground Water Elevation	546.04	ft/MSL		Field	#
Oxidation-Reduction Potential	-321	mV		Field	#
pH, Field (SM4500B)	8.13	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	466	umhos/cm	1	Field	#
Temperature	18.38	Deg. C		Field	#
Total Well Depth	142.70	Feet		Field	#
Turbidity, Field	9	NTU	1	Field	#
Volume in Water Column	111.84	Gallons		Field	#
Water Level After Purge	103.70	Feet		Field	#
Well Volumes Purged	0.94	Vol		Field	#
METALS					
Calcium, Total	43.3	mg/L	0.11	SW846 6010C	#
Iron, Total	4.1	mg/L	0.067	SW846 6010C	#
Magnesium, Total	3.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.34	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	9.0	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	77	mg/L	5	SM2320B-2011	#
Alkalinity, Total	77	mg/L	5	SM2320B-2011	#
Chloride	20.1	mg/L	2.0	EPA 300.0	#
pH	8.19	pH_Units		S4500HB-11	#
Specific Conductance	341	umhos/cm	1	SW846 9050A	#
Sulfate	45.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	192	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.95	mg/L	0.50	SW846 9060A	#
Turbidity	30	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP002W	Collected	08/04/2022 13:16		
Lab Sample ID	3256290010	Lab Receipt	08/04/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	65.30	Feet		Field	#
Dissolved Oxygen	6.12	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	613.20	Feet		Field	#
Flow Rate	1.09	gal/min		Field	#
Ground Water Elevation	547.90	ft/MSL		Field	#
Oxidation-Reduction Potential	294	mV		Field	#
pH, Field (SM4500B)	5.34	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	367	umhos/cm	1	Field	#
Temperature	16.45	Deg. C		Field	#
Total Well Depth	90.02	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
Volume in Water Column	36.34	Gallons		Field	#
Water Level After Purge	78.75	Feet		Field	#
Well Volumes Purged	0.78	Vol		Field	#
METALS					
Calcium, Total	17.8	mg/L	0.11	SW846 6010C	#
Iron, Total	1.3	mg/L	0.067	SW846 6010C	#
Magnesium, Total	6.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.24	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	12.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Chloride	15.6	mg/L	2.0	EPA 300.0	#
Nitrate-N	18.4	mg/L	1.0	EPA 300.0	#
pH	5.59	pH_Units		S4500HB-11	#
Specific Conductance	266	umhos/cm	1	SW846 9050A	#
Sulfate	11.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	188	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.78	mg/L	0.50	SW846 9060A	#
Turbidity	0.49	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP032W	Collected	08/04/2022 13:49		
Lab Sample ID	3256290011	Lab Receipt	08/04/2022 15:20		
Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	49.39	Feet		Field	#
Dissolved Oxygen	0.35	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	544.70	ft/MSL		Field	#
Oxidation-Reduction Potential	-123	mV		Field	#
pH, Field (SM4500B)	7.06	pH_Units		Field	#
Sample Depth	62.00	Feet		Field	#
Specific Conductance, Field	292	umhos/cm	1	Field	#
Temperature	17.00	Deg. C		Field	#
Total Well Depth	77.60	Feet		Field	#
Turbidity, Field	15	NTU	1	Field	#
Volume in Water Column	41.47	Gallons		Field	#
Water Level After Purge	55.67	Feet		Field	#
Well Volumes Purged	0.29	Vol		Field	#
METALS					
Calcium, Total	15.3	mg/L	0.11	SW846 6010C	#
Iron, Total	4.5	mg/L	0.067	SW846 6010C	#
Magnesium, Total	5.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.45	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	12.1	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	0.396	mg/L	0.100	ASTM D6919-09	#
Chloride	18.5	mg/L	2.0	EPA 300.0	#
pH	8.09	pH_Units		S4500HB-11	#
Specific Conductance	210	umhos/cm	1	SW846 9050A	#
Total Dissolved Solids	104	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.0	mg/L	0.50	SW846 9060A	#
Turbidity	64	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FIELD BLANK	Collected	08/04/2022 13:40
Lab Sample ID	3256290012	Lab Receipt	08/04/2022 15:20

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
pH	5.75	pH_Units		S4500HB-11	#
Specific Conductance	2	umhos/cm	1	SW846 9050A	#



Results

Client Sample ID	FFMP02DW	Collected	08/04/2022 09:36
Lab Sample ID	3256290006	Lab Receipt	08/04/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	26.53		Feet		Field	1	08/04/2022 09:37	BGS	D
Dissolved Oxygen	0.08		mg/L	0.01	Field	1	08/04/2022 09:37	BGS	D
Elev Top MW Casing above MSL	509.60		Feet		Field	1	08/04/2022 09:37	BGS	D
Flow Rate	1.95		gal/min		Field	1	08/04/2022 09:37	BGS	D
Ground Water Elevation	483.07		ft/MSL		Field	1	08/04/2022 09:37	BGS	D
Oxidation-Reduction Potential	13		mV		Field	1	08/04/2022 09:37	BGS	D
pH, Field (SM4500B)	7.16		pH_Units		Field	1	08/04/2022 09:37	BGS	D
Sample Depth	120.00		Feet		Field	1	08/04/2022 09:37	BGS	D
Specific Conductance, Field	2408		umhos/cm	1	Field	1	08/04/2022 09:37	BGS	D
Temperature	20.39		Deg. C		Field	1	08/04/2022 09:37	BGS	D
Total Well Depth	153.00		Feet		Field	1	08/04/2022 09:37	BGS	D
Turbidity, Field	12		NTU	1	Field	1	08/04/2022 09:37	BGS	D
Volume in Water Column	185.91		Gallons		Field	1	08/04/2022 09:37	BGS	D
Water Level After Purge	39.91		Feet		Field	1	08/04/2022 09:37	BGS	D
Well Volumes Purged	0.68		Vol		Field	1	08/04/2022 09:37	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	128		mg/L	0.11	SW846 6010C	1	08/25/2022 20:35	RMD	J1
Iron, Total	0.78		mg/L	0.067	SW846 6010C	1	08/25/2022 20:35	RMD	J1
Magnesium, Total	20.5		mg/L	0.11	SW846 6010C	1	08/25/2022 20:35	RMD	J1
Manganese, Total	0.44		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:35	RMD	J1
Potassium, Total	1.9	5	mg/L	0.56	SW846 6010C	1	08/25/2022 20:35	RMD	J1
Sodium, Total	139		mg/L	0.56	SW846 6010C	1	08/25/2022 20:35	RMD	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	08/18/2022 05:02	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:02	PDK	H



Results

Client Sample ID	FFMP02DW	Collected	08/04/2022 09:36
Lab Sample ID	3256290006	Lab Receipt	08/04/2022 15:20

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			84.3%	62 – 133		08/18/2022 05:02		
4-Bromofluorobenzene	460-00-4			100%	79 – 114		08/18/2022 05:02		
Dibromofluoromethane	1868-53-7			81.9%	78 – 116		08/18/2022 05:02		
Toluene-d8	2037-26-5			101%	76 – 127		08/18/2022 05:02		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	106		mg/L	5	SM2320B-2011	1	08/10/2022 05:48	BXD	B
Alkalinity, Total	106	1	mg/L	5	SM2320B-2011	1	08/10/2022 05:48	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/09/2022 05:08	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:40	KMS	A
Chloride	408		mg/L	5.0	EPA 300.0	5	08/05/2022 20:12	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/16/2022 12:38	GJB	B
Nitrate-N	5.9		mg/L	2.5	EPA 300.0	5	08/05/2022 20:12	GJB	B
pH	8.18	2	pH_Units		S4500HB-11	1	08/10/2022 05:48	BXD	B
Phenolics	0.008	3,4	mg/L	0.004	SW846 9066	1	08/11/2022 14:21	AKH	G
Specific Conductance	1800		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	33.1		mg/L	5.0	EPA 300.0	5	08/05/2022 20:12	GJB	B
Total Dissolved Solids	1130		mg/L	25	S2540C-11	1	08/08/2022 08:03	SMS	B
Total Organic Carbon (TOC)	1.2		mg/L	0.50	SW846 9060A	1	08/05/2022 21:37	PAG	E
Turbidity	9.7		NTU	0.30	SM2130B-2011	1	08/05/2022 07:12	LXZ	B



Results

Client Sample ID	FFMP02SW	Collected	08/04/2022 10:00
Lab Sample ID	3256290007	Lab Receipt	08/04/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	15.52		Feet		Field	1	08/04/2022 10:00	BGS	D
Dissolved Oxygen	3.30		mg/L	0.01	Field	1	08/04/2022 10:00	BGS	D
Elev Top MW Casing above MSL	509.90		Feet		Field	1	08/04/2022 10:00	BGS	D
Flow Rate	1.00		gal/min		Field	1	08/04/2022 10:00	BGS	D
Ground Water Elevation	494.38		ft/MSL		Field	1	08/04/2022 10:00	BGS	D
Oxidation-Reduction Potential	236		mV		Field	1	08/04/2022 10:00	BGS	D
pH, Field (SM4500B)	5.37		pH_Units		Field	1	08/04/2022 10:00	BGS	D
Sample Depth	18.00		Feet		Field	1	08/04/2022 10:00	BGS	D
Specific Conductance, Field	770		umhos/cm	1	Field	1	08/04/2022 10:00	BGS	D
Temperature	19.99		Deg. C		Field	1	08/04/2022 10:00	BGS	D
Total Well Depth	22.70		Feet		Field	1	08/04/2022 10:00	BGS	D
Turbidity, Field	23		NTU	1	Field	1	08/04/2022 10:00	BGS	D
Volume in Water Column	4.67		Gallons		Field	1	08/04/2022 10:00	BGS	D
Water Level After Purge	17.70		Feet		Field	1	08/04/2022 10:00	BGS	D
Well Volumes Purged	1.29		Vol		Field	1	08/04/2022 10:00	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	20.9		mg/L	0.11	SW846 6010C	1	08/25/2022 20:43	RMD	J1
Iron, Total	0.21		mg/L	0.067	SW846 6010C	1	08/25/2022 20:43	RMD	J1
Magnesium, Total	7.8		mg/L	0.11	SW846 6010C	1	08/25/2022 20:43	RMD	J1
Manganese, Total	0.023		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:43	RMD	J1
Potassium, Total	4.8	5	mg/L	0.56	SW846 6010C	1	08/25/2022 20:43	RMD	J1
Sodium, Total	68.2		mg/L	0.56	SW846 6010C	1	08/25/2022 20:43	RMD	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	08/18/2022 05:24	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:24	PDK	H



Results

Client Sample ID	FFMP02SW	Collected	08/04/2022 10:00
Lab Sample ID	3256290007	Lab Receipt	08/04/2022 15:20

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			82.4%	62 – 133		08/18/2022 05:24		
4-Bromofluorobenzene	460-00-4			99.3%	79 – 114		08/18/2022 05:24		
Dibromofluoromethane	1868-53-7			82.7%	78 – 116		08/18/2022 05:24		
Toluene-d8	2037-26-5			104%	76 – 127		08/18/2022 05:24		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	19		mg/L	5	SM2320B-2011	1	08/10/2022 05:59	BXD	B
Alkalinity, Total	19	1	mg/L	5	SM2320B-2011	1	08/10/2022 05:59	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/09/2022 03:59	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:40	KMS	A
Chloride	106		mg/L	2.0	EPA 300.0	2	08/05/2022 20:23	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/16/2022 12:49	GJB	B
Nitrate-N	13.9		mg/L	1.0	EPA 300.0	2	08/05/2022 20:23	GJB	B
pH	7.15	2	pH_Units		S4500HB-11	1	08/10/2022 05:59	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/11/2022 14:31	AKH	G
Specific Conductance	647		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	41.6		mg/L	2.0	EPA 300.0	2	08/05/2022 20:23	GJB	B
Total Dissolved Solids	368		mg/L	25	S2540C-11	1	08/08/2022 08:03	SMS	B
Total Organic Carbon (TOC)	1.9		mg/L	0.50	SW846 9060A	1	08/05/2022 21:37	PAG	E
Turbidity	13		NTU	0.30	SM2130B-2011	1	08/05/2022 07:12	LXZ	B



Results

Client Sample ID	FFMP035W	Collected	08/04/2022 11:08
Lab Sample ID	3256290008	Lab Receipt	08/04/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	42.86		Feet		Field	1	08/04/2022 11:08	BGS	D
Dissolved Oxygen	4.80		mg/L	0.01	Field	1	08/04/2022 11:08	BGS	D
Elev Top MW Casing above MSL	477.56		Feet		Field	1	08/04/2022 11:08	BGS	D
Flow Rate	0.65		gal/min		Field	1	08/04/2022 11:08	BGS	D
Ground Water Elevation	434.70		ft/MSL		Field	1	08/04/2022 11:08	BGS	D
Oxidation-Reduction Potential	127		mV		Field	1	08/04/2022 11:08	BGS	D
pH, Field (SM4500B)	6.38		pH_Units		Field	1	08/04/2022 11:08	BGS	D
Sample Depth	65.00		Feet		Field	1	08/04/2022 11:08	BGS	D
Specific Conductance, Field	967		umhos/cm	1	Field	1	08/04/2022 11:08	BGS	D
Temperature	17.85		Deg. C		Field	1	08/04/2022 11:08	BGS	D
Total Well Depth	71.80		Feet		Field	1	08/04/2022 11:08	BGS	D
Turbidity, Field	2		NTU	1	Field	1	08/04/2022 11:08	BGS	D
Volume in Water Column	42.54		Gallons		Field	1	08/04/2022 11:08	BGS	D
Water Level After Purge	53.84		Feet		Field	1	08/04/2022 11:08	BGS	D
Well Volumes Purged	0.76		Vol		Field	1	08/04/2022 11:08	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	56.2		mg/L	0.11	SW846 6010C	1	08/25/2022 20:46	RMD	J1
Iron, Total	0.068		mg/L	0.067	SW846 6010C	1	08/25/2022 20:46	RMD	J1
Magnesium, Total	13.7		mg/L	0.11	SW846 6010C	1	08/25/2022 20:46	RMD	J1
Manganese, Total	0.0096		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:46	RMD	J1
Potassium, Total	3.7	5	mg/L	0.56	SW846 6010C	1	08/25/2022 20:46	RMD	J1
Sodium, Total	36.1		mg/L	0.56	SW846 6010C	1	08/25/2022 20:46	RMD	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	08/18/2022 05:47	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 05:47	PDK	H



Results

Client Sample ID	FFMP035W	Collected	08/04/2022 11:08
Lab Sample ID	3256290008	Lab Receipt	08/04/2022 15:20

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			84.8%	62 – 133		08/18/2022 05:47		
4-Bromofluorobenzene	460-00-4			98%	79 – 114		08/18/2022 05:47		
Dibromofluoromethane	1868-53-7			84.7%	78 – 116		08/18/2022 05:47		
Toluene-d8	2037-26-5			102%	76 – 127		08/18/2022 05:47		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	76		mg/L	5	SM2320B-2011	1	08/10/2022 06:08	BXD	B
Alkalinity, Total	76	1	mg/L	5	SM2320B-2011	1	08/10/2022 06:08	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/09/2022 03:45	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:40	KMS	A
Chloride	130		mg/L	5.0	EPA 300.0	5	08/18/2022 19:57	M1D	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/05/2022 16:36	GJB	B
Nitrate-N	5.2		mg/L	1.0	EPA 300.0	2	08/05/2022 16:36	GJB	B
pH	7.98	2	pH_Units		S4500HB-11	1	08/10/2022 06:08	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/11/2022 14:34	AKH	G
Specific Conductance	743		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	35.5		mg/L	2.0	EPA 300.0	2	08/05/2022 16:36	GJB	B
Total Dissolved Solids	476		mg/L	25	S2540C-11	1	08/08/2022 08:03	SMS	B
Total Organic Carbon (TOC)	2.1		mg/L	0.50	SW846 9060A	1	08/05/2022 21:37	PAG	E
Turbidity	4.3		NTU	0.30	SM2130B-2011	1	08/05/2022 07:12	LXZ	B



Results

Client Sample ID	FFMP031W	Collected	08/04/2022 12:31
Lab Sample ID	3256290009	Lab Receipt	08/04/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	66.62		Feet		Field	1	08/04/2022 12:31	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	08/04/2022 12:31	BGS	D
Elev Top MW Casing above MSL	612.66		Feet		Field	1	08/04/2022 12:31	BGS	D
Flow Rate	1.62		gal/min		Field	1	08/04/2022 12:31	BGS	D
Ground Water Elevation	546.04		ft/MSL		Field	1	08/04/2022 12:31	BGS	D
Oxidation-Reduction Potential	-321		mV		Field	1	08/04/2022 12:31	BGS	D
pH, Field (SM4500B)	8.13		pH_Units		Field	1	08/04/2022 12:31	BGS	D
Sample Depth	130.00		Feet		Field	1	08/04/2022 12:31	BGS	D
Specific Conductance, Field	466		umhos/cm	1	Field	1	08/04/2022 12:31	BGS	D
Temperature	18.38		Deg. C		Field	1	08/04/2022 12:31	BGS	D
Total Well Depth	142.70		Feet		Field	1	08/04/2022 12:31	BGS	D
Turbidity, Field	9		NTU	1	Field	1	08/04/2022 12:31	BGS	D
Volume in Water Column	111.84		Gallons		Field	1	08/04/2022 12:31	BGS	D
Water Level After Purge	103.70		Feet		Field	1	08/04/2022 12:31	BGS	D
Well Volumes Purged	0.94		Vol		Field	1	08/04/2022 12:31	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	43.3		mg/L	0.11	SW846 6010C	1	08/25/2022 20:50	RMD	J1
Iron, Total	4.1		mg/L	0.067	SW846 6010C	1	08/25/2022 20:50	RMD	J1
Magnesium, Total	3.9		mg/L	0.11	SW846 6010C	1	08/25/2022 20:50	RMD	J1
Manganese, Total	0.34		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:50	RMD	J1
Potassium, Total	1.2	5	mg/L	0.56	SW846 6010C	1	08/25/2022 20:50	RMD	J1
Sodium, Total	9.0		mg/L	0.56	SW846 6010C	1	08/25/2022 20:50	RMD	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	08/18/2022 06:09	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:09	PDK	H



Results

Client Sample ID	FFMP031W	Collected	08/04/2022 12:31
Lab Sample ID	3256290009	Lab Receipt	08/04/2022 15:20

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			84.4%	62 – 133		08/18/2022 06:09		
4-Bromofluorobenzene	460-00-4			98.5%	79 – 114		08/18/2022 06:09		
Dibromofluoromethane	1868-53-7			83.1%	78 – 116		08/18/2022 06:09		
Toluene-d8	2037-26-5			102%	76 – 127		08/18/2022 06:09		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	77		mg/L	5	SM2320B-2011	1	08/10/2022 06:17	BXD	B
Alkalinity, Total	77	1	mg/L	5	SM2320B-2011	1	08/10/2022 06:17	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/08/2022 19:50	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:40	KMS	A
Chloride	20.1		mg/L	2.0	EPA 300.0	2	08/05/2022 16:46	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/05/2022 16:46	GJB	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	08/05/2022 16:46	GJB	B
pH	8.19	2	pH_Units		S4500HB-11	1	08/10/2022 06:17	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/11/2022 14:57	AKH	G
Specific Conductance	341		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	45.0		mg/L	2.0	EPA 300.0	2	08/05/2022 16:46	GJB	B
Total Dissolved Solids	192		mg/L	25	S2540C-11	1	08/09/2022 07:49	SMS	B
Total Organic Carbon (TOC)	0.95		mg/L	0.50	SW846 9060A	1	08/05/2022 21:37	PAG	E
Turbidity	30		NTU	0.30	SM2130B-2011	1	08/05/2022 07:12	LXZ	B



Results

Client Sample ID	FFMP002W	Collected	08/04/2022 13:16
Lab Sample ID	3256290010	Lab Receipt	08/04/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	65.30		Feet		Field	1	08/04/2022 13:16	BGS	D
Dissolved Oxygen	6.12		mg/L	0.01	Field	1	08/04/2022 13:16	BGS	D
Elev Top MW Casing above MSL	613.20		Feet		Field	1	08/04/2022 13:16	BGS	D
Flow Rate	1.09		gal/min		Field	1	08/04/2022 13:16	BGS	D
Ground Water Elevation	547.90		ft/MSL		Field	1	08/04/2022 13:16	BGS	D
Oxidation-Reduction Potential	294		mV		Field	1	08/04/2022 13:16	BGS	D
pH, Field (SM4500B)	5.34		pH_Units		Field	1	08/04/2022 13:16	BGS	D
Sample Depth	85.00		Feet		Field	1	08/04/2022 13:16	BGS	D
Specific Conductance, Field	367		umhos/cm	1	Field	1	08/04/2022 13:16	BGS	D
Temperature	16.45		Deg. C		Field	1	08/04/2022 13:16	BGS	D
Total Well Depth	90.02		Feet		Field	1	08/04/2022 13:16	BGS	D
Turbidity, Field	1		NTU	1	Field	1	08/04/2022 13:16	BGS	D
Volume in Water Column	36.34		Gallons		Field	1	08/04/2022 13:16	BGS	D
Water Level After Purge	78.75		Feet		Field	1	08/04/2022 13:16	BGS	D
Well Volumes Purged	0.78		Vol		Field	1	08/04/2022 13:16	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	17.8		mg/L	0.11	SW846 6010C	1	08/25/2022 20:54	RMD	J1
Iron, Total	1.3		mg/L	0.067	SW846 6010C	1	08/25/2022 20:54	RMD	J1
Magnesium, Total	6.7		mg/L	0.11	SW846 6010C	1	08/25/2022 20:54	RMD	J1
Manganese, Total	0.24		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:54	RMD	J1
Potassium, Total	2.7	5	mg/L	0.56	SW846 6010C	1	08/25/2022 20:54	RMD	J1
Sodium, Total	12.9		mg/L	0.56	SW846 6010C	1	08/25/2022 20:54	RMD	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	08/18/2022 06:31	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:31	PDK	H



Results

Client Sample ID	FFMP002W	Collected	08/04/2022 13:16
Lab Sample ID	3256290010	Lab Receipt	08/04/2022 15:20

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			84.5%	62 – 133		08/18/2022 06:31		
4-Bromofluorobenzene	460-00-4			97.9%	79 – 114		08/18/2022 06:31		
Dibromofluoromethane	1868-53-7			82.8%	78 – 116		08/18/2022 06:31		
Toluene-d8	2037-26-5			101%	76 – 127		08/18/2022 06:31		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	08/10/2022 06:26	BXD	B
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	08/10/2022 06:26	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	08/08/2022 21:56	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:40	KMS	A
Chloride	15.6		mg/L	2.0	EPA 300.0	2	08/05/2022 16:57	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/05/2022 16:57	GJB	B
Nitrate-N	18.4	E,6	mg/L	1.0	EPA 300.0	2	08/05/2022 16:57	GJB	B
pH	5.59	2	pH_Units		S4500HB-11	1	08/10/2022 06:26	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/11/2022 15:01	AKH	G
Specific Conductance	266		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	11.4		mg/L	2.0	EPA 300.0	2	08/05/2022 16:57	GJB	B
Total Dissolved Solids	188		mg/L	25	S2540C-11	1	08/09/2022 07:49	SMS	B
Total Organic Carbon (TOC)	0.78		mg/L	0.50	SW846 9060A	1	08/05/2022 21:37	PAG	E
Turbidity	0.49		NTU	0.30	SM2130B-2011	1	08/05/2022 07:12	LXZ	B



Results

Client Sample ID	FFMP032W	Collected	08/04/2022 13:49
Lab Sample ID	3256290011	Lab Receipt	08/04/2022 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	49.39		Feet		Field	1	08/04/2022 13:49	BGS	D
Dissolved Oxygen	0.35		mg/L	0.01	Field	1	08/04/2022 13:49	BGS	D
Elev Top MW Casing above MSL	594.09		Feet		Field	1	08/04/2022 13:49	BGS	D
Flow Rate	0.75		gal/min		Field	1	08/04/2022 13:49	BGS	D
Ground Water Elevation	544.70		ft/MSL		Field	1	08/04/2022 13:49	BGS	D
Oxidation-Reduction Potential	-123		mV		Field	1	08/04/2022 13:49	BGS	D
pH, Field (SM4500B)	7.06		pH_Units		Field	1	08/04/2022 13:49	BGS	D
Sample Depth	62.00		Feet		Field	1	08/04/2022 13:49	BGS	D
Specific Conductance, Field	292		umhos/cm	1	Field	1	08/04/2022 13:49	BGS	D
Temperature	17.00		Deg. C		Field	1	08/04/2022 13:49	BGS	D
Total Well Depth	77.60		Feet		Field	1	08/04/2022 13:49	BGS	D
Turbidity, Field	15		NTU	1	Field	1	08/04/2022 13:49	BGS	D
Volume in Water Column	41.47		Gallons		Field	1	08/04/2022 13:49	BGS	D
Water Level After Purge	55.67		Feet		Field	1	08/04/2022 13:49	BGS	D
Well Volumes Purged	0.29		Vol		Field	1	08/04/2022 13:49	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	15.3		mg/L	0.11	SW846 6010C	1	08/25/2022 20:57	RMD	J1
Iron, Total	4.5		mg/L	0.067	SW846 6010C	1	08/25/2022 20:57	RMD	J1
Magnesium, Total	5.4		mg/L	0.11	SW846 6010C	1	08/25/2022 20:57	RMD	J1
Manganese, Total	0.45		mg/L	0.0056	SW846 6010C	1	08/25/2022 20:57	RMD	J1
Potassium, Total	1.2	5	mg/L	0.56	SW846 6010C	1	08/25/2022 20:57	RMD	J1
Sodium, Total	12.1		mg/L	0.56	SW846 6010C	1	08/25/2022 20:57	RMD	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	08/18/2022 06:53	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 06:53	PDK	H



Results

Client Sample ID	FFMP032W	Collected	08/04/2022 13:49
Lab Sample ID	3256290011	Lab Receipt	08/04/2022 15:20

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			83.8%	62 – 133		08/18/2022 06:53		
4-Bromofluorobenzene	460-00-4			97.8%	79 – 114		08/18/2022 06:53		
Dibromofluoromethane	1868-53-7			83.1%	78 – 116		08/18/2022 06:53		
Toluene-d8	2037-26-5			101%	76 – 127		08/18/2022 06:53		

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	69		mg/L	5	SM2320B-2011	1	08/10/2022 06:35	BXD	B
Alkalinity, Total	69	1	mg/L	5	SM2320B-2011	1	08/10/2022 06:35	BXD	B
Ammonia-N	0.396		mg/L	0.100	ASTM D6919-09	10	08/09/2022 05:22	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:40	KMS	A
Chloride	18.5		mg/L	2.0	EPA 300.0	2	08/05/2022 17:07	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/05/2022 17:07	GJB	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	08/05/2022 17:07	GJB	B
pH	8.09	2	pH_Units		S4500HB-11	1	08/10/2022 06:35	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/11/2022 15:04	AKH	G
Specific Conductance	210		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	08/05/2022 17:07	GJB	B
Total Dissolved Solids	104		mg/L	25	S2540C-11	1	08/09/2022 07:49	SMS	B
Total Organic Carbon (TOC)	1.0		mg/L	0.50	SW846 9060A	1	08/05/2022 21:37	PAG	E
Turbidity	64		NTU	0.30	SM2130B-2011	1	08/05/2022 07:12	LXZ	B



Results

Client Sample ID	FIELD BLANK	Collected	08/04/2022 13:40
Lab Sample ID	3256290012	Lab Receipt	08/04/2022 15:20

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	08/25/2022 21:01	RMD	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	08/25/2022 21:01	RMD	J1
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	08/25/2022 21:01	RMD	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	08/25/2022 21:01	RMD	J1
Potassium, Total	ND	ND,5	mg/L	0.56	SW846 6010C	1	08/25/2022 21:01	RMD	J1
Sodium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	08/25/2022 21:01	RMD	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	08/18/2022 03:55	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/18/2022 03:55	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	83.8%	62 – 133	08/18/2022 03:55	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	08/18/2022 03:55	
Dibromofluoromethane	1868-53-7	83.9%	78 – 116	08/18/2022 03:55	
Toluene-d8	2037-26-5	102%	76 – 127	08/18/2022 03:55	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	08/10/2022 06:43	BXD	B
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	08/10/2022 06:43	BXD	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	1	08/08/2022 21:42	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	08/08/2022 12:40	KMS	A
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	08/05/2022 17:18	GJB	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	08/05/2022 17:18	GJB	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	08/05/2022 17:18	GJB	B
pH	5.75	2	pH_Units		S4500HB-11	1	08/10/2022 06:43	BXD	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	08/11/2022 15:07	AKH	G



Results

Client Sample ID	FIELD BLANK	Collected	08/04/2022 13:40
Lab Sample ID	3256290012	Lab Receipt	08/04/2022 15:20

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Specific Conductance	2		umhos/cm	1	SW846 9050A	1	08/22/2022 16:12	BXD	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	08/05/2022 17:18	GJB	B
Total Dissolved Solids	ND	ND	mg/L	25	S2540C-11	1	08/09/2022 07:49	SMS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	08/05/2022 21:37	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	08/05/2022 07:12	LXZ	B



Results

Client Sample ID	TRIP BLANK	Collected	08/04/2022 15:20
Lab Sample ID	3256290013	Lab Receipt	08/04/2022 15:20

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	08/10/2022 13:38	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	08/10/2022 13:38	TMP	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	08/10/2022 13:38	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	08/10/2022 13:38	
Dibromofluoromethane	1868-53-7	104%	78 – 116	08/10/2022 13:38	
Toluene-d8	2037-26-5	102%	76 – 127	08/10/2022 13:38	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3256290006	FFMP02DW	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	
3256290007	FFMP02SW	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	
3256290008	FFMP035W	Field	N/A	
		SW846 6010C	SW846 3015	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	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	420.4/9066	
3256290009	FFMP031W	Field	N/A	
		SW846 6010C	SW846 3015	
		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	420.4/9066	



Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3256290010	FFMP002W	Field	N/A	
		SW846 6010C	SW846 3015	
		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	420.4/9066	
3256290011	FFMP032W	Field	N/A	
		SW846 6010C	SW846 3015	
		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	420.4/9066	
3256290012	FIELD BLANK	SW846 6010C	SW846 3015	
		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	420.4/9066	
3256290013	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
3256290006	FFMP02DW	N/A	N/A	N/A		Field	869647
		SW846 3015	870027	08/11/2022 00:17	ANN	SW846 6010C	874057
		N/A	N/A	N/A		SW846 8260B	871994
		N/A	N/A	N/A		ASTM D6919-09	869661
		N/A	N/A	N/A		EPA 300.0	869198
		N/A	N/A	N/A		EPA 300.0	871328
		N/A	N/A	N/A		EPA 410.4	869649
		N/A	N/A	N/A		S2540C-11	869064
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	869052
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	869205
		420.4/9066	870357	08/11/2022 07:29	AKH	SW846 9066	870370
3256290007	FFMP02SW	N/A	N/A	N/A		Field	869647
		SW846 3015	870027	08/11/2022 00:17	ANN	SW846 6010C	874057
		N/A	N/A	N/A		SW846 8260B	871994
		N/A	N/A	N/A		ASTM D6919-09	869661
		N/A	N/A	N/A		EPA 300.0	869198
		N/A	N/A	N/A		EPA 300.0	871328
		N/A	N/A	N/A		EPA 410.4	869649
		N/A	N/A	N/A		S2540C-11	869064
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	869052
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	869205
		420.4/9066	870357	08/11/2022 07:29	AKH	SW846 9066	870370
3256290008	FFMP035W	N/A	N/A	N/A		Field	869647
		SW846 3015	870027	08/11/2022 00:17	ANN	SW846 6010C	874057
		N/A	N/A	N/A		SW846 8260B	871994
		N/A	N/A	N/A		ASTM D6919-09	869661
		N/A	N/A	N/A		EPA 300.0	869267
		N/A	N/A	N/A		EPA 300.0	872190
		N/A	N/A	N/A		EPA 410.4	869649
		N/A	N/A	N/A		S2540C-11	869064
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	869052
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	869205
		420.4/9066	870357	08/11/2022 07:29	AKH	SW846 9066	870370
3256290009	FFMP031W	N/A	N/A	N/A		Field	869647
		SW846 3015	870027	08/11/2022 00:17	ANN	SW846 6010C	874057
		N/A	N/A	N/A		SW846 8260B	871994
		N/A	N/A	N/A		ASTM D6919-09	869650
		N/A	N/A	N/A		EPA 300.0	869267
		N/A	N/A	N/A		EPA 410.4	869649
		N/A	N/A	N/A		S2540C-11	869632
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	869052
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	869205
		420.4/9066	870357	08/11/2022 07:29	AKH	SW846 9066	870370



Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3256290010	FFMP002W	N/A	N/A	N/A	ANN	Field	869647
		SW846 3015	870027	08/11/2022 00:17		SW846 6010C	874057
		N/A	N/A	N/A		SW846 8260B	871994
		N/A	N/A	N/A		ASTM D6919-09	869660
		N/A	N/A	N/A		EPA 300.0	869267
		N/A	N/A	N/A		EPA 410.4	869649
		N/A	N/A	N/A		S2540C-11	869632
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	869052
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	869205
		420.4/9066	870357	08/11/2022 07:29		SW846 9066	870370
3256290011	FFMP032W	N/A	N/A	N/A	ANN	Field	869647
		SW846 3015	870027	08/11/2022 00:17		SW846 6010C	874057
		N/A	N/A	N/A		SW846 8260B	871994
		N/A	N/A	N/A		ASTM D6919-09	869661
		N/A	N/A	N/A		EPA 300.0	869267
		N/A	N/A	N/A		EPA 410.4	869649
		N/A	N/A	N/A		S2540C-11	869632
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	869052
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	869205
		420.4/9066	870357	08/11/2022 07:29		SW846 9066	870370
3256290012	FIELD BLANK	SW846 3015	870027	08/11/2022 00:17	ANN	SW846 6010C	874057
		N/A	N/A	N/A		SW846 8260B	871994
		N/A	N/A	N/A		ASTM D6919-09	869660
		N/A	N/A	N/A		EPA 300.0	869267
		N/A	N/A	N/A		EPA 410.4	869649
		N/A	N/A	N/A		S2540C-11	869632
		N/A	N/A	N/A		S4500HB-11	869882
		N/A	N/A	N/A		SM2130B-2011	869052
		N/A	N/A	N/A		SM2320B-2011	869882
		N/A	N/A	N/A		SW846 9050A	873042
		N/A	N/A	N/A		SW846 9060A	869205
		420.4/9066	870357	08/11/2022 07:29		SW846 9066	870370
3256290013	TRIP BLANK	N/A	N/A	N/A	AKH	SW846 8260B	870088

MOVED from 5036270

3216664

CC AI

Generated by ALS

3256664

Logged By: SLS

PM: SJB

1 of 1

CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS

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

ALS Environmental

301 Fulfilling Mill Road • Middletown, PA 17057 • Phone: 717-944-5541 • Fax: 717-944-1430

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

Date Required: Approved By: _____

Email? ☒ Y ☐ N dbrown@LCSWMA.com

Fax? ☒ Y ☐ N No.: (717) 397-9973

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1. FFMP02DW	08/04/22	0936
2. FFMP02SW	08/04/22	1000
3. FFMP03SW	08/04/22	1108
4. FFMP031W	08/04/22	1231
5. FFMP002W	08/04/22	1316
6. FFMP032W	08/04/22	1349
7. Field Blank	08/04/22	1340
8. Trip Blank	08/04/22	1520
9		
10		

Enter Number of Containers Per Sample or Field Results Below.									
Container Type	AG	AW	CG	PL	PL	PL	PL	PL	PL
Container Size	40 ml	125 ml	40 ml	250 ml	125 ml	500 ml	500 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	H2SO4	HNO3	None	None	None	None
Matrix	G	GW	G	GW	G	GW	G	GW	G
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									

Temp Taken By: _____

WO Temp (°C) _____

Therm ID: 574 2

Receipt Info Completed By: _____

Cooler Custody Seal Intact ☒ Y ☐ N

Sample Custody Seal Intact ☒ Y ☐ N

Received on Ice ☒ Y ☐ N

Cooler & Samples Intact ☒ Y ☐ N

Correct Containers Provided ☒ Y ☐ N

Sample Label/COC Agree ☒ Y ☐ N

Adequate Sample Volumes ☒ Y ☐ N

VDA Headspace Present ☒ Y ☐ N

Voa Trip Blank ☒ Y ☐ N

NJ≤ 4 Days? ☒ Y ☐ N

Rad Screen (uCi) _____

Courier/Tracking #: _____

SDWA Compliance ☒ Y ☐ N

PWSID _____

WV Containers 0-6°C ☒ Y ☐ N

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

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
XXX XXXXX BY ALS	8-4-22	1520	2-XXX	8/4/22	1520

Project Comments:

LOGGED BY (signature): _____

REVIEWED BY (signature): _____

State Samples Collected In: ☐ USACE ☐ Navy ☐ NY ☐ NJ ☒ PA ☐ NC

Sample Disposal: ☐ Lab ☒ Special

Reportable to PADEP? ☐ Yes ☐ No

PWSID # _____

EDDS: Format Type: _____

* G=Grab, C=Composite

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

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