2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP015W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 61.67 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.90 ft — Elevation of Water Level: 514.73 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 128.11 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/5/2024 — 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 X No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344065001 — Final Lab Analysis CompletionDate: 2/15/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP015W
Sample Date	2/5/2024

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	25	SM20-2320B
CALCIUM, TOTAL	28.6	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	36.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	25.4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	17	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	32.6 E	EPA 300
pH-FIELD (SU)	5.21	FIELD
pH-LAB (SU)	7.23	SM20-4500HB
POTASSIUM, TOTAL	2.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	20.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	657	FIELD
SPEC. COND., LAB (umhos/cm)	480	SW846 9050A
SULFATE	23.1	EPA 300
ALKALINITY	25	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	300	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.2	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP015W
Sample Date	2/5/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP03AW — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 51.23 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.20 ft — Elevation of Water Level: 539.67 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 140.95 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/5/2024 — Sample Collection Time: 11:02

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344065002 — Final Lab Analysis CompletionDate: 2/15/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP03AW
Sample Date	2/5/2024

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	14	SM20-2320B
CALCIUM, TOTAL	23.5	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	47.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	17.4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	430	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	22.6 E	EPA 300
pH-FIELD (SU)	5.1	FIELD
pH-LAB (SU)	6.93	SM20-4500HB
POTASSIUM, TOTAL	1.6	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	16.6	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	506	FIELD
SPEC. COND., LAB (umhos/cm)	373	SW846 9050A
SULFATE	3.2	EPA 300
ALKALINITY	14	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	248	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP03AW
Sample Date	2/5/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: 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: 31.36 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.20 ft — Elevation of Water Level: 530.94 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 86.12 gal

Total Well Depth: 90 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 X No

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/5/2024 — Sample Collection Time: 12:51

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344065003 — Final Lab Analysis CompletionDate: 2/15/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP30RW
Sample Date	2/5/2024

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	30	SM20-2320B
CALCIUM, TOTAL	23.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	104	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	11.7	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	910	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	5.5	EPA 300
pH-FIELD (SU)	5.44	FIELD
pH-LAB (SU)	7.06	SM20-4500HB
POTASSIUM, TOTAL	3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	50.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	661	FIELD
SPEC. COND., LAB (umhos/cm)	482	SW846 9050A
SULFATE	22.7	EPA 300
ALKALINITY	30	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	268	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.79	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.45	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP30RW
Sample Date	2/5/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP04AW — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 31.74 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.52 ft — Elevation of Water Level: 528.98 ft./MSL

Sampling Depth: 146 ft — Volume of Water Column: 396.21 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/5/2024 — Sample Collection Time: 12:46

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344065004 — Final Lab Analysis CompletionDate: 2/15/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP04AW
Sample Date	2/5/2024

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	195	SM20-2320B
CALCIUM, TOTAL	169	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	335	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	26.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	500	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	2.5 ND	EPA 300
pH-FIELD (SU)	6.61	FIELD
pH-LAB (SU)	8.09	SM20-4500HB
POTASSIUM, TOTAL	2.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	92.2	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	2004	FIELD
SPEC. COND., LAB (umhos/cm)	1490	SW846 9050A
SULFATE	56.4	EPA 300
ALKALINITY	195	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	898	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.8	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.5	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP04AW
Sample Date	2/5/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP26RW — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 58.72 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 3.30 ft — Elevation of Water Level: 488.68 ft./MSL

Sampling Depth: 105 ft — Volume of Water Column: 81.19 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 1.2

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/5/2024 — Sample Collection Time: 13:53

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344065005 — Final Lab Analysis CompletionDate: 2/15/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP26RW
Sample Date	2/5/2024

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	85	SM20-2320B
CALCIUM, TOTAL	71.3	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	87.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	74	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	12.8	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	780	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	5.9	FIELD
pH-LAB (SU)	7.76	SM20-4500HB
POTASSIUM, TOTAL	9.7	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	42.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	874	FIELD
SPEC. COND., LAB (umhos/cm)	660	SW846 9050A
SULFATE	110	EPA 300
ALKALINITY	85	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	384	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	2.7	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	2	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP26RW
Sample Date	2/5/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP005W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 51.14 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.70 ft — Elevation of Water Level: 486.26 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 145.19 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/5/2024 — Sample Collection Time: 14:29

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344065006 — Final Lab Analysis CompletionDate: 2/15/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP005W
Sample Date	2/5/2024

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	67	SM20-2320B
CALCIUM, TOTAL	80.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	159	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	18.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	170	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1.2	EPA 300
pH-FIELD (SU)	5.35	FIELD
pH-LAB (SU)	7.62	SM20-4500HB
POTASSIUM, TOTAL	3.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	56.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1124	FIELD
SPEC. COND., LAB (umhos/cm)	823	SW846 9050A
SULFATE	94.8	EPA 300
ALKALINITY	67	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	490	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	2	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP005W
Sample Date	2/5/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP039W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

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

Sampling Point — Latitude: 39 ° 57 ' 10.38 " — Longitude: 76 ° 27 ' 2.83 "

Depth to Water Level: 13.07 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.04 ft — Elevation of Water Level: 442.39 ft./MSL

Sampling Depth: 118 ft — Volume of Water Column: 171.73 gal

Total Well Depth: 130 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 2.0

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/6/2024 — Sample Collection Time: 12:00

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344241001 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP039W
Sample Date	2/6/2024

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	0.539	D6919-09
BICARBONATE ALKALINITY	52	SM20-2320B
CALCIUM, TOTAL	65	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	215	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	2400	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	22.4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	970	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	2.9	EPA 300
pH-FIELD (SU)	5.69	FIELD
pH-LAB (SU)	7.52	SM20-4500HB
POTASSIUM, TOTAL	6.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	68.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1307	FIELD
SPEC. COND., LAB (umhos/cm)	909	SW846 9050A
SULFATE	40.1	EPA 300
ALKALINITY	52	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	502	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.5	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	17	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.	FFMP039W
Sample Date	2/6/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP038W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

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

Sampling Point — Latitude: 39 ° 57 ' 10.18 " — Longitude: 76 ° 27 ' 2.2 "

Depth to Water Level: 18.15 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.15 ft — Elevation of Water Level: 435.89 ft./MSL

Sampling Depth: 46 ft — Volume of Water Column: 46.78 gal

Total Well Depth: 50 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 1.2

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/6/2024 — Sample Collection Time: 11:11

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344241002 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP038W
Sample Date	2/6/2024

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	0.169	D6919-09
BICARBONATE ALKALINITY	81	SM20-2320B
CALCIUM, TOTAL	77	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	99.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1400	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	6.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	69	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	8.01	FIELD
pH-LAB (SU)	8.02	SM20-4500HB
POTASSIUM, TOTAL	1.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	14.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	758	FIELD
SPEC. COND., LAB (umhos/cm)	514	SW846 9050A
SULFATE	14	EPA 300
ALKALINITY	81	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	360	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	7	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.	FFMP038W
Sample Date	2/6/2024

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	8.4	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP017W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 39.94 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.00 ft — Elevation of Water Level: 440.76 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 162.37 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 1.5

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/6/2024 — Sample Collection Time: 14:02

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344241003 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP017W
Sample Date	2/6/2024

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	153	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15	EPA 410.4
CHLORIDE	196	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	47.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	1500	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1.4	EPA 300
pH-FIELD (SU)	6.11	FIELD
pH-LAB (SU)	7.57	SM20-4500HB
POTASSIUM, TOTAL	14.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	154	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	2900	FIELD
SPEC. COND., LAB (umhos/cm)	2010	SW846 9050A
SULFATE	48.1	EPA 300
ALKALINITY	90	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	1180	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	4.4	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.4	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP017W
Sample Date	2/6/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP029W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 36.55 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.00 ft — Elevation of Water Level: 440.75 ft./MSL

Sampling Depth: 55 ft — Volume of Water Column: 32.24 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 2.6

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/6/2024 — Sample Collection Time: 13:37

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344241004 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP029W
Sample Date	2/6/2024

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	7	SM20-2320B
CALCIUM, TOTAL	8.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	44.1	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	130	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	7.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	29	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.4	EPA 300
pH-FIELD (SU)	4.91	FIELD
pH-LAB (SU)	6.94	SM20-4500HB
POTASSIUM, TOTAL	1.7	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	15.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	281	FIELD
SPEC. COND., LAB (umhos/cm)	197	SW846 9050A
SULFATE	2 ND	EPA 300
ALKALINITY	7	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	118	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	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.	FFMP029W
Sample Date	2/6/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP035W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

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

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

Depth to Water Level: 42.62 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.45 ft — Elevation of Water Level: 434.94 ft./MSL

Sampling Depth: 65 ft — Volume of Water Column: 40.21 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/7/2024 — 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 X No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344493001 — Final Lab Analysis CompletionDate: 2/27/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP035W
Sample Date	2/7/2024

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	0.301	D6919-09
BICARBONATE ALKALINITY	57	SM20-2320B
CALCIUM, TOTAL	74.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	185	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	24.7	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	690	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	10.8	EPA 300
pH-FIELD (SU)	5.89	FIELD
pH-LAB (SU)	7.48	SM20-4500HB
POTASSIUM, TOTAL	5.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	65.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1278	FIELD
SPEC. COND., LAB (umhos/cm)	910	SW846 9050A
SULFATE	51.8	EPA 300
ALKALINITY	57	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	512	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.5	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.5	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP035W
Sample Date	2/7/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP036W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

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

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

Depth to Water Level: 48.97 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.91 ft — Elevation of Water Level: 429.26 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 133.69 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/7/2024 — Sample Collection Time: 11:36

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344493002 — Final Lab Analysis CompletionDate: 2/27/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP036W
Sample Date	2/7/2024

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	0.347	D6919-09
BICARBONATE ALKALINITY	93	SM20-2320B
CALCIUM, TOTAL	51	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	34.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1200	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	89	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	8.18	FIELD
pH-LAB (SU)	8.2	SM20-4500HB
POTASSIUM, TOTAL	1.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	15.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	486	FIELD
SPEC. COND., LAB (umhos/cm)	342	SW846 9050A
SULFATE	28.7	EPA 300
ALKALINITY	93	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	200	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.51	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	9.8	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP036W
Sample Date	2/7/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP034W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: ___

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

Depth to Water Level: 10.22 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 462.66 ft./MSL

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

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/7/2024 — Sample Collection Time: 13:15

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344493003 — Final Lab Analysis CompletionDate: 2/27/2024

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

Comments: ___

I.D. No	101389
Monitoring Point No.	FFMP034W
Sample Date	2/7/2024

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	42	SM20-2320B
CALCIUM, TOTAL	38.9	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	151	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	7100	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	13.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	270	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	11.3	EPA 300
pH-FIELD (SU)	5.76	FIELD
pH-LAB (SU)	7.45	SM20-4500HB
POTASSIUM, TOTAL	2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	19.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1028	FIELD
SPEC. COND., LAB (umhos/cm)	730	SW846 9050A
SULFATE	28.9	EPA 300
ALKALINITY	42	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	362	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.7	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.	FFMP034W
Sample Date	2/7/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP033W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

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

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

Depth to Water Level: 19.38 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 0.49 ft — Elevation of Water Level: 497.14 ft./MSL

Sampling Depth: 79 ft — Volume of Water Column: 112.53 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/7/2024 — Sample Collection Time: 13:50

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344493004 — Final Lab Analysis CompletionDate: 2/27/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP033W
Sample Date	2/7/2024

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	0.421	D6919-09
BICARBONATE ALKALINITY	32	SM20-2320B
CALCIUM, TOTAL	61.6	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	78.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1300	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	22.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	140	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	10.8	EPA 300
pH-FIELD (SU)	5.56	FIELD
pH-LAB (SU)	7.15	SM20-4500HB
POTASSIUM, TOTAL	4.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	43	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	616	FIELD
SPEC. COND., LAB (umhos/cm)	430	SW846 9050A
SULFATE	11.2	EPA 300
ALKALINITY	32	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	190	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	29	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP033W
Sample Date	2/7/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP02DW — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

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

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

Depth to Water Level: 27.82 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 481.78 ft./MSL

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

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/8/2024 — Sample Collection Time: 10:48

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344744001 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP02DW
Sample Date	2/8/2024

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	124	SM20-2320B
CALCIUM, TOTAL	151	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	415	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	1200	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	23	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	470	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	7.3	EPA 300
pH-FIELD (SU)	7.11	FIELD
pH-LAB (SU)	8.11	SM20-4500HB
POTASSIUM, TOTAL	1.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	156	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	2255	FIELD
SPEC. COND., LAB (umhos/cm)	1700	SW846 9050A
SULFATE	42.1	EPA 300
ALKALINITY	124	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	1020	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.93	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.	FFMP02DW
Sample Date	2/8/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP02SW — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

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

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

Depth to Water Level: 14.53 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 495.37 ft./MSL

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

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/8/2024 — Sample Collection Time: 9:46

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344744002 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP02SW
Sample Date	2/8/2024

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	184	SM20-2320B
CALCIUM, TOTAL	27.1	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	93.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1100	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	9.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	35	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	9.9	EPA 300
pH-FIELD (SU)	5.38	FIELD
pH-LAB (SU)	7.28	SM20-4500HB
POTASSIUM, TOTAL	4.8	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	63.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	611	FIELD
SPEC. COND., LAB (umhos/cm)	516	SW846 9050A
SULFATE	39.6	EPA 300
ALKALINITY	184	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	290	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.9	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	19	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP02SW
Sample Date	2/8/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP031W — X Well ___ Spring ___ Stream ___ Other

X Upgradient/Upstream ___ Downgradient/Downstream

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

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

Depth to Water Level: 62.19 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.38 ft — Elevation of Water Level: 550.47 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 114.28 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/8/2024 — Sample Collection Time: 11:05

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344744003 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP031W
Sample Date	2/8/2024

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	0.203	D6919-09
BICARBONATE ALKALINITY	77	SM20-2320B
CALCIUM, TOTAL	50.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	21.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	4100	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	4.8	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)	8.21	FIELD
pH-LAB (SU)	8.13	SM20-4500HB
POTASSIUM, TOTAL	1.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	9.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	449	FIELD
SPEC. COND., LAB (umhos/cm)	315	SW846 9050A
SULFATE	49	EPA 300
ALKALINITY	77	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	186	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	31	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP031W
Sample Date	2/8/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP002W — X Well ___ Spring ___ Stream ___ Other

X Upgradient/Upstream ___ Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 52.62 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.60 ft — Elevation of Water Level: 560.58 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 171.80 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/8/2024 — Sample Collection Time: 11:57

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344744004 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP002W
Sample Date	2/8/2024

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	0.108	D6919-09
BICARBONATE ALKALINITY	6	SM20-2320B
CALCIUM, TOTAL	18.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	16.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	290	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	7.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	200	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	18.3	EPA 300
pH-FIELD (SU)	4.64	FIELD
pH-LAB (SU)	6.26	SM20-4500HB
POTASSIUM, TOTAL	1.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	13.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	340	FIELD
SPEC. COND., LAB (umhos/cm)	243	SW846 9050A
SULFATE	11	EPA 300
ALKALINITY	6	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	157	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.7	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.	FFMP002W
Sample Date	2/8/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
03/21/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP032W — X Well ___ Spring ___ Stream ___ Other

X Upgradient/Upstream ___ Downgradient/Downstream

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

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

Depth to Water Level: 49.95 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.06 ft — Elevation of Water Level: 544.14 ft./MSL

Sampling Depth: 62 ft — Volume of Water Column: 36.79 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 0.4

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 2/8/2024 — Sample Collection Time: 13:45

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3344744005 — Final Lab Analysis CompletionDate: 2/22/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP032W
Sample Date	2/8/2024

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	0.608	D6919-09
BICARBONATE ALKALINITY	71	SM20-2320B
CALCIUM, TOTAL	18.9	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	22.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	11600	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	6.9	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	740	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	6.9	FIELD
pH-LAB (SU)	8.06	SM20-4500HB
POTASSIUM, TOTAL	1.6	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	13.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	102	FIELD
SPEC. COND., LAB (umhos/cm)	205	SW846 9050A
SULFATE	2 ND	EPA 300
ALKALINITY	71	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	108	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.61	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	85	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
** Total and dissolved analysis required only in conjunction with additional annual metals sampling (see page 4). Remaining quarterly samples only require total metals analysis.

I.D. No	101389
Monitoring Point No.	FFMP032W
Sample Date	2/8/2024

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.

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

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, NJ PA101

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

Project 1ST QTR 2024 GWMP-FORM 19Q
Workorder 3344065
Report ID 302099 on 2/21/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 05, 2024.

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):
Jordan Bigler - Lancaster County Solid Waste Authority
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3344065001	FFMP015W	Ground Water	02/05/2024 10:44	02/05/2024 15:55	BGS	Analytical Laboratory Service
3344065002	FFMP03AW	Ground Water	02/05/2024 11:02	02/05/2024 15:55	BGS	Analytical Laboratory Service
3344065003	FFMP30RW	Ground Water	02/05/2024 12:51	02/05/2024 15:55	BGS	Analytical Laboratory Service
3344065004	FFMP04AW	Ground Water	02/05/2024 12:46	02/05/2024 15:55	BGS	Analytical Laboratory Service
3344065005	FFMP26RW	Ground Water	02/05/2024 13:53	02/05/2024 15:55	BGS	Analytical Laboratory Service
3344065006	FFMP005W	Ground Water	02/05/2024 14:29	02/05/2024 15:55	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, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
E	Result reported exceeds instrument calibration
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The sample was originally run within hold time, but required further analysis that exceeded hold time.
3	This sample was reran out of hold within the instrument’s calibration range, for the analyte Nitrate/Nitrite -N, and confirms the initial in-hold reported result.
4	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
5	The QC sample type MS for method SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 87 and the control limits were 90 to 110.

Detected Results Summary

Client Sample ID	FFMP015W	Collected	02/05/2024 10:44
Lab Sample ID	3344065001	Lab Receipt	02/05/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	61.67	Feet		Field	#
Dissolved Oxygen	7.92	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	576.40	Feet		Field	#
Flow Rate	1.79	gal/min		Field	#
Ground Water Elevation	514.73	ft/MSL		Field	#
Oxidation-Reduction Potential	269	mV		Field	#
pH, Field (SM4500B)	5.21	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	657	umhos/cm	1	Field	#
Temperature	15.46	Deg. C		Field	#
Total Well Depth	149.90	Feet		Field	#
Volume in Water Column	129.70	Gallons		Field	#
Water Level After Purge	110.25	Feet		Field	#
Well Volumes Purged	1.04	Vol		Field	#
METALS					
Calcium, Total	28.6	mg/L	0.11	SW846 6010C	#
Magnesium, Total	25.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.017	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	20.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	25	mg/L	5	SM2320B-2011	#
Alkalinity, Total	25	mg/L	5	SM2320B-2011	#
Chloride	36.4	mg/L	2.0	EPA 300.0	#
Nitrate-N	32.6	mg/L	1.0	EPA 300.0	#
pH	7.23	pH_Units		S4500HB-11	#
Specific Conductance	480	umhos/cm	5	SW846 9050A	#
Sulfate	23.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	300	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.2	mg/L	0.50	SW846 9060A	#

Detected Results Summary

Client Sample ID	FFMP03AW	Collected	02/05/2024 11:02
Lab Sample ID	3344065002	Lab Receipt	02/05/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	51.23	Feet		Field	#
Dissolved Oxygen	0.93	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	590.90	Feet		Field	#
Flow Rate	2.06	gal/min		Field	#
Ground Water Elevation	539.67	ft/MSL		Field	#
Oxidation-Reduction Potential	289	mV		Field	#
pH, Field (SM4500B)	5.10	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	506	umhos/cm	1	Field	#
Temperature	14.00	Deg. C		Field	#
Total Well Depth	148.40	Feet		Field	#
Volume in Water Column	142.84	Gallons		Field	#
Water Level After Purge	89.62	Feet		Field	#
Well Volumes Purged	1.01	Vol		Field	#
METALS					
Calcium, Total	23.5	mg/L	0.11	SW846 6010C	#
Magnesium, Total	17.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.43	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	16.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	14	mg/L	5	SM2320B-2011	#
Alkalinity, Total	14	mg/L	5	SM2320B-2011	#
Chloride	47.4	mg/L	2.0	EPA 300.0	#
Nitrate-N	22.6	mg/L	1.0	EPA 300.0	#
pH	6.93	pH_Units		S4500HB-11	#
Specific Conductance	373	umhos/cm	5	SW846 9050A	#
Sulfate	3.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	248	mg/L	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	FFMP30RW	Collected	02/05/2024 12:51
Lab Sample ID	3344065003	Lab Receipt	02/05/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	31.36	Feet		Field	#
Dissolved Oxygen	4.16	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	562.30	Feet		Field	#
Flow Rate	2.55	gal/min		Field	#
Ground Water Elevation	530.94	ft/MSL		Field	#
Oxidation-Reduction Potential	295	mV		Field	#
pH, Field (SM4500B)	5.44	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	661	umhos/cm	1	Field	#
Temperature	13.81	Deg. C		Field	#
Total Well Depth	94.20	Feet		Field	#
Volume in Water Column	92.37	Gallons		Field	#
Water Level After Purge	35.12	Feet		Field	#
Well Volumes Purged	2.35	Vol		Field	#
METALS					
Calcium, Total	23.3	mg/L	0.11	SW846 6010C	#
Magnesium, Total	11.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.91	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	50.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	30	mg/L	5	SM2320B-2011	#
Alkalinity, Total	30	mg/L	5	SM2320B-2011	#
Chloride	104	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.5	mg/L	1.0	EPA 300.0	#
pH	7.06	pH_Units		S4500HB-11	#
Specific Conductance	482	umhos/cm	5	SW846 9050A	#
Sulfate	22.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	268	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.79	mg/L	0.50	SW846 9060A	#
Turbidity	0.45	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP04AW	Collected	02/05/2024 12:46
Lab Sample ID	3344065004	Lab Receipt	02/05/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	31.74	Feet		Field	#
Elev Top MW Casing above MSL	560.72	Feet		Field	#
Flow Rate	2.33	gal/min		Field	#
Ground Water Elevation	528.98	ft/MSL		Field	#
Oxidation-Reduction Potential	91	mV		Field	#
pH, Field (SM4500B)	6.61	pH_Units		Field	#
Sample Depth	146.00	Feet		Field	#
Specific Conductance, Field	2004	umhos/cm	1	Field	#
Temperature	13.98	Deg. C		Field	#
Total Well Depth	148.50	Feet		Field	#
Volume in Water Column	171.64	Gallons		Field	#
Water Level After Purge	84.31	Feet		Field	#
Well Volumes Purged	1.02	Vol		Field	#
METALS					
Calcium, Total	169	mg/L	0.11	SW846 6010C	#
Magnesium, Total	26.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.50	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	92.2	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	195	mg/L	5	SM2320B-2011	#
Alkalinity, Total	195	mg/L	5	SM2320B-2011	#
Chloride	335	mg/L	5.0	EPA 300.0	#
pH	8.09	pH_Units		S4500HB-11	#
Specific Conductance	1490	umhos/cm	5	SW846 9050A	#
Sulfate	56.4	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	898	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.80	mg/L	0.50	SW846 9060A	#
Turbidity	0.50	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP26RW	Collected	02/05/2024 13:53
Lab Sample ID	3344065005	Lab Receipt	02/05/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	58.72	Feet		Field	#
Dissolved Oxygen	1.03	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	547.40	Feet		Field	#
Flow Rate	3.39	gal/min		Field	#
Ground Water Elevation	488.68	ft/MSL		Field	#
Oxidation-Reduction Potential	262	mV		Field	#
pH, Field (SM4500B)	5.90	pH_Units		Field	#
Sample Depth	105.00	Feet		Field	#
Specific Conductance, Field	874	umhos/cm	1	Field	#
Temperature	14.38	Deg. C		Field	#
Total Well Depth	118.30	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
Volume in Water Column	87.58	Gallons		Field	#
Water Level After Purge	76.39	Feet		Field	#
Well Volumes Purged	1.16	Vol		Field	#
METALS					
Calcium, Total	71.3	mg/L	0.11	SW846 6010C	#
Iron, Total	0.074	mg/L	0.067	SW846 6010C	#
Magnesium, Total	12.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.78	mg/L	0.0056	SW846 6010C	#
Potassium, Total	9.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	42.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	85	mg/L	5	SM2320B-2011	#
Alkalinity, Total	85	mg/L	5	SM2320B-2011	#
Chloride	87.4	mg/L	2.0	EPA 300.0	#
pH	7.76	pH_Units		S4500HB-11	#
Specific Conductance	660	umhos/cm	5	SW846 9050A	#
Sulfate	110	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	384	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	2.7	mg/L	0.50	SW846 9060A	#
Turbidity	2.0	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP005W	Collected	02/05/2024 14:29
Lab Sample ID	3344065006	Lab Receipt	02/05/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	51.14	Feet		Field	#
Dissolved Oxygen	0.27	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	537.40	Feet		Field	#
Flow Rate	2.39	gal/min		Field	#
Ground Water Elevation	486.26	ft/MSL		Field	#
Oxidation-Reduction Potential	251	mV		Field	#
pH, Field (SM4500B)	5.35	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	1124	umhos/cm	1	Field	#
Temperature	13.49	Deg. C		Field	#
Total Well Depth	149.70	Feet		Field	#
Volume in Water Column	144.88	Gallons		Field	#
Water Level After Purge	80.63	Feet		Field	#
Well Volumes Purged	0.91	Vol		Field	#
METALS					
Calcium, Total	80.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	18.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.17	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	56.1	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	67	mg/L	5	SM2320B-2011	#
Alkalinity, Total	67	mg/L	5	SM2320B-2011	#
Chloride	159	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.2	mg/L	1.0	EPA 300.0	#
pH	7.62	pH_Units		S4500HB-11	#
Specific Conductance	823	umhos/cm	5	SW846 9050A	#
Sulfate	94.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	490	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	2.0	mg/L	0.50	SW846 9060A	#

Results

Client Sample ID	FFMP015W	Collected	02/05/2024 10:44
Lab Sample ID	3344065001	Lab Receipt	02/05/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	61.67		Feet		Field	1	02/05/2024 10:44	BGS	D
Dissolved Oxygen	7.92		mg/L	0.01	Field	1	02/05/2024 10:44	BGS	D
Elev Top MW Casing above MSL	576.40		Feet		Field	1	02/05/2024 10:44	BGS	D
Flow Rate	1.79		gal/min		Field	1	02/05/2024 10:44	BGS	D
Ground Water Elevation	514.73		ft/MSL		Field	1	02/05/2024 10:44	BGS	D
Oxidation-Reduction Potential	269		mV		Field	1	02/05/2024 10:44	BGS	D
pH, Field (SM4500B)	5.21		pH_Units		Field	1	02/05/2024 10:44	BGS	D
Sample Depth	135.00		Feet		Field	1	02/05/2024 10:44	BGS	D
Specific Conductance, Field	657		umhos/cm	1	Field	1	02/05/2024 10:44	BGS	D
Temperature	15.46		Deg. C		Field	1	02/05/2024 10:44	BGS	D
Total Well Depth	149.90		Feet		Field	1	02/05/2024 10:44	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/05/2024 10:44	BGS	D
Volume in Water Column	129.70		Gallons		Field	1	02/05/2024 10:44	BGS	D
Water Level After Purge	110.25		Feet		Field	1	02/05/2024 10:44	BGS	D
Well Volumes Purged	1.04		Vol		Field	1	02/05/2024 10:44	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	28.6		mg/L	0.11	SW846 6010C	1	02/12/2024 12:52	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/12/2024 12:52	AXW	J1
Magnesium, Total	25.4		mg/L	0.11	SW846 6010C	1	02/12/2024 12:52	AXW	J1
Manganese, Total	0.017		mg/L	0.0056	SW846 6010C	1	02/12/2024 12:52	AXW	J1
Potassium, Total	2.3		mg/L	0.56	SW846 6010C	1	02/12/2024 12:52	AXW	J1
Sodium, Total	20.9		mg/L	0.56	SW846 6010C	1	02/12/2024 12:52	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:54	JTH	H

Results

Client Sample ID	FFMP015W	Collected	02/05/2024 10:44
Lab Sample ID	3344065001	Lab Receipt	02/05/2024 15:55

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	99.1%	62 – 133	02/12/2024 17:54	
4-Bromofluorobenzene	460-00-4	99.9%	79 – 114	02/12/2024 17:54	
Dibromofluoromethane	1868-53-7	97%	78 – 116	02/12/2024 17:54	
Toluene-d8	2037-26-5	99.5%	76 – 127	02/12/2024 17:54	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	25		mg/L	5	SM2320B-2011	1	02/08/2024 01:15	KMV	B
Alkalinity, Total	25	1	mg/L	5	SM2320B-2011	1	02/08/2024 01:15	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/15/2024 22:28	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	36.4		mg/L	2.0	EPA 300.0	2	02/06/2024 14:03	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/06/2024 14:03	J1W	B
Nitrate-N	32.6	E,2,3	mg/L	1.0	EPA 300.0	2	02/06/2024 14:03	J1W	B
pH	7.23	4	pH_Units		S4500HB-11	1	02/08/2024 01:15	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/07/2024 14:48	AKH	G
Specific Conductance	480		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	23.1		mg/L	2.0	EPA 300.0	2	02/06/2024 14:03	J1W	B
Total Dissolved Solids	300		mg/L	25	SM2540C-15	1	02/07/2024 15:00	RAG	B
Total Organic Carbon (TOC)	1.2		mg/L	0.50	SW846 9060A	1	02/06/2024 19:31	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/06/2024 00:20	NRB	B

Results

Client Sample ID	FFMP03AW	Collected	02/05/2024 11:02
Lab Sample ID	3344065002	Lab Receipt	02/05/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	51.23		Feet		Field	1	02/05/2024 11:02	BGS	D
Dissolved Oxygen	0.93		mg/L	0.01	Field	1	02/05/2024 11:02	BGS	D
Elev Top MW Casing above MSL	590.90		Feet		Field	1	02/05/2024 11:02	BGS	D
Flow Rate	2.06		gal/min		Field	1	02/05/2024 11:02	BGS	D
Ground Water Elevation	539.67		ft/MSL		Field	1	02/05/2024 11:02	BGS	D
Oxidation-Reduction Potential	289		mV		Field	1	02/05/2024 11:02	BGS	D
pH, Field (SM4500B)	5.10		pH_Units		Field	1	02/05/2024 11:02	BGS	D
Sample Depth	130.00		Feet		Field	1	02/05/2024 11:02	BGS	D
Specific Conductance, Field	506		umhos/cm	1	Field	1	02/05/2024 11:02	BGS	D
Temperature	14.00		Deg. C		Field	1	02/05/2024 11:02	BGS	D
Total Well Depth	148.40		Feet		Field	1	02/05/2024 11:02	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/05/2024 11:02	BGS	D
Volume in Water Column	142.84		Gallons		Field	1	02/05/2024 11:02	BGS	D
Water Level After Purge	89.62		Feet		Field	1	02/05/2024 11:02	BGS	D
Well Volumes Purged	1.01		Vol		Field	1	02/05/2024 11:02	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	23.5		mg/L	0.11	SW846 6010C	1	02/12/2024 12:53	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/12/2024 12:53	AXW	J1
Magnesium, Total	17.4		mg/L	0.11	SW846 6010C	1	02/12/2024 12:53	AXW	J1
Manganese, Total	0.43		mg/L	0.0056	SW846 6010C	1	02/12/2024 12:53	AXW	J1
Potassium, Total	1.6		mg/L	0.56	SW846 6010C	1	02/12/2024 12:53	AXW	J1
Sodium, Total	16.6		mg/L	0.56	SW846 6010C	1	02/12/2024 12:53	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/12/2024 17:33	JTH	H

Results

Client Sample ID	FFMP03AW	Collected	02/05/2024 11:02
Lab Sample ID	3344065002	Lab Receipt	02/05/2024 15:55

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	106%	62 – 133	02/12/2024 17:33	
4-Bromofluorobenzene	460-00-4	97.8%	79 – 114	02/12/2024 17:33	
Dibromofluoromethane	1868-53-7	105%	78 – 116	02/12/2024 17:33	
Toluene-d8	2037-26-5	105%	76 – 127	02/12/2024 17:33	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	14		mg/L	5	SM2320B-2011	1	02/08/2024 01:28	KMV	B
Alkalinity, Total	14	1	mg/L	5	SM2320B-2011	1	02/08/2024 01:28	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/15/2024 22:42	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	47.4		mg/L	2.0	EPA 300.0	2	02/06/2024 09:40	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/06/2024 09:40	J1W	B
Nitrate-N	22.6	E,2,3	mg/L	1.0	EPA 300.0	2	02/06/2024 09:40	J1W	B
pH	6.93	4	pH_Units		S4500HB-11	1	02/08/2024 01:28	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/07/2024 15:19	AKH	G
Specific Conductance	373		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	3.2		mg/L	2.0	EPA 300.0	2	02/06/2024 09:40	J1W	B
Total Dissolved Solids	248		mg/L	25	SM2540C-15	1	02/07/2024 15:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/06/2024 19:31	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/06/2024 00:20	NRB	B

Results

Client Sample ID	FFMP30RW	Collected	02/05/2024 12:51
Lab Sample ID	3344065003	Lab Receipt	02/05/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	31.36		Feet		Field	1	02/05/2024 12:51	BGS	D
Dissolved Oxygen	4.16		mg/L	0.01	Field	1	02/05/2024 12:51	BGS	D
Elev Top MW Casing above MSL	562.30		Feet		Field	1	02/05/2024 12:51	BGS	D
Flow Rate	2.55		gal/min		Field	1	02/05/2024 12:51	BGS	D
Ground Water Elevation	530.94		ft/MSL		Field	1	02/05/2024 12:51	BGS	D
Oxidation-Reduction Potential	295		mV		Field	1	02/05/2024 12:51	BGS	D
pH, Field (SM4500B)	5.44		pH_Units		Field	1	02/05/2024 12:51	BGS	D
Sample Depth	85.00		Feet		Field	1	02/05/2024 12:51	BGS	D
Specific Conductance, Field	661		umhos/cm	1	Field	1	02/05/2024 12:51	BGS	D
Temperature	13.81		Deg. C		Field	1	02/05/2024 12:51	BGS	D
Total Well Depth	94.20		Feet		Field	1	02/05/2024 12:51	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/05/2024 12:51	BGS	D
Volume in Water Column	92.37		Gallons		Field	1	02/05/2024 12:51	BGS	D
Water Level After Purge	35.12		Feet		Field	1	02/05/2024 12:51	BGS	D
Well Volumes Purged	2.35		Vol		Field	1	02/05/2024 12:51	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	23.3		mg/L	0.11	SW846 6010C	1	02/12/2024 13:05	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/12/2024 13:05	AXW	J1
Magnesium, Total	11.7		mg/L	0.11	SW846 6010C	1	02/12/2024 13:05	AXW	J1
Manganese, Total	0.91		mg/L	0.0056	SW846 6010C	1	02/12/2024 13:05	AXW	J1
Potassium, Total	3.0		mg/L	0.56	SW846 6010C	1	02/12/2024 13:05	AXW	J1
Sodium, Total	50.7		mg/L	0.56	SW846 6010C	1	02/12/2024 13:05	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:37	PDK	H

Results

Client Sample ID	FFMP30RW	Collected	02/05/2024 12:51
Lab Sample ID	3344065003	Lab Receipt	02/05/2024 15:55

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	107%	62 – 133	02/13/2024 00:37	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	02/13/2024 00:37	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/13/2024 00:37	
Toluene-d8	2037-26-5	106%	76 – 127	02/13/2024 00:37	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	30		mg/L	5	SM2320B-2011	1	02/08/2024 01:41	KMV	B
Alkalinity, Total	30	1	mg/L	5	SM2320B-2011	1	02/08/2024 01:41	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/15/2024 22:56	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	104		mg/L	2.0	EPA 300.0	2	02/06/2024 09:52	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/06/2024 09:52	J1W	B
Nitrate-N	5.5		mg/L	1.0	EPA 300.0	2	02/06/2024 09:52	J1W	B
pH	7.06	4	pH_Units		S4500HB-11	1	02/08/2024 01:41	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/07/2024 15:15	AKH	G
Specific Conductance	482		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	22.7		mg/L	2.0	EPA 300.0	2	02/06/2024 09:52	J1W	B
Total Dissolved Solids	268		mg/L	25	SM2540C-15	1	02/07/2024 15:00	RAG	B
Total Organic Carbon (TOC)	0.79		mg/L	0.50	SW846 9060A	1	02/06/2024 19:31	PAG	E
Turbidity	0.45		NTU	0.30	SM2130B-2011	1	02/06/2024 00:20	NRB	B

Results

Client Sample ID	FFMP04AW	Collected	02/05/2024 12:46
Lab Sample ID	3344065004	Lab Receipt	02/05/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	31.74		Feet		Field	1	02/05/2024 12:46	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	02/05/2024 12:46	BGS	D
Elev Top MW Casing above MSL	560.72		Feet		Field	1	02/05/2024 12:46	BGS	D
Flow Rate	2.33		gal/min		Field	1	02/05/2024 12:46	BGS	D
Ground Water Elevation	528.98		ft/MSL		Field	1	02/05/2024 12:46	BGS	D
Oxidation-Reduction Potential	91		mV		Field	1	02/05/2024 12:46	BGS	D
pH, Field (SM4500B)	6.61		pH_Units		Field	1	02/05/2024 12:46	BGS	D
Sample Depth	146.00		Feet		Field	1	02/05/2024 12:46	BGS	D
Specific Conductance, Field	2004		umhos/cm	1	Field	1	02/05/2024 12:46	BGS	D
Temperature	13.98		Deg. C		Field	1	02/05/2024 12:46	BGS	D
Total Well Depth	148.50		Feet		Field	1	02/05/2024 12:46	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/05/2024 12:46	BGS	D
Volume in Water Column	171.64		Gallons		Field	1	02/05/2024 12:46	BGS	D
Water Level After Purge	84.31		Feet		Field	1	02/05/2024 12:46	BGS	D
Well Volumes Purged	1.02		Vol		Field	1	02/05/2024 12:46	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	169		mg/L	0.11	SW846 6010C	1	02/12/2024 13:07	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/12/2024 13:07	AXW	J1
Magnesium, Total	26.5		mg/L	0.11	SW846 6010C	1	02/12/2024 13:07	AXW	J1
Manganese, Total	0.50		mg/L	0.0056	SW846 6010C	1	02/12/2024 13:07	AXW	J1
Potassium, Total	2.5		mg/L	0.56	SW846 6010C	1	02/12/2024 13:07	AXW	J1
Sodium, Total	92.2		mg/L	0.56	SW846 6010C	1	02/12/2024 13:07	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 00:57	PDK	H

Results

Client Sample ID	FFMP04AW	Collected	02/05/2024 12:46
Lab Sample ID	3344065004	Lab Receipt	02/05/2024 15:55

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	108%	62 – 133	02/13/2024 00:57	
4-Bromofluorobenzene	460-00-4	92.8%	79 – 114	02/13/2024 00:57	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/13/2024 00:57	
Toluene-d8	2037-26-5	101%	76 – 127	02/13/2024 00:57	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	195		mg/L	5	SM2320B-2011	1	02/08/2024 01:53	KMV	B
Alkalinity, Total	195	1	mg/L	5	SM2320B-2011	1	02/08/2024 01:53	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/15/2024 23:09	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	335		mg/L	5.0	EPA 300.0	5	02/06/2024 10:03	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	02/06/2024 10:03	J1W	B
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	02/06/2024 10:03	J1W	B
pH	8.09	4	pH_Units		S4500HB-11	1	02/08/2024 01:53	KMV	B
Phenolics	ND	ND,5	mg/L	0.004	SW846 9066	1	02/07/2024 15:26	AKH	G
Specific Conductance	1490		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	56.4		mg/L	5.0	EPA 300.0	5	02/06/2024 10:03	J1W	B
Total Dissolved Solids	898		mg/L	25	SM2540C-15	1	02/07/2024 15:00	RAG	B
Total Organic Carbon (TOC)	0.80		mg/L	0.50	SW846 9060A	1	02/06/2024 19:31	PAG	E
Turbidity	0.50		NTU	0.30	SM2130B-2011	1	02/06/2024 00:20	NRB	B

Results

Client Sample ID	FFMP26RW	Collected	02/05/2024 13:53
Lab Sample ID	3344065005	Lab Receipt	02/05/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	58.72		Feet		Field	1	02/05/2024 13:53	BGS	D
Dissolved Oxygen	1.03		mg/L	0.01	Field	1	02/05/2024 13:53	BGS	D
Elev Top MW Casing above MSL	547.40		Feet		Field	1	02/05/2024 13:53	BGS	D
Flow Rate	3.39		gal/min		Field	1	02/05/2024 13:53	BGS	D
Ground Water Elevation	488.68		ft/MSL		Field	1	02/05/2024 13:53	BGS	D
Oxidation-Reduction Potential	262		mV		Field	1	02/05/2024 13:53	BGS	D
pH, Field (SM4500B)	5.90		pH_Units		Field	1	02/05/2024 13:53	BGS	D
Sample Depth	105.00		Feet		Field	1	02/05/2024 13:53	BGS	D
Specific Conductance, Field	874		umhos/cm	1	Field	1	02/05/2024 13:53	BGS	D
Temperature	14.38		Deg. C		Field	1	02/05/2024 13:53	BGS	D
Total Well Depth	118.30		Feet		Field	1	02/05/2024 13:53	BGS	D
Turbidity, Field	1		NTU	1	Field	1	02/05/2024 13:53	BGS	D
Volume in Water Column	87.58		Gallons		Field	1	02/05/2024 13:53	BGS	D
Water Level After Purge	76.39		Feet		Field	1	02/05/2024 13:53	BGS	D
Well Volumes Purged	1.16		Vol		Field	1	02/05/2024 13:53	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	71.3		mg/L	0.11	SW846 6010C	1	02/12/2024 13:08	AXW	J1
Iron, Total	0.074		mg/L	0.067	SW846 6010C	1	02/12/2024 13:08	AXW	J1
Magnesium, Total	12.8		mg/L	0.11	SW846 6010C	1	02/12/2024 13:08	AXW	J1
Manganese, Total	0.78		mg/L	0.0056	SW846 6010C	1	02/12/2024 13:08	AXW	J1
Potassium, Total	9.7		mg/L	0.56	SW846 6010C	1	02/12/2024 13:08	AXW	J1
Sodium, Total	42.7		mg/L	0.56	SW846 6010C	1	02/12/2024 13:08	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:18	PDK	H

Results

Client Sample ID	FFMP26RW	Collected	02/05/2024 13:53
Lab Sample ID	3344065005	Lab Receipt	02/05/2024 15:55

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	102%	62 – 133	02/13/2024 01:18	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	02/13/2024 01:18	
Dibromofluoromethane	1868-53-7	98%	78 – 116	02/13/2024 01:18	
Toluene-d8	2037-26-5	101%	76 – 127	02/13/2024 01:18	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	85		mg/L	5	SM2320B-2011	1	02/08/2024 02:04	KMV	B
Alkalinity, Total	85	1	mg/L	5	SM2320B-2011	1	02/08/2024 02:04	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/15/2024 23:23	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	87.4		mg/L	2.0	EPA 300.0	2	02/06/2024 10:14	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/06/2024 10:14	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/06/2024 10:14	J1W	B
pH	7.76	4	pH_Units		S4500HB-11	1	02/08/2024 02:04	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/07/2024 14:52	AKH	G
Specific Conductance	660		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	110		mg/L	2.0	EPA 300.0	2	02/06/2024 10:14	J1W	B
Total Dissolved Solids	384		mg/L	25	SM2540C-15	1	02/07/2024 15:00	RAG	B
Total Organic Carbon (TOC)	2.7		mg/L	0.50	SW846 9060A	1	02/06/2024 19:31	PAG	E
Turbidity	2.0		NTU	0.30	SM2130B-2011	1	02/06/2024 00:20	NRB	B

Results

Client Sample ID	FFMP005W	Collected	02/05/2024 14:29
Lab Sample ID	3344065006	Lab Receipt	02/05/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	51.14		Feet		Field	1	02/05/2024 14:29	BGS	D
Dissolved Oxygen	0.27		mg/L	0.01	Field	1	02/05/2024 14:29	BGS	D
Elev Top MW Casing above MSL	537.40		Feet		Field	1	02/05/2024 14:29	BGS	D
Flow Rate	2.39		gal/min		Field	1	02/05/2024 14:29	BGS	D
Ground Water Elevation	486.26		ft/MSL		Field	1	02/05/2024 14:29	BGS	D
Oxidation-Reduction Potential	251		mV		Field	1	02/05/2024 14:29	BGS	D
pH, Field (SM4500B)	5.35		pH_Units		Field	1	02/05/2024 14:29	BGS	D
Sample Depth	135.00		Feet		Field	1	02/05/2024 14:29	BGS	D
Specific Conductance, Field	1124		umhos/cm	1	Field	1	02/05/2024 14:29	BGS	D
Temperature	13.49		Deg. C		Field	1	02/05/2024 14:29	BGS	D
Total Well Depth	149.70		Feet		Field	1	02/05/2024 14:29	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/05/2024 14:29	BGS	D
Volume in Water Column	144.88		Gallons		Field	1	02/05/2024 14:29	BGS	D
Water Level After Purge	80.63		Feet		Field	1	02/05/2024 14:29	BGS	D
Well Volumes Purged	0.91		Vol		Field	1	02/05/2024 14:29	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	80.2		mg/L	0.11	SW846 6010C	1	02/12/2024 13:09	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/12/2024 13:09	AXW	J1
Magnesium, Total	18.5		mg/L	0.11	SW846 6010C	1	02/12/2024 13:09	AXW	J1
Manganese, Total	0.17		mg/L	0.0056	SW846 6010C	1	02/12/2024 13:09	AXW	J1
Potassium, Total	3.4		mg/L	0.56	SW846 6010C	1	02/12/2024 13:09	AXW	J1
Sodium, Total	56.1		mg/L	0.56	SW846 6010C	1	02/12/2024 13:09	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:38	PDK	H

Results

Client Sample ID	FFMP005W	Collected	02/05/2024 14:29
Lab Sample ID	3344065006	Lab Receipt	02/05/2024 15:55

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	107%	62 – 133	02/13/2024 01:38	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	02/13/2024 01:38	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/13/2024 01:38	
Toluene-d8	2037-26-5	104%	76 – 127	02/13/2024 01:38	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	67		mg/L	5	SM2320B-2011	1	02/08/2024 02:16	KMV	B
Alkalinity, Total	67	1	mg/L	5	SM2320B-2011	1	02/08/2024 02:16	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/15/2024 23:36	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	159		mg/L	2.0	EPA 300.0	2	02/06/2024 11:34	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/06/2024 11:34	J1W	B
Nitrate-N	1.2		mg/L	1.0	EPA 300.0	2	02/06/2024 11:34	J1W	B
pH	7.62	4	pH_Units		S4500HB-11	1	02/08/2024 02:16	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/07/2024 15:49	AKH	G
Specific Conductance	823		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	94.8		mg/L	2.0	EPA 300.0	2	02/06/2024 11:34	J1W	B
Total Dissolved Solids	490		mg/L	25	SM2540C-15	1	02/07/2024 16:30	RAG	B
Total Organic Carbon (TOC)	2.0		mg/L	0.50	SW846 9060A	1	02/06/2024 19:31	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/06/2024 00:20	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3344065001	FFMP015W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344065002	FFMP03AW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344065003	FFMP30RW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344065004	FFMP04AW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3344065005	FFMP26RW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344065006	FFMP005W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3344065001	FFMP015W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132104	02/06/2024 00:54	ANN	SW846 6010C	1136312
		N/A	N/A	N/A		SW846 8260B	1136322
		N/A	N/A	N/A		ASTM D6919-17	1137120
		N/A	N/A	N/A		EPA 300.0	1132599
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1132703
		N/A	N/A	N/A		SM2130B-2011	1132204
		N/A	N/A	N/A		SM2320B-2011	1132703
		N/A	N/A	N/A		SM2540C-15	1133338
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1132680
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330
3344065002	FFMP03AW	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132104	02/06/2024 00:54	ANN	SW846 6010C	1136312
		N/A	N/A	N/A		SW846 8260B	1136322
		N/A	N/A	N/A		ASTM D6919-17	1137120
		N/A	N/A	N/A		EPA 300.0	1132599
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1132703
		N/A	N/A	N/A		SM2130B-2011	1132204
		N/A	N/A	N/A		SM2320B-2011	1132703
		N/A	N/A	N/A		SM2540C-15	1133338
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1132680
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330
3344065003	FFMP30RW	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132104	02/06/2024 00:54	ANN	SW846 6010C	1136312
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1137120
		N/A	N/A	N/A		EPA 300.0	1132599
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1132703
		N/A	N/A	N/A		SM2130B-2011	1132204
		N/A	N/A	N/A		SM2320B-2011	1132703
		N/A	N/A	N/A		SM2540C-15	1133338
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1132680
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330
3344065004	FFMP04AW	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132104	02/06/2024 00:54	ANN	SW846 6010C	1136312
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1137120
		N/A	N/A	N/A		EPA 300.0	1132599
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1132703
		N/A	N/A	N/A		SM2130B-2011	1132204
		N/A	N/A	N/A		SM2320B-2011	1132703
		N/A	N/A	N/A		SM2540C-15	1133338
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1132680
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3344065005	FFMP26RW	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132104	02/06/2024 00:54	ANN	SW846 6010C	1136312
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1137120
		N/A	N/A	N/A		EPA 300.0	1132599
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1132703
		N/A	N/A	N/A		SM2130B-2011	1132204
		N/A	N/A	N/A		SM2320B-2011	1132703
		N/A	N/A	N/A		SM2540C-15	1133338
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1132680
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330
3344065006	FFMP005W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132104	02/06/2024 00:54	ANN	SW846 6010C	1136312
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1137120
		N/A	N/A	N/A		EPA 300.0	1132599
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1132703
		N/A	N/A	N/A		SM2130B-2011	1132204
		N/A	N/A	N/A		SM2320B-2011	1132703
		N/A	N/A	N/A		SM2540C-15	1133339
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1132680
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330

ALS Environmental

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

301 Fulling Mill Road • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

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

COC #: 3344065

Logged By: RAW

PM: SJB

ALS Quote #:

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike, P.O. Box 4424

Lancaster, PA 17604

Contact: Dan Brown

Phone#: (717) 735-0193

Project Name/#: Frey Farm Quarterly (GWMP)

Bill To: Lancaster County Solid Waste MA

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

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

Email? [X] -Y dbrown@LCSWMA.com

Fax? [X] -Y No.: (717) 397-9973

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	VOC - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	pH, Cl, SpC, F, SO4, TDS, NO3, Turb.	Alkalinity Bicarbonate	
					Enter Number of Containers Per Sample or Field Results Below.									
1. FFMP015W	02/05/24	1044	G	GW	2	1	2	X	X	1	2	1	1	
2. FFMP03AW	02/05/24	1102	G	GW	2	1	2	X	X	1	2	1	1	
3. FFMP30RW	02/05/24	1251	G	GW	2	1	2	X	X	1	2	1	1	
4. FFMP04AW	02/05/24	1246	G	GW	2	1	2	X	X	1	2	1	1	
5. FFMP26RW	02/05/24	1353	G	GW	2	1	2	X	X	1	2	1	1	
6. FFMP005W	02/05/24	1429	G	GW	2	1	2	X	X	1	2	1	1	
7														
8														
9														
10														

Receipt ...

Cooler Temp: 1 Therm ID: _____

No. of Coolers: _____ Y N Initial

Custody Seals Present? [ ] [ ]

(if present) Seals Intact? [ ] [ ]

Received on Ice? [ ] [ ]

COC

Temp By: DAG | WO Temp (°C) 1 | Therm ID 570

Courie

Receipt Info Completed By: DAG

Cooler Custody Seal Intact Y N NA

Sample Custody Seal Intact Y N NA

Received on Ice Y N NA

Cooler & Samples Intact Y N

Correct Containers Provided Y N

Sample Label/COC Agree Y N

Adequate Sample Volumes Y N

CR6 Samples Filtered Y N NA

OP Samples Filtered Y N NA

VOA Trip Blank Y N NA

NJ≤ 4 Days? Y N

Rad Screen (uCi) 7

Courier/Tracking #: 1

SDWA Compliance Y N NA

PWSID

WV Containers 0-6°C Y N NA

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

Project Comments:

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] ALS	2-5-24	1555	2 [signature]	2-5-24	1555
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ] PWSID # _____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- _____

* G=Grab; C=Composite

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

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

Rev 8/04

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

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, NJ PA101

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 1ST QTR 2024 GWMP-FORM 19Q
Workorder 3344241
Report ID 303300 on 2/26/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 06, 2024.

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):
Jordan Bigler - Lancaster County Solid Waste Authority
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3344241001	FFMP039W	Ground Water	02/06/2024 12:00	02/06/2024 15:50	BGS	Analytical Laboratory Service
3344241002	FFMP038W	Ground Water	02/06/2024 11:11	02/06/2024 15:50	BGS	Analytical Laboratory Service
3344241003	FFMP017W	Ground Water	02/06/2024 14:02	02/06/2024 15:50	BGS	Analytical Laboratory Service
3344241004	FFMP029W	Ground Water	02/06/2024 13:37	02/06/2024 15:50	BGS	Analytical Laboratory Service

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	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 MB for method EPA 300.0 was outside the control limits for the analyte Sulfate. The concentration was reported at 2.8mg/L and the control limit is less than 0.7mg/L

Detected Results Summary

Client Sample ID	FFMP039W	Collected	02/06/2024 12:00
Lab Sample ID	3344241001	Lab Receipt	02/06/2024 15:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	13.07	Feet		Field	#
Elev Top MW Casing above MSL	455.65	Feet		Field	#
Flow Rate	2.34	gal/min		Field	#
Ground Water Elevation	442.58	ft/MSL		Field	#
Oxidation-Reduction Potential	88	mV		Field	#
pH, Field (SM4500B)	5.69	pH_Units		Field	#
Sample Depth	118.00	Feet		Field	#
Specific Conductance, Field	1307	umhos/cm	1	Field	#
Temperature	14.12	Deg. C		Field	#
Total Well Depth	131.50	Feet		Field	#
Turbidity, Field	15	NTU	1	Field	#
Volume in Water Column	174.09	Gallons		Field	#
Water Level After Purge	21.50	Feet		Field	#
Well Volumes Purged	1.95	Vol		Field	#
METALS					
Calcium, Total	65.0	mg/L	0.11	SW846 6010C	#
Iron, Total	2.4	mg/L	0.067	SW846 6010C	#
Magnesium, Total	22.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.97	mg/L	0.0056	SW846 6010C	#
Potassium, Total	6.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	68.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	52	mg/L	5	SM2320B-2011	#
Alkalinity, Total	52	mg/L	5	SM2320B-2011	#
Ammonia-N	0.539	mg/L	0.100	ASTM D6919-17	#
Chloride	215	mg/L	5.0	EPA 300.0	#
Nitrate-N	2.9	mg/L	1.0	EPA 300.0	#
pH	7.52	pH_Units		S4500HB-11	#
Specific Conductance	909	umhos/cm	5	SW846 9050A	#
Sulfate	40.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	502	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.5	mg/L	0.50	SW846 9060A	#
Turbidity	17	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP038W	Collected	02/06/2024 11:11
Lab Sample ID	3344241002	Lab Receipt	02/06/2024 15:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	18.15	Feet		Field	#
Dissolved Oxygen	0.52	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	454.05	Feet		Field	#
Flow Rate	0.72	gal/min		Field	#
Ground Water Elevation	435.90	ft/MSL		Field	#
Oxidation-Reduction Potential	-163	mV		Field	#
pH, Field (SM4500B)	8.01	pH_Units		Field	#
Sample Depth	46.00	Feet		Field	#
Specific Conductance, Field	758	umhos/cm	1	Field	#
Temperature	12.73	Deg. C		Field	#
Total Well Depth	52.00	Feet		Field	#
Volume in Water Column	49.76	Gallons		Field	#
Water Level After Purge	28.48	Feet		Field	#
Well Volumes Purged	1.23	Vol		Field	#
METALS					
Calcium, Total	77.0	mg/L	0.11	SW846 6010C	#
Iron, Total	1.4	mg/L	0.067	SW846 6010C	#
Magnesium, Total	6.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.069	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	14.1	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
Toluene	8.4	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	81	mg/L	5	SM2320B-2011	#
Alkalinity, Total	81	mg/L	5	SM2320B-2011	#
Ammonia-N	0.169	mg/L	0.100	ASTM D6919-17	#
Chloride	99.6	mg/L	2.0	EPA 300.0	#
pH	8.02	pH_Units		S4500HB-11	#
Phenolics	0.007	mg/L	0.004	SW846 9066	#
Specific Conductance	514	umhos/cm	5	SW846 9050A	#
Sulfate	14.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	360	mg/L	25	SM2540C-15	#
Turbidity	13	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP017W	Collected	02/06/2024 14:02
Lab Sample ID	3344241003	Lab Receipt	02/06/2024 15:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	39.94	Feet		Field	#
Dissolved Oxygen	0.33	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	480.70	Feet		Field	#
Flow Rate	2.09	gal/min		Field	#
Ground Water Elevation	440.76	ft/MSL		Field	#
Oxidation-Reduction Potential	147	mV		Field	#
pH, Field (SM4500B)	6.11	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	2900	umhos/cm	1	Field	#
Temperature	13.12	Deg. C		Field	#
Total Well Depth	150.50	Feet		Field	#
Volume in Water Column	162.52	Gallons		Field	#
Water Level After Purge	45.52	Feet		Field	#
Well Volumes Purged	1.54	Vol		Field	#
METALS					
Calcium, Total	153	mg/L	0.11	SW846 6010C	#
Magnesium, Total	47.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	1.5	mg/L	0.0056	SW846 6010C	#
Potassium, Total	14.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	154	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	90	mg/L	5	SM2320B-2011	#
Alkalinity, Total	90	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	15	mg/L	15	EPA 410.4	#
Chloride	196	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.4	mg/L	1.0	EPA 300.0	#
pH	7.57	pH_Units		S4500HB-11	#
Specific Conductance	2010	umhos/cm	5	SW846 9050A	#
Sulfate	48.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	1180	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	4.4	mg/L	0.50	SW846 9060A	#
Turbidity	0.40	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP029W	Collected	02/06/2024 13:37
Lab Sample ID	3344241004	Lab Receipt	02/06/2024 15:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	36.55	Feet		Field	#
Dissolved Oxygen	6.52	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.30	Feet		Field	#
Flow Rate	2.36	gal/min		Field	#
Ground Water Elevation	440.75	ft/MSL		Field	#
Oxidation-Reduction Potential	271	mV		Field	#
pH, Field (SM4500B)	4.91	pH_Units		Field	#
Sample Depth	55.00	Feet		Field	#
Specific Conductance, Field	281	umhos/cm	1	Field	#
Temperature	14.77	Deg. C		Field	#
Total Well Depth	60.50	Feet		Field	#
Volume in Water Column	35.21	Gallons		Field	#
Water Level After Purge	43.23	Feet		Field	#
Well Volumes Purged	2.61	Vol		Field	#
METALS					
Calcium, Total	8.2	mg/L	0.11	SW846 6010C	#
Iron, Total	0.13	mg/L	0.067	SW846 6010C	#
Magnesium, Total	7.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.029	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	15.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	7	mg/L	5	SM2320B-2011	#
Alkalinity, Total	7	mg/L	5	SM2320B-2011	#
Chloride	44.1	mg/L	2.0	EPA 300.0	#
Nitrate-N	3.4	mg/L	1.0	EPA 300.0	#
pH	6.94	pH_Units		S4500HB-11	#
Specific Conductance	197	umhos/cm	5	SW846 9050A	#
Total Dissolved Solids	118	mg/L	25	SM2540C-15	#
Turbidity	1.1	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	FFMP039W	Collected	02/06/2024 12:00
Lab Sample ID	3344241001	Lab Receipt	02/06/2024 15:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	13.07		Feet		Field	1	02/06/2024 12:00	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	02/06/2024 12:00	BGS	D
Elev Top MW Casing above MSL	455.65		Feet		Field	1	02/06/2024 12:00	BGS	D
Flow Rate	2.34		gal/min		Field	1	02/06/2024 12:00	BGS	D
Ground Water Elevation	442.58		ft/MSL		Field	1	02/06/2024 12:00	BGS	D
Oxidation-Reduction Potential	88		mV		Field	1	02/06/2024 12:00	BGS	D
pH, Field (SM4500B)	5.69		pH_Units		Field	1	02/06/2024 12:00	BGS	D
Sample Depth	118.00		Feet		Field	1	02/06/2024 12:00	BGS	D
Specific Conductance, Field	1307		umhos/cm	1	Field	1	02/06/2024 12:00	BGS	D
Temperature	14.12		Deg. C		Field	1	02/06/2024 12:00	BGS	D
Total Well Depth	131.50		Feet		Field	1	02/06/2024 12:00	BGS	D
Turbidity, Field	15		NTU	1	Field	1	02/06/2024 12:00	BGS	D
Volume in Water Column	174.09		Gallons		Field	1	02/06/2024 12:00	BGS	D
Water Level After Purge	21.50		Feet		Field	1	02/06/2024 12:00	BGS	D
Well Volumes Purged	1.95		Vol		Field	1	02/06/2024 12:00	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	65.0		mg/L	0.11	SW846 6010C	1	02/20/2024 08:40	AXW	J1
Iron, Total	2.4		mg/L	0.067	SW846 6010C	1	02/20/2024 08:40	AXW	J1
Magnesium, Total	22.4		mg/L	0.11	SW846 6010C	1	02/20/2024 08:40	AXW	J1
Manganese, Total	0.97		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:44	AXW	J1
Potassium, Total	6.2		mg/L	0.56	SW846 6010C	1	02/20/2024 08:40	AXW	J1
Sodium, Total	68.5		mg/L	0.56	SW846 6010C	1	02/20/2024 08:40	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 01:59	PDK	H

Results

Client Sample ID	FFMP039W	Collected	02/06/2024 12:00
Lab Sample ID	3344241001	Lab Receipt	02/06/2024 15:50

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	02/13/2024 01:59	
4-Bromofluorobenzene	460-00-4	95.7%	79 – 114	02/13/2024 01:59	
Dibromofluoromethane	1868-53-7	100%	78 – 116	02/13/2024 01:59	
Toluene-d8	2037-26-5	99.1%	76 – 127	02/13/2024 01:59	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	52		mg/L	5	SM2320B-2011	1	02/19/2024 16:33	KMV	B
Alkalinity, Total	52	1	mg/L	5	SM2320B-2011	1	02/19/2024 16:33	KMV	B
Ammonia-N	0.539		mg/L	0.100	ASTM D6919-17	10	02/21/2024 19:36	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	215		mg/L	5.0	EPA 300.0	5	02/13/2024 12:52	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/07/2024 10:39	J1W	B
Nitrate-N	2.9		mg/L	1.0	EPA 300.0	2	02/07/2024 10:39	J1W	B
pH	7.52	2	pH_Units		S4500HB-11	1	02/19/2024 16:33	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/07/2024 16:20	AKH	G
Specific Conductance	909		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	40.1	3	mg/L	2.0	EPA 300.0	2	02/07/2024 10:39	J1W	B
Total Dissolved Solids	502		mg/L	25	SM2540C-15	1	02/08/2024 15:00	RAG	B
Total Organic Carbon (TOC)	1.5		mg/L	0.50	SW846 9060A	1	02/07/2024 20:45	PAG	E
Turbidity	17		NTU	0.30	SM2130B-2011	1	02/07/2024 01:15	NRB	B

Results

Client Sample ID	FFMP038W	Collected	02/06/2024 11:11
Lab Sample ID	3344241002	Lab Receipt	02/06/2024 15:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	18.15		Feet		Field	1	02/06/2024 11:11	BGS	D
Dissolved Oxygen	0.52		mg/L	0.01	Field	1	02/06/2024 11:11	BGS	D
Elev Top MW Casing above MSL	454.05		Feet		Field	1	02/06/2024 11:11	BGS	D
Flow Rate	0.72		gal/min		Field	1	02/06/2024 11:11	BGS	D
Ground Water Elevation	435.90		ft/MSL		Field	1	02/06/2024 11:11	BGS	D
Oxidation-Reduction Potential	-163		mV		Field	1	02/06/2024 11:11	BGS	D
pH, Field (SM4500B)	8.01		pH_Units		Field	1	02/06/2024 11:11	BGS	D
Sample Depth	46.00		Feet		Field	1	02/06/2024 11:11	BGS	D
Specific Conductance, Field	758		umhos/cm	1	Field	1	02/06/2024 11:11	BGS	D
Temperature	12.73		Deg. C		Field	1	02/06/2024 11:11	BGS	D
Total Well Depth	52.00		Feet		Field	1	02/06/2024 11:11	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/06/2024 11:11	BGS	D
Volume in Water Column	49.76		Gallons		Field	1	02/06/2024 11:11	BGS	D
Water Level After Purge	28.48		Feet		Field	1	02/06/2024 11:11	BGS	D
Well Volumes Purged	1.23		Vol		Field	1	02/06/2024 11:11	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	77.0		mg/L	0.11	SW846 6010C	1	02/20/2024 08:56	AXW	J1
Iron, Total	1.4		mg/L	0.067	SW846 6010C	1	02/20/2024 08:56	AXW	J1
Magnesium, Total	6.3		mg/L	0.11	SW846 6010C	1	02/20/2024 08:56	AXW	J1
Manganese, Total	0.069		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:49	AXW	J1
Potassium, Total	1.1		mg/L	0.56	SW846 6010C	1	02/20/2024 08:56	AXW	J1
Sodium, Total	14.1		mg/L	0.56	SW846 6010C	1	02/20/2024 08:56	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
Toluene	8.4		ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:19	PDK	H

Results

Client Sample ID	FFMP038W	Collected	02/06/2024 11:11
Lab Sample ID	3344241002	Lab Receipt	02/06/2024 15:50

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	02/13/2024 02:19	
4-Bromofluorobenzene	460-00-4	99.1%	79 – 114	02/13/2024 02:19	
Dibromofluoromethane	1868-53-7	98.6%	78 – 116	02/13/2024 02:19	
Toluene-d8	2037-26-5	101%	76 – 127	02/13/2024 02:19	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	81		mg/L	5	SM2320B-2011	1	02/19/2024 16:43	KMV	B
Alkalinity, Total	81	1	mg/L	5	SM2320B-2011	1	02/19/2024 16:43	KMV	B
Ammonia-N	0.169		mg/L	0.100	ASTM D6919-17	10	02/21/2024 19:50	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	99.6		mg/L	2.0	EPA 300.0	2	02/07/2024 10:50	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/07/2024 10:50	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/07/2024 10:50	J1W	B
pH	8.02	2	pH_Units		S4500HB-11	1	02/19/2024 16:43	KMV	B
Phenolics	0.007		mg/L	0.004	SW846 9066	1	02/07/2024 16:16	AKH	G
Specific Conductance	514		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	14.0	3	mg/L	2.0	EPA 300.0	2	02/07/2024 10:50	J1W	B
Total Dissolved Solids	360		mg/L	25	SM2540C-15	1	02/07/2024 16:30	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/07/2024 20:45	PAG	E
Turbidity	13		NTU	0.30	SM2130B-2011	1	02/07/2024 01:15	NRB	B

Results

Client Sample ID	FFMP017W	Collected	02/06/2024 14:02
Lab Sample ID	3344241003	Lab Receipt	02/06/2024 15:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	39.94		Feet		Field	1	02/06/2024 14:02	BGS	D
Dissolved Oxygen	0.33		mg/L	0.01	Field	1	02/06/2024 14:02	BGS	D
Elev Top MW Casing above MSL	480.70		Feet		Field	1	02/06/2024 14:02	BGS	D
Flow Rate	2.09		gal/min		Field	1	02/06/2024 14:02	BGS	D
Ground Water Elevation	440.76		ft/MSL		Field	1	02/06/2024 14:02	BGS	D
Oxidation-Reduction Potential	147		mV		Field	1	02/06/2024 14:02	BGS	D
pH, Field (SM4500B)	6.11		pH_Units		Field	1	02/06/2024 14:02	BGS	D
Sample Depth	135.00		Feet		Field	1	02/06/2024 14:02	BGS	D
Specific Conductance, Field	2900		umhos/cm	1	Field	1	02/06/2024 14:02	BGS	D
Temperature	13.12		Deg. C		Field	1	02/06/2024 14:02	BGS	D
Total Well Depth	150.50		Feet		Field	1	02/06/2024 14:02	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/06/2024 14:02	BGS	D
Volume in Water Column	162.52		Gallons		Field	1	02/06/2024 14:02	BGS	D
Water Level After Purge	45.52		Feet		Field	1	02/06/2024 14:02	BGS	D
Well Volumes Purged	1.54		Vol		Field	1	02/06/2024 14:02	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	153		mg/L	0.11	SW846 6010C	1	02/20/2024 08:57	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/20/2024 08:57	AXW	J1
Magnesium, Total	47.9		mg/L	0.11	SW846 6010C	1	02/20/2024 08:57	AXW	J1
Manganese, Total	1.5		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:50	AXW	J1
Potassium, Total	14.1		mg/L	0.56	SW846 6010C	1	02/20/2024 08:57	AXW	J1
Sodium, Total	154		mg/L	0.56	SW846 6010C	1	02/20/2024 08:57	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 02:39	PDK	H

Results

Client Sample ID	FFMP017W	Collected	02/06/2024 14:02
Lab Sample ID	3344241003	Lab Receipt	02/06/2024 15:50

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	02/13/2024 02:39	
4-Bromofluorobenzene	460-00-4	91.8%	79 – 114	02/13/2024 02:39	
Dibromofluoromethane	1868-53-7	99.2%	78 – 116	02/13/2024 02:39	
Toluene-d8	2037-26-5	98.1%	76 – 127	02/13/2024 02:39	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	90		mg/L	5	SM2320B-2011	1	02/19/2024 16:54	KMV	B
Alkalinity, Total	90	1	mg/L	5	SM2320B-2011	1	02/19/2024 16:54	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/21/2024 19:23	NML	A
Chemical Oxygen Demand (COD)	15		mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	196		mg/L	2.0	EPA 300.0	2	02/07/2024 11:00	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/07/2024 11:00	J1W	B
Nitrate-N	1.4		mg/L	1.0	EPA 300.0	2	02/07/2024 11:00	J1W	B
pH	7.57	2	pH_Units		S4500HB-11	1	02/19/2024 16:54	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/07/2024 16:39	AKH	G
Specific Conductance	2010		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	48.1	3	mg/L	2.0	EPA 300.0	2	02/07/2024 11:00	J1W	B
Total Dissolved Solids	1180		mg/L	25	SM2540C-15	1	02/08/2024 15:00	RAG	B
Total Organic Carbon (TOC)	4.4		mg/L	0.50	SW846 9060A	1	02/07/2024 20:45	PAG	E
Turbidity	0.40		NTU	0.30	SM2130B-2011	1	02/07/2024 01:15	NRB	B

Results

Client Sample ID	FFMP029W	Collected	02/06/2024 13:37
Lab Sample ID	3344241004	Lab Receipt	02/06/2024 15:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	36.55		Feet		Field	1	02/06/2024 13:37	BGS	D
Dissolved Oxygen	6.52		mg/L	0.01	Field	1	02/06/2024 13:37	BGS	D
Elev Top MW Casing above MSL	477.30		Feet		Field	1	02/06/2024 13:37	BGS	D
Flow Rate	2.36		gal/min		Field	1	02/06/2024 13:37	BGS	D
Ground Water Elevation	440.75		ft/MSL		Field	1	02/06/2024 13:37	BGS	D
Oxidation-Reduction Potential	271		mV		Field	1	02/06/2024 13:37	BGS	D
pH, Field (SM4500B)	4.91		pH_Units		Field	1	02/06/2024 13:37	BGS	D
Sample Depth	55.00		Feet		Field	1	02/06/2024 13:37	BGS	D
Specific Conductance, Field	281		umhos/cm	1	Field	1	02/06/2024 13:37	BGS	D
Temperature	14.77		Deg. C		Field	1	02/06/2024 13:37	BGS	D
Total Well Depth	60.50		Feet		Field	1	02/06/2024 13:37	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/06/2024 13:37	BGS	D
Volume in Water Column	35.21		Gallons		Field	1	02/06/2024 13:37	BGS	D
Water Level After Purge	43.23		Feet		Field	1	02/06/2024 13:37	BGS	D
Well Volumes Purged	2.61		Vol		Field	1	02/06/2024 13:37	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	8.2		mg/L	0.11	SW846 6010C	1	02/20/2024 08:59	AXW	J1
Iron, Total	0.13		mg/L	0.067	SW846 6010C	1	02/20/2024 08:59	AXW	J1
Magnesium, Total	7.3		mg/L	0.11	SW846 6010C	1	02/20/2024 08:59	AXW	J1
Manganese, Total	0.029		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:51	AXW	J1
Potassium, Total	1.7		mg/L	0.56	SW846 6010C	1	02/20/2024 08:59	AXW	J1
Sodium, Total	15.5		mg/L	0.56	SW846 6010C	1	02/20/2024 08:59	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:00	PDK	H

Results

Client Sample ID	FFMP029W	Collected	02/06/2024 13:37
Lab Sample ID	3344241004	Lab Receipt	02/06/2024 15:50

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	02/13/2024 03:00	
4-Bromofluorobenzene	460-00-4	99.4%	79 – 114	02/13/2024 03:00	
Dibromofluoromethane	1868-53-7	97.5%	78 – 116	02/13/2024 03:00	
Toluene-d8	2037-26-5	99.8%	76 – 127	02/13/2024 03:00	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	7		mg/L	5	SM2320B-2011	1	02/19/2024 17:07	KMV	B
Alkalinity, Total	7	1	mg/L	5	SM2320B-2011	1	02/19/2024 17:07	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/21/2024 19:09	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/07/2024 10:35	KMS	A
Chloride	44.1		mg/L	2.0	EPA 300.0	2	02/07/2024 11:10	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/07/2024 11:10	J1W	B
Nitrate-N	3.4		mg/L	1.0	EPA 300.0	2	02/07/2024 11:10	J1W	B
pH	6.94	2	pH_Units		S4500HB-11	1	02/19/2024 17:07	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/07/2024 16:24	AKH	G
Specific Conductance	197		umhos/cm	5	SW846 9050A	1	02/07/2024 16:45	BLP	B
Sulfate	ND	ND,3	mg/L	2.0	EPA 300.0	2	02/07/2024 11:10	J1W	B
Total Dissolved Solids	118		mg/L	25	SM2540C-15	1	02/08/2024 15:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/07/2024 20:45	PAG	E
Turbidity	1.1		NTU	0.30	SM2130B-2011	1	02/07/2024 01:15	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3344241001	FFMP039W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344241002	FFMP038W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344241003	FFMP017W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344241004	FFMP029W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3344241001	FFMP039W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132778	02/07/2024 03:54	ANN	SW846 6010C	1141826
		SW846 3015A	1132778	02/07/2024 03:54	ANN	SW846 6010C	1143322
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1141982
		N/A	N/A	N/A		EPA 300.0	1133199
		N/A	N/A	N/A		EPA 300.0	1137001
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1141532
		N/A	N/A	N/A		SM2130B-2011	1132788
		N/A	N/A	N/A		SM2320B-2011	1141532
		N/A	N/A	N/A		SM2540C-15	1133926
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1133400
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330
3344241002	FFMP038W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132778	02/07/2024 03:54	ANN	SW846 6010C	1141826
		SW846 3015A	1132778	02/07/2024 03:54	ANN	SW846 6010C	1143322
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1141982
		N/A	N/A	N/A		EPA 300.0	1133199
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1141532
		N/A	N/A	N/A		SM2130B-2011	1132788
		N/A	N/A	N/A		SM2320B-2011	1141532
		N/A	N/A	N/A		SM2540C-15	1133339
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1133400
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330
3344241003	FFMP017W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132778	02/07/2024 03:54	ANN	SW846 6010C	1141826
		SW846 3015A	1132778	02/07/2024 03:54	ANN	SW846 6010C	1143322
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1141982
		N/A	N/A	N/A		EPA 300.0	1133199
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1141532
		N/A	N/A	N/A		SM2130B-2011	1132788
		N/A	N/A	N/A		SM2320B-2011	1141532
		N/A	N/A	N/A		SM2540C-15	1133926
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1133400
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330
3344241004	FFMP029W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1132778	02/07/2024 03:54	ANN	SW846 6010C	1141826
		SW846 3015A	1132778	02/07/2024 03:54	ANN	SW846 6010C	1143322
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1141982
		N/A	N/A	N/A		EPA 300.0	1133199
		N/A	N/A	N/A		EPA 410.4	1133316
		N/A	N/A	N/A		S4500HB-11	1141532
		N/A	N/A	N/A		SM2130B-2011	1132788
		N/A	N/A	N/A		SM2320B-2011	1141532
		N/A	N/A	N/A		SM2540C-15	1133926
		N/A	N/A	N/A		SW846 9050A	1133375
		N/A	N/A	N/A		SW846 9060A	1133400
		SW846 9066	1132685	02/07/2024 09:03	AKH	SW846 9066	1133330

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

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

301 Fulling Mill Road • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

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

COC #: 3344241
Logged By: RAW
PM: SJB

ALS Quo

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

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

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	VOC - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	pH, Cl, SpC, F, SO4, TDS, NO3, Turb.	Alkalinity Bicarbonate	
					Enter Number of Containers Per Sample or Field Results Below.									
FFMP039W	02/06/24	1200	G	GW	2	1	2	x	x	1	2	1	1	
FFMP038W	02/06/24	1111	G	GW	2	1	2	x	x	1	2	1	1	
FFMP017W	02/06/24	1402	G	GW	2	1	2	x	x	1	2	1	1	
FFMP029W	02/06/24	1337	G	GW	2	1	2	x	x	1	2	1	1	

Receipt Information (completed by lab)
Cooler Temp: 3 Therm ID:
No. of Coolers: _____

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

COC/ Temp By: DAG | WO Temp: 3 | 573

Courier

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

SDWA Compliance Y N
PWSID
WV Containers 0-6°C Y N NA

ct Comments:

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

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

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
[illegible] ALS	2/6/24	1630	2 DAG/ALS	2/6/24	1550
			4		
			6		
			8		
			10		

Data Deliverables: ☐Standard ☐CLP-like ☐USACE ☐

Special Processing: USACE ☐ Navy ☐ ☐

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

Reportable to PADEP? Yes ☐ PWSID #

Sample Disposal: Lab ☒ Special ☐

EDDS: Format Type-

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

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

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

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, NJ PA101

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

Project 1ST QTR 2024 GWMP-FORM 19Q
Workorder 3344493
Report ID 304611 on 2/29/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 07, 2024.

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):
Jordan Bigler - Lancaster County Solid Waste Authority
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

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

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3344493001	FFMP035W	Ground Water	02/07/2024 11:13	02/07/2024 15:10	BGS	Analytical Laboratory Service
3344493002	FFMP036W	Ground Water	02/07/2024 11:36	02/07/2024 15:10	BGS	Analytical Laboratory Service
3344493003	FFMP034W	Ground Water	02/07/2024 13:15	02/07/2024 15:10	BGS	Analytical Laboratory Service
3344493004	FFMP033W	Ground Water	02/07/2024 13:50	02/07/2024 15:10	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, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	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 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	FFMP035W	Collected	02/07/2024 11:13
Lab Sample ID	3344493001	Lab Receipt	02/07/2024 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	42.62	Feet		Field	#
Dissolved Oxygen	5.75	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.56	Feet		Field	#
Flow Rate	0.45	gal/min		Field	#
Ground Water Elevation	434.94	ft/MSL		Field	#
Oxidation-Reduction Potential	213	mV		Field	#
pH, Field (SM4500B)	5.89	pH_Units		Field	#
Sample Depth	65.00	Feet		Field	#
Specific Conductance, Field	1278	umhos/cm	1	Field	#
Temperature	11.86	Deg. C		Field	#
Total Well Depth	71.80	Feet		Field	#
Volume in Water Column	42.89	Gallons		Field	#
Water Level After Purge	49.20	Feet		Field	#
Well Volumes Purged	1.00	Vol		Field	#
METALS					
Calcium, Total	74.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	24.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.69	mg/L	0.0056	SW846 6010C	#
Potassium, Total	5.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	65.1	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	57	mg/L	5	SM2320B-2011	#
Alkalinity, Total	57	mg/L	5	SM2320B-2011	#
Ammonia-N	0.301	mg/L	0.100	ASTM D6919-17	#
Chloride	185	mg/L	2.0	EPA 300.0	#
Nitrate-N	10.8	mg/L	1.0	EPA 300.0	#
pH	7.48	pH_Units		S4500HB-11	#
Specific Conductance	910	umhos/cm	5	SW846 9050A	#
Sulfate	51.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	512	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.5	mg/L	0.50	SW846 9060A	#
Turbidity	0.50	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP036W	Collected	02/07/2024 11:36
Lab Sample ID	3344493002	Lab Receipt	02/07/2024 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	48.97	Feet		Field	#
Elev Top MW Casing above MSL	478.23	Feet		Field	#
Flow Rate	1.24	gal/min		Field	#
Ground Water Elevation	429.26	ft/MSL		Field	#
Oxidation-Reduction Potential	-236	mV		Field	#
pH, Field (SM4500B)	8.18	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	486	umhos/cm	1	Field	#
Temperature	14.43	Deg. C		Field	#
Total Well Depth	142.60	Feet		Field	#
Turbidity, Field	144	NTU	1	Field	#
Volume in Water Column	137.64	Gallons		Field	#
Water Level After Purge	78.09	Feet		Field	#
Well Volumes Purged	1.08	Vol		Field	#
METALS					
Calcium, Total	51.0	mg/L	0.11	SW846 6010C	#
Iron, Total	1.2	mg/L	0.067	SW846 6010C	#
Magnesium, Total	5.0	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.089	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	15.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	93	mg/L	5	SM2320B-2011	#
Alkalinity, Total	93	mg/L	5	SM2320B-2011	#
Ammonia-N	0.347	mg/L	0.100	ASTM D6919-17	#
Chloride	34.2	mg/L	2.0	EPA 300.0	#
pH	8.20	pH_Units		S4500HB-11	#
Specific Conductance	342	umhos/cm	5	SW846 9050A	#
Sulfate	28.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	200	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.51	mg/L	0.50	SW846 9060A	#
Turbidity	9.8	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP034W	Collected	02/07/2024 13:15
Lab Sample ID	3344493003	Lab Receipt	02/07/2024 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	10.22	Feet		Field	#
Dissolved Oxygen	1.54	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	472.88	Feet		Field	#
Flow Rate	1.77	gal/min		Field	#
Ground Water Elevation	462.66	ft/MSL		Field	#
Oxidation-Reduction Potential	127	mV		Field	#
pH, Field (SM4500B)	5.76	pH_Units		Field	#
Sample Depth	25.85	Feet		Field	#
Specific Conductance, Field	1028	umhos/cm	1	Field	#
Temperature	14.45	Deg. C		Field	#
Total Well Depth	121.00	Feet		Field	#
Turbidity, Field	4	NTU	1	Field	#
Volume in Water Column	162.85	Gallons		Field	#
Water Level After Purge	19.56	Feet		Field	#
Well Volumes Purged	1.03	Vol		Field	#
METALS					
Calcium, Total	38.9	mg/L	0.11	SW846 6010C	#
Iron, Total	7.1	mg/L	0.067	SW846 6010C	#
Magnesium, Total	13.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.27	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	19.3	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	42	mg/L	5	SM2320B-2011	#
Alkalinity, Total	42	mg/L	5	SM2320B-2011	#
Chloride	151	mg/L	2.0	EPA 300.0	#
Nitrate-N	11.3	mg/L	1.0	EPA 300.0	#
pH	7.45	pH_Units		S4500HB-11	#
Specific Conductance	730	umhos/cm	5	SW846 9050A	#
Sulfate	28.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	362	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.7	mg/L	0.50	SW846 9060A	#
Turbidity	13	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP033W	Collected	02/07/2024 13:50
Lab Sample ID	3344493004	Lab Receipt	02/07/2024 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	19.38	Feet		Field	#
Dissolved Oxygen	1.19	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	516.52	Feet		Field	#
Flow Rate	1.79	gal/min		Field	#
Ground Water Elevation	497.14	ft/MSL		Field	#
Oxidation-Reduction Potential	122	mV		Field	#
pH, Field (SM4500B)	5.56	pH_Units		Field	#
Sample Depth	79.00	Feet		Field	#
Specific Conductance, Field	616	umhos/cm	1	Field	#
Temperature	15.33	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Turbidity, Field	3	NTU	1	Field	#
Volume in Water Column	118.51	Gallons		Field	#
Water Level After Purge	38.16	Feet		Field	#
Well Volumes Purged	1.59	Vol		Field	#
METALS					
Calcium, Total	61.6	mg/L	0.11	SW846 6010C	#
Iron, Total	1.3	mg/L	0.067	SW846 6010C	#
Magnesium, Total	22.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.14	mg/L	0.0056	SW846 6010C	#
Potassium, Total	4.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	43.0	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	32	mg/L	5	SM2320B-2011	#
Alkalinity, Total	32	mg/L	5	SM2320B-2011	#
Ammonia-N	0.421	mg/L	0.100	ASTM D6919-17	#
Chloride	78.5	mg/L	2.0	EPA 300.0	#
Nitrate-N	10.8	mg/L	1.0	EPA 300.0	#
pH	7.15	pH_Units		S4500HB-11	#
Specific Conductance	430	umhos/cm	5	SW846 9050A	#
Sulfate	11.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	190	mg/L	25	SM2540C-15	#
Turbidity	29	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	FFMP035W	Collected	02/07/2024 11:13
Lab Sample ID	3344493001	Lab Receipt	02/07/2024 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	42.62		Feet		Field	1	02/07/2024 13:13	BGS	D
Dissolved Oxygen	5.75		mg/L	0.01	Field	1	02/07/2024 13:13	BGS	D
Elev Top MW Casing above MSL	477.56		Feet		Field	1	02/07/2024 13:13	BGS	D
Flow Rate	0.45		gal/min		Field	1	02/07/2024 13:13	BGS	D
Ground Water Elevation	434.94		ft/MSL		Field	1	02/07/2024 13:13	BGS	D
Oxidation-Reduction Potential	213		mV		Field	1	02/07/2024 13:13	BGS	D
pH, Field (SM4500B)	5.89		pH_Units		Field	1	02/07/2024 13:13	BGS	D
Sample Depth	65.00		Feet		Field	1	02/07/2024 13:13	BGS	D
Specific Conductance, Field	1278		umhos/cm	1	Field	1	02/07/2024 13:13	BGS	D
Temperature	11.86		Deg. C		Field	1	02/07/2024 13:13	BGS	D
Total Well Depth	71.80		Feet		Field	1	02/07/2024 13:13	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/07/2024 13:13	BGS	D
Volume in Water Column	42.89		Gallons		Field	1	02/07/2024 13:13	BGS	D
Water Level After Purge	49.20		Feet		Field	1	02/07/2024 13:13	BGS	D
Well Volumes Purged	1.00		Vol		Field	1	02/07/2024 13:13	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	74.2	3	mg/L	0.11	SW846 6010C	1	02/14/2024 10:01	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/14/2024 10:01	AXW	J1
Magnesium, Total	24.7		mg/L	0.11	SW846 6010C	1	02/14/2024 10:01	AXW	J1
Manganese, Total	0.69		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:21	AXW	J1
Potassium, Total	5.2		mg/L	0.56	SW846 6010C	1	02/14/2024 10:01	AXW	J1
Sodium, Total	65.1		mg/L	0.56	SW846 6010C	1	02/14/2024 10:01	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:20	PDK	H

Results

Client Sample ID	FFMP035W	Collected	02/07/2024 11:13
Lab Sample ID	3344493001	Lab Receipt	02/07/2024 15:10

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	102%	62 – 133	02/13/2024 03:20	
4-Bromofluorobenzene	460-00-4	95.9%	79 – 114	02/13/2024 03:20	
Dibromofluoromethane	1868-53-7	97.4%	78 – 116	02/13/2024 03:20	
Toluene-d8	2037-26-5	97.5%	76 – 127	02/13/2024 03:20	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	57		mg/L	5	SM2320B-2011	1	02/14/2024 19:45	KMV	B
Alkalinity, Total	57	1	mg/L	5	SM2320B-2011	1	02/14/2024 19:45	KMV	B
Ammonia-N	0.301		mg/L	0.100	ASTM D6919-17	10	02/27/2024 12:14	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/08/2024 11:25	KMS	A
Chloride	185		mg/L	2.0	EPA 300.0	2	02/08/2024 09:11	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/08/2024 09:11	J1W	B
Nitrate-N	10.8		mg/L	1.0	EPA 300.0	2	02/08/2024 09:11	J1W	B
pH	7.48	2	pH_Units		S4500HB-11	1	02/14/2024 19:45	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 12:28	AKH	G
Specific Conductance	910		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	51.8		mg/L	2.0	EPA 300.0	2	02/08/2024 09:11	J1W	B
Total Dissolved Solids	512		mg/L	25	SM2540C-15	1	02/12/2024 19:00	RAG	B
Total Organic Carbon (TOC)	1.5		mg/L	0.50	SW846 9060A	1	02/08/2024 19:53	PAG	E
Turbidity	0.50		NTU	0.30	SM2130B-2011	1	02/08/2024 00:45	NRB	B

Results

Client Sample ID	FFMP036W	Collected	02/07/2024 11:36
Lab Sample ID	3344493002	Lab Receipt	02/07/2024 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	48.97		Feet		Field	1	02/07/2024 11:36	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	02/07/2024 11:36	BGS	D
Elev Top MW Casing above MSL	478.23		Feet		Field	1	02/07/2024 11:36	BGS	D
Flow Rate	1.24		gal/min		Field	1	02/07/2024 11:36	BGS	D
Ground Water Elevation	429.26		ft/MSL		Field	1	02/07/2024 11:36	BGS	D
Oxidation-Reduction Potential	-236		mV		Field	1	02/07/2024 11:36	BGS	D
pH, Field (SM4500B)	8.18		pH_Units		Field	1	02/07/2024 11:36	BGS	D
Sample Depth	135.00		Feet		Field	1	02/07/2024 11:36	BGS	D
Specific Conductance, Field	486		umhos/cm	1	Field	1	02/07/2024 11:36	BGS	D
Temperature	14.43		Deg. C		Field	1	02/07/2024 11:36	BGS	D
Total Well Depth	142.60		Feet		Field	1	02/07/2024 11:36	BGS	D
Turbidity, Field	144		NTU	1	Field	1	02/07/2024 11:36	BGS	D
Volume in Water Column	137.64		Gallons		Field	1	02/07/2024 11:36	BGS	D
Water Level After Purge	78.09		Feet		Field	1	02/07/2024 11:36	BGS	D
Well Volumes Purged	1.08		Vol		Field	1	02/07/2024 11:36	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	51.0		mg/L	0.11	SW846 6010C	1	02/14/2024 10:13	AXW	J1
Iron, Total	1.2		mg/L	0.067	SW846 6010C	1	02/14/2024 10:13	AXW	J1
Magnesium, Total	5.0		mg/L	0.11	SW846 6010C	1	02/14/2024 10:13	AXW	J1
Manganese, Total	0.089		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:24	AXW	J1
Potassium, Total	1.1		mg/L	0.56	SW846 6010C	1	02/14/2024 10:13	AXW	J1
Sodium, Total	15.5		mg/L	0.56	SW846 6010C	1	02/14/2024 10:13	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 03:41	PDK	H

Results

Client Sample ID	FFMP036W	Collected	02/07/2024 11:36
Lab Sample ID	3344493002	Lab Receipt	02/07/2024 15:10

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	108%	62 – 133	02/13/2024 03:41	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	02/13/2024 03:41	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/13/2024 03:41	
Toluene-d8	2037-26-5	105%	76 – 127	02/13/2024 03:41	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	93		mg/L	5	SM2320B-2011	1	02/14/2024 19:54	KMV	B
Alkalinity, Total	93	1	mg/L	5	SM2320B-2011	1	02/14/2024 19:54	KMV	B
Ammonia-N	0.347		mg/L	0.100	ASTM D6919-17	10	02/27/2024 12:55	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/08/2024 11:25	KMS	A
Chloride	34.2		mg/L	2.0	EPA 300.0	2	02/08/2024 09:22	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/08/2024 09:22	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/08/2024 09:22	J1W	B
pH	8.20	2	pH_Units		S4500HB-11	1	02/14/2024 19:54	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 12:32	AKH	G
Specific Conductance	342		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	28.7		mg/L	2.0	EPA 300.0	2	02/08/2024 09:22	J1W	B
Total Dissolved Solids	200		mg/L	25	SM2540C-15	1	02/13/2024 12:10	RAG	B
Total Organic Carbon (TOC)	0.51		mg/L	0.50	SW846 9060A	1	02/08/2024 19:53	PAG	E
Turbidity	9.8		NTU	0.30	SM2130B-2011	1	02/08/2024 00:45	NRB	B

Results

Client Sample ID	FFMP034W	Collected	02/07/2024 13:15
Lab Sample ID	3344493003	Lab Receipt	02/07/2024 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	10.22		Feet		Field	1	02/07/2024 13:29	BGS	D
Dissolved Oxygen	1.54		mg/L	0.01	Field	1	02/07/2024 13:29	BGS	D
Elev Top MW Casing above MSL	472.88		Feet		Field	1	02/07/2024 13:29	BGS	D
Flow Rate	1.77		gal/min		Field	1	02/07/2024 13:29	BGS	D
Ground Water Elevation	462.66		ft/MSL		Field	1	02/07/2024 13:29	BGS	D
Oxidation-Reduction Potential	127		mV		Field	1	02/07/2024 13:29	BGS	D
pH, Field (SM4500B)	5.76		pH_Units		Field	1	02/07/2024 13:29	BGS	D
Sample Depth	25.85		Feet		Field	1	02/07/2024 13:29	BGS	D
Specific Conductance, Field	1028		umhos/cm	1	Field	1	02/07/2024 13:29	BGS	D
Temperature	14.45		Deg. C		Field	1	02/07/2024 13:29	BGS	D
Total Well Depth	121.00		Feet		Field	1	02/07/2024 13:29	BGS	D
Turbidity, Field	4		NTU	1	Field	1	02/07/2024 13:29	BGS	D
Volume in Water Column	162.85		Gallons		Field	1	02/07/2024 13:29	BGS	D
Water Level After Purge	19.56		Feet		Field	1	02/07/2024 13:29	BGS	D
Well Volumes Purged	1.03		Vol		Field	1	02/07/2024 13:29	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	38.9		mg/L	0.11	SW846 6010C	1	02/14/2024 10:14	AXW	J1
Iron, Total	7.1		mg/L	0.067	SW846 6010C	1	02/14/2024 10:14	AXW	J1
Magnesium, Total	13.9		mg/L	0.11	SW846 6010C	1	02/14/2024 10:14	AXW	J1
Manganese, Total	0.27		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:26	AXW	J1
Potassium, Total	2.0		mg/L	0.56	SW846 6010C	1	02/14/2024 10:14	AXW	J1
Sodium, Total	19.3		mg/L	0.56	SW846 6010C	1	02/14/2024 10:14	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:01	PDK	H

Results

Client Sample ID	FFMP034W	Collected	02/07/2024 13:15
Lab Sample ID	3344493003	Lab Receipt	02/07/2024 15:10

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	108%	62 – 133	02/13/2024 04:01	
4-Bromofluorobenzene	460-00-4	99.4%	79 – 114	02/13/2024 04:01	
Dibromofluoromethane	1868-53-7	104%	78 – 116	02/13/2024 04:01	
Toluene-d8	2037-26-5	101%	76 – 127	02/13/2024 04:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	42		mg/L	5	SM2320B-2011	1	02/14/2024 20:06	KMV	B
Alkalinity, Total	42	1	mg/L	5	SM2320B-2011	1	02/14/2024 20:06	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/27/2024 13:08	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/08/2024 11:25	KMS	A
Chloride	151		mg/L	2.0	EPA 300.0	2	02/08/2024 10:14	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/08/2024 10:14	J1W	B
Nitrate-N	11.3		mg/L	1.0	EPA 300.0	2	02/08/2024 10:14	J1W	B
pH	7.45	2	pH_Units		S4500HB-11	1	02/14/2024 20:06	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 12:36	AKH	G
Specific Conductance	730		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	28.9		mg/L	2.0	EPA 300.0	2	02/08/2024 10:14	J1W	B
Total Dissolved Solids	362		mg/L	25	SM2540C-15	1	02/13/2024 12:10	RAG	B
Total Organic Carbon (TOC)	1.7		mg/L	0.50	SW846 9060A	1	02/08/2024 19:53	PAG	E
Turbidity	13		NTU	0.30	SM2130B-2011	1	02/08/2024 00:45	NRB	B

Results

Client Sample ID	FFMP033W	Collected	02/07/2024 13:50
Lab Sample ID	3344493004	Lab Receipt	02/07/2024 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	19.38		Feet		Field	1	02/07/2024 13:50	BGS	D
Dissolved Oxygen	1.19		mg/L	0.01	Field	1	02/07/2024 13:50	BGS	D
Elev Top MW Casing above MSL	516.52		Feet		Field	1	02/07/2024 13:50	BGS	D
Flow Rate	1.79		gal/min		Field	1	02/07/2024 13:50	BGS	D
Ground Water Elevation	497.14		ft/MSL		Field	1	02/07/2024 13:50	BGS	D
Oxidation-Reduction Potential	122		mV		Field	1	02/07/2024 13:50	BGS	D
pH, Field (SM4500B)	5.56		pH_Units		Field	1	02/07/2024 13:50	BGS	D
Sample Depth	79.00		Feet		Field	1	02/07/2024 13:50	BGS	D
Specific Conductance, Field	616		umhos/cm	1	Field	1	02/07/2024 13:50	BGS	D
Temperature	15.33		Deg. C		Field	1	02/07/2024 13:50	BGS	D
Total Well Depth	100.00		Feet		Field	1	02/07/2024 13:50	BGS	D
Turbidity, Field	3		NTU	1	Field	1	02/07/2024 13:50	BGS	D
Volume in Water Column	118.51		Gallons		Field	1	02/07/2024 13:50	BGS	D
Water Level After Purge	38.16		Feet		Field	1	02/07/2024 13:50	BGS	D
Well Volumes Purged	1.59		Vol		Field	1	02/07/2024 13:50	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	61.6		mg/L	0.11	SW846 6010C	1	02/14/2024 10:15	AXW	J1
Iron, Total	1.3		mg/L	0.067	SW846 6010C	1	02/14/2024 10:15	AXW	J1
Magnesium, Total	22.6		mg/L	0.11	SW846 6010C	1	02/14/2024 10:15	AXW	J1
Manganese, Total	0.14		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:27	AXW	J1
Potassium, Total	4.2		mg/L	0.56	SW846 6010C	1	02/14/2024 10:15	AXW	J1
Sodium, Total	43.0		mg/L	0.56	SW846 6010C	1	02/14/2024 10:15	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/13/2024 04:21	PDK	H

Results

Client Sample ID	FFMP033W	Collected	02/07/2024 13:50
Lab Sample ID	3344493004	Lab Receipt	02/07/2024 15:10

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	107%	62 – 133	02/13/2024 04:21	
4-Bromofluorobenzene	460-00-4	89.5%	79 – 114	02/13/2024 04:21	
Dibromofluoromethane	1868-53-7	103%	78 – 116	02/13/2024 04:21	
Toluene-d8	2037-26-5	99.4%	76 – 127	02/13/2024 04:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	32		mg/L	5	SM2320B-2011	1	02/14/2024 20:18	KMV	B
Alkalinity, Total	32	1	mg/L	5	SM2320B-2011	1	02/14/2024 20:18	KMV	B
Ammonia-N	0.421		mg/L	0.100	ASTM D6919-17	10	02/27/2024 13:22	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/08/2024 11:25	KMS	A
Chloride	78.5		mg/L	2.0	EPA 300.0	2	02/08/2024 10:24	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/08/2024 10:24	J1W	B
Nitrate-N	10.8		mg/L	1.0	EPA 300.0	2	02/08/2024 10:24	J1W	B
pH	7.15	2	pH_Units		S4500HB-11	1	02/14/2024 20:18	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 12:59	AKH	G
Specific Conductance	430		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	11.2		mg/L	2.0	EPA 300.0	2	02/08/2024 10:24	J1W	B
Total Dissolved Solids	190		mg/L	25	SM2540C-15	1	02/13/2024 12:10	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/08/2024 19:53	PAG	E
Turbidity	29		NTU	0.30	SM2130B-2011	1	02/08/2024 00:45	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3344493001	FFMP035W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344493002	FFMP036W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344493003	FFMP034W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344493004	FFMP033W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3344493001	FFMP035W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1146000
		N/A	N/A	N/A		EPA 300.0	1133706
		N/A	N/A	N/A		EPA 410.4	1133911
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1133539
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1136330
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1133963
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717
3344493002	FFMP036W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1146000
		N/A	N/A	N/A		EPA 300.0	1133706
		N/A	N/A	N/A		EPA 410.4	1133911
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1133539
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1137015
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1133963
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717
3344493003	FFMP034W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1146000
		N/A	N/A	N/A		EPA 300.0	1133706
		N/A	N/A	N/A		EPA 410.4	1133911
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1133539
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1137015
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1133963
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717
3344493004	FFMP033W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1136504
		N/A	N/A	N/A		ASTM D6919-17	1146000
		N/A	N/A	N/A		EPA 300.0	1133706
		N/A	N/A	N/A		EPA 410.4	1133911
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1133539
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1137015
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1133963
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717

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

301 Fulling Mill Road • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

3344493

Logged By: SLS
PM: SJB

93

1 of 1

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

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike, P.O. Box 4424
Lancaster, PA 17604

Contact: Dan Brown

Phone#: (717) 735-0193

Project Name/#: Frey Farm Quarterly (GWMP)

Bill To: Lancaster County Solid Waste MA

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

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

Email? [X] -Y dbrown@LCSWMA.com

Fax? [X] -Y No.: (717) 397-9973

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	VOC - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	pH, Cl, SpC, F, SO4, TDS, NO3, Turb.	Alkalinity Bicarbonate
					Enter Number of Containers Per Sample or Field Results Below.								
1. FFMP035W	02/07/24	1113	G	GW	2	1	2	X	X	1	2	1	1
2. FFMP036W	02/07/24	1136	G	GW	2	1	2	X	X	1	2	1	1
3. FFMP034W	02/07/24	1315	G	GW	2	1	2	X	X	1	2	1	1
4. FFMP033W	02/07/24	1350	G	GW	2	1	2	X	X	1	2	1	1
5													
6													
7													
8													
9													
10													

Receipt Information (completed by Receiving Lab)

Cooler Temp: 1 Therm ID: _____

No. of Coolers: _____ Y N Initial

Custody Seals Present? [ ] [ ]

(if present) Seals Intact? [ ] [ ]

Temp By: DAG 1 570

Receipt Info Completed By: DAG

Cooler Custody Seal Intact Y N NA

Sample Custody Seal Intact Y N NA

Received on Ice Y N NA

Cooler & Samples Intact Y N

Correct Containers Provided Y N

Sample Label/COC Agree Y N

Cou Adequate Sample Volumes Y N

CR6 Samples Filtered Y N NA

OP Samples Filtered Y N NA

VOA Trip Blank Y N NA

NJ≤ 4 Days? N

Rad Screen (uCi) _____

Courier/Tracking #: _____

SDWA Compliance Y N

PWSID

WV Containers 0-6°C Y N NA

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

Project Comments:

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [signature] AHO	2-7-24	1510	2 [signature]	2-7-24	1510
3			4		
5			6		
7			8		
9			10		

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ] PWSID # _____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- _____

* G=Grab; C=Composite

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

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

Rev 8/04

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

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, NJ PA101

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

Project 1ST QTR 2024 GWMP-FORM 19Q
Workorder 3344744
Report ID 303733 on 2/27/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Feb 08, 2024.

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):
Jordan Bigler - Lancaster County Solid Waste Authority
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer
Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3344744001	FFMP02DW	Ground Water	02/08/2024 10:48	02/08/2024 15:30	BGS	Analytical Laboratory Service
3344744002	FFMP02SW	Ground Water	02/08/2024 09:46	02/08/2024 16:15	BGS	Analytical Laboratory Service
3344744003	FFMP031W	Ground Water	02/08/2024 11:05	02/08/2024 16:15	BGS	Analytical Laboratory Service
3344744004	FFMP002W	Ground Water	02/08/2024 11:57	02/08/2024 16:15	BGS	Analytical Laboratory Service
3344744005	FFMP032W	Ground Water	02/08/2024 13:45	02/08/2024 16:15	BGS	Analytical Laboratory Service
3344744006	FIELD BLANK	Ground Water	02/08/2024 14:00	02/08/2024 16:15	BGS	Analytical Laboratory Service
3344744007	TRIP BLANK	Water	02/08/2024 00:00	02/08/2024 16:15	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, including but not limited to the following EPA Method reference revisions:
  EPA 300.1 Rev. 1.0-1997
  EPA 300.0 Rev. 2.1-1993
  EPA 353.2 Rev. 2.0-1993
  EPA 410.4 Rev. 1.0-1993
  EPA 420.4 Rev. 1.0-1993
  EPA 365.1 Rev. 2.0-1993
  EPA 200.7 Rev. 4.4-1994
  EPA 200.8 Rev. 5.4-1994
  EPA 245.1 Rev. 3.0-1994
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Chloride. The % Recovery was reported as 76.7 and the control limits were 80 to 120.
3	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.

Detected Results Summary

Client Sample ID	FFMP02DW	Collected	02/08/2024 10:48
Lab Sample ID	3344744001	Lab Receipt	02/08/2024 15:30

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	27.82	Feet		Field	#
Dissolved Oxygen	0.05	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	509.60	Feet		Field	#
Flow Rate	2.06	gal/min		Field	#
Ground Water Elevation	481.78	ft/MSL		Field	#
Oxidation-Reduction Potential	-45	mV		Field	#
pH, Field (SM4500B)	7.11	pH_Units		Field	#
Sample Depth	120.00	Feet		Field	#
Specific Conductance, Field	2255	umhos/cm	1	Field	#
Temperature	15.65	Deg. C		Field	#
Total Well Depth	153.00	Feet		Field	#
Turbidity, Field	10	NTU	1	Field	#
Volume in Water Column	184.01	Gallons		Field	#
Water Level After Purge	82.11	Feet		Field	#
Well Volumes Purged	1.01	Vol		Field	#
METALS					
Calcium, Total	151	mg/L	0.11	SW846 6010C	#
Iron, Total	1.2	mg/L	0.067	SW846 6010C	#
Magnesium, Total	23.0	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.47	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	156	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	124	mg/L	5	SM2320B-2011	#
Alkalinity, Total	124	mg/L	5	SM2320B-2011	#
Chloride	415	mg/L	5.0	EPA 300.0	#
Nitrate-N	7.3	mg/L	2.5	EPA 300.0	#
pH	8.11	pH_Units		S4500HB-11	#
Specific Conductance	1700	umhos/cm	5	SW846 9050A	#
Sulfate	42.1	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1020	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.93	mg/L	0.50	SW846 9060A	#
Turbidity	13	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP02SW	Collected	02/08/2024 09:46
Lab Sample ID	3344744002	Lab Receipt	02/08/2024 16:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	14.53	Feet		Field	#
Dissolved Oxygen	6.72	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	509.90	Feet		Field	#
Flow Rate	0.20	gal/min		Field	#
Ground Water Elevation	495.37	ft/MSL		Field	#
Oxidation-Reduction Potential	216	mV		Field	#
pH, Field (SM4500B)	5.38	pH_Units		Field	#
Sample Depth	18.00	Feet		Field	#
Specific Conductance, Field	611	umhos/cm	1	Field	#
Temperature	15.88	Deg. C		Field	#
Total Well Depth	22.70	Feet		Field	#
Turbidity, Field	14	NTU	1	Field	#
Volume in Water Column	5.31	Gallons		Field	#
Water Level After Purge	17.01	Feet		Field	#
Well Volumes Purged	1.02	Vol		Field	#
METALS					
Calcium, Total	27.1	mg/L	0.11	SW846 6010C	#
Iron, Total	1.1	mg/L	0.067	SW846 6010C	#
Magnesium, Total	9.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.035	mg/L	0.0056	SW846 6010C	#
Potassium, Total	4.8	mg/L	0.56	SW846 6010C	#
Sodium, Total	63.3	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	184	mg/L	5	SM2320B-2011	#
Alkalinity, Total	184	mg/L	5	SM2320B-2011	#
Chloride	93.7	mg/L	2.0	EPA 300.0	#
Nitrate-N	9.9	mg/L	1.0	EPA 300.0	#
pH	7.28	pH_Units		S4500HB-11	#
Specific Conductance	516	umhos/cm	5	SW846 9050A	#
Sulfate	39.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	290	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.9	mg/L	0.50	SW846 9060A	#
Turbidity	19	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP031W	Collected	02/08/2024 11:05
Lab Sample ID	3344744003	Lab Receipt	02/08/2024 16:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	62.19	Feet		Field	#
Elev Top MW Casing above MSL	612.66	Feet		Field	#
Flow Rate	2.78	gal/min		Field	#
Ground Water Elevation	550.47	ft/MSL		Field	#
Oxidation-Reduction Potential	-327	mV		Field	#
pH, Field (SM4500B)	8.21	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	449	umhos/cm	1	Field	#
Temperature	14.32	Deg. C		Field	#
Total Well Depth	142.70	Feet		Field	#
Turbidity, Field	3	NTU	1	Field	#
Volume in Water Column	118.35	Gallons		Field	#
Water Level After Purge	119.50	Feet		Field	#
Well Volumes Purged	1.06	Vol		Field	#
METALS					
Calcium, Total	50.4	mg/L	0.11	SW846 6010C	#
Iron, Total	4.1	mg/L	0.067	SW846 6010C	#
Magnesium, Total	4.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.31	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	9.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	77	mg/L	5	SM2320B-2011	#
Alkalinity, Total	77	mg/L	5	SM2320B-2011	#
Ammonia-N	0.203	mg/L	0.100	ASTM D6919-17	#
Chloride	21.5	mg/L	2.0	EPA 300.0	#
pH	8.13	pH_Units		S4500HB-11	#
Specific Conductance	315	umhos/cm	5	SW846 9050A	#
Sulfate	49.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	186	mg/L	25	SM2540C-15	#
Turbidity	31	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP002W	Collected	02/08/2024 11:57
Lab Sample ID	3344744004	Lab Receipt	02/08/2024 16:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	52.62	Feet		Field	#
Dissolved Oxygen	6.95	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	613.20	Feet		Field	#
Flow Rate	1.50	gal/min		Field	#
Ground Water Elevation	560.58	ft/MSL		Field	#
Oxidation-Reduction Potential	308	mV		Field	#
pH, Field (SM4500B)	4.64	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	340	umhos/cm	1	Field	#
Temperature	14.91	Deg. C		Field	#
Total Well Depth	90.02	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
Volume in Water Column	54.98	Gallons		Field	#
Water Level After Purge	78.80	Feet		Field	#
Well Volumes Purged	0.98	Vol		Field	#
METALS					
Calcium, Total	18.4	mg/L	0.11	SW846 6010C	#
Iron, Total	0.29	mg/L	0.067	SW846 6010C	#
Magnesium, Total	7.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.20	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	6	mg/L	5	SM2320B-2011	#
Alkalinity, Total	6	mg/L	5	SM2320B-2011	#
Ammonia-N	0.108	mg/L	0.100	ASTM D6919-17	#
Chloride	16.7	mg/L	2.0	EPA 300.0	#
Nitrate-N	18.3	mg/L	1.0	EPA 300.0	#
pH	6.26	pH_Units		S4500HB-11	#
Specific Conductance	243	umhos/cm	5	SW846 9050A	#
Sulfate	11.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	157	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.50	mg/L	0.50	SW846 9060A	#
Turbidity	1.7	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP032W	Collected	02/08/2024 13:45
Lab Sample ID	3344744005	Lab Receipt	02/08/2024 16:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	49.95	Feet		Field	#
Dissolved Oxygen	5.14	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	594.09	Feet		Field	#
Flow Rate	0.19	gal/min		Field	#
Ground Water Elevation	544.14	ft/MSL		Field	#
Oxidation-Reduction Potential	-10	mV		Field	#
pH, Field (SM4500B)	6.90	pH_Units		Field	#
Sample Depth	62.00	Feet		Field	#
Specific Conductance, Field	102	umhos/cm	1	Field	#
Temperature	17.46	Deg. C		Field	#
Total Well Depth	77.60	Feet		Field	#
Volume in Water Column	40.65	Gallons		Field	#
Water Level After Purge	59.41	Feet		Field	#
Well Volumes Purged	0.38	Vol		Field	#
METALS					
Calcium, Total	18.9	mg/L	0.11	SW846 6010C	#
Iron, Total	11.6	mg/L	0.067	SW846 6010C	#
Magnesium, Total	6.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.74	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	71	mg/L	5	SM2320B-2011	#
Alkalinity, Total	71	mg/L	5	SM2320B-2011	#
Ammonia-N	0.608	mg/L	0.100	ASTM D6919-17	#
Chloride	22.9	mg/L	2.0	EPA 300.0	#
pH	8.06	pH_Units		S4500HB-11	#
Specific Conductance	205	umhos/cm	5	SW846 9050A	#
Total Dissolved Solids	108	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.61	mg/L	0.50	SW846 9060A	#
Turbidity	85	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FIELD BLANK	Collected	02/08/2024 14:00
Lab Sample ID	3344744006	Lab Receipt	02/08/2024 16:15

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Ammonia-N	0.036	mg/L	0.010	ASTM D6919-17	#
pH	5.98	pH_Units		S4500HB-11	#

Results

Client Sample ID	FFMP02DW	Collected	02/08/2024 10:48
Lab Sample ID	3344744001	Lab Receipt	02/08/2024 15:30

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	27.82		Feet		Field	1	02/08/2024 10:46	BGS	D
Dissolved Oxygen	0.05		mg/L	0.01	Field	1	02/08/2024 10:46	BGS	D
Elev Top MW Casing above MSL	509.60		Feet		Field	1	02/08/2024 10:46	BGS	D
Flow Rate	2.06		gal/min		Field	1	02/08/2024 10:46	BGS	D
Ground Water Elevation	481.78		ft/MSL		Field	1	02/08/2024 10:46	BGS	D
Oxidation-Reduction Potential	-45		mV		Field	1	02/08/2024 10:46	BGS	D
pH, Field (SM4500B)	7.11		pH_Units		Field	1	02/08/2024 10:46	BGS	D
Sample Depth	120.00		Feet		Field	1	02/08/2024 10:46	BGS	D
Specific Conductance, Field	2255		umhos/cm	1	Field	1	02/08/2024 10:46	BGS	D
Temperature	15.65		Deg. C		Field	1	02/08/2024 10:46	BGS	D
Total Well Depth	153.00		Feet		Field	1	02/08/2024 10:46	BGS	D
Turbidity, Field	10		NTU	1	Field	1	02/08/2024 10:46	BGS	D
Volume in Water Column	184.01		Gallons		Field	1	02/08/2024 10:46	BGS	D
Water Level After Purge	82.11		Feet		Field	1	02/08/2024 10:46	BGS	D
Well Volumes Purged	1.01		Vol		Field	1	02/08/2024 10:46	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	151		mg/L	0.11	SW846 6010C	1	02/14/2024 10:16	AXW	J1
Iron, Total	1.2		mg/L	0.067	SW846 6010C	1	02/14/2024 10:16	AXW	J1
Magnesium, Total	23.0		mg/L	0.11	SW846 6010C	1	02/14/2024 10:16	AXW	J1
Manganese, Total	0.47		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:28	AXW	J1
Potassium, Total	1.4		mg/L	0.56	SW846 6010C	1	02/14/2024 10:16	AXW	J1
Sodium, Total	156		mg/L	0.56	SW846 6010C	1	02/14/2024 10:16	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 03:42	PDK	H

Results

Client Sample ID	FFMP02DW	Collected	02/08/2024 10:48
Lab Sample ID	3344744001	Lab Receipt	02/08/2024 15:30

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	101%	62 – 133	02/15/2024 03:42	
4-Bromofluorobenzene	460-00-4	96.4%	79 – 114	02/15/2024 03:42	
Dibromofluoromethane	1868-53-7	92.9%	78 – 116	02/15/2024 03:42	
Toluene-d8	2037-26-5	98.1%	76 – 127	02/15/2024 03:42	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	124		mg/L	5	SM2320B-2011	1	02/15/2024 03:15	KMV	B
Alkalinity, Total	124	1	mg/L	5	SM2320B-2011	1	02/15/2024 03:15	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/22/2024 09:17	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2024 11:05	KMS	A
Chloride	415	2	mg/L	5.0	EPA 300.0	5	02/09/2024 11:33	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	02/09/2024 11:33	J1W	B
Nitrate-N	7.3		mg/L	2.5	EPA 300.0	5	02/09/2024 11:33	J1W	B
pH	8.11	3	pH_Units		S4500HB-11	1	02/15/2024 03:15	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 13:26	AKH	G
Specific Conductance	1700		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	42.1		mg/L	5.0	EPA 300.0	5	02/09/2024 11:33	J1W	B
Total Dissolved Solids	1020		mg/L	25	SM2540C-15	1	02/14/2024 13:30	RAG	B
Total Organic Carbon (TOC)	0.93		mg/L	0.50	SW846 9060A	1	02/13/2024 03:24	PAG	E
Turbidity	13		NTU	0.30	SM2130B-2011	1	02/09/2024 00:40	NRB	B

Results

Client Sample ID	FFMP02SW	Collected	02/08/2024 09:46
Lab Sample ID	3344744002	Lab Receipt	02/08/2024 16:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	14.53		Feet		Field	1	02/08/2024 09:47	BGS	D
Dissolved Oxygen	6.72		mg/L	0.01	Field	1	02/08/2024 09:47	BGS	D
Elev Top MW Casing above MSL	509.90		Feet		Field	1	02/08/2024 09:47	BGS	D
Flow Rate	0.20		gal/min		Field	1	02/08/2024 09:47	BGS	D
Ground Water Elevation	495.37		ft/MSL		Field	1	02/08/2024 09:47	BGS	D
Oxidation-Reduction Potential	216		mV		Field	1	02/08/2024 09:47	BGS	D
pH, Field (SM4500B)	5.38		pH_Units		Field	1	02/08/2024 09:47	BGS	D
Sample Depth	18.00		Feet		Field	1	02/08/2024 09:47	BGS	D
Specific Conductance, Field	611		umhos/cm	1	Field	1	02/08/2024 09:47	BGS	D
Temperature	15.88		Deg. C		Field	1	02/08/2024 09:47	BGS	D
Total Well Depth	22.70		Feet		Field	1	02/08/2024 09:47	BGS	D
Turbidity, Field	14		NTU	1	Field	1	02/08/2024 09:47	BGS	D
Volume in Water Column	5.31		Gallons		Field	1	02/08/2024 09:47	BGS	D
Water Level After Purge	17.01		Feet		Field	1	02/08/2024 09:47	BGS	D
Well Volumes Purged	1.02		Vol		Field	1	02/08/2024 09:47	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	27.1		mg/L	0.11	SW846 6010C	1	02/14/2024 10:18	AXW	J1
Iron, Total	1.1		mg/L	0.067	SW846 6010C	1	02/14/2024 10:18	AXW	J1
Magnesium, Total	9.6		mg/L	0.11	SW846 6010C	1	02/14/2024 10:18	AXW	J1
Manganese, Total	0.035		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:29	AXW	J1
Potassium, Total	4.8		mg/L	0.56	SW846 6010C	1	02/14/2024 10:18	AXW	J1
Sodium, Total	63.3		mg/L	0.56	SW846 6010C	1	02/14/2024 10:18	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:01	PDK	H

Results

Client Sample ID	FFMP02SW	Collected	02/08/2024 09:46
Lab Sample ID	3344744002	Lab Receipt	02/08/2024 16:15

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	99.6%	62 – 133	02/15/2024 04:01	
4-Bromofluorobenzene	460-00-4	97.1%	79 – 114	02/15/2024 04:01	
Dibromofluoromethane	1868-53-7	93.6%	78 – 116	02/15/2024 04:01	
Toluene-d8	2037-26-5	100%	76 – 127	02/15/2024 04:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	184		mg/L	5	SM2320B-2011	1	02/15/2024 03:26	KMV	B
Alkalinity, Total	184	1	mg/L	5	SM2320B-2011	1	02/15/2024 03:26	KMV	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	02/22/2024 09:31	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2024 11:05	KMS	A
Chloride	93.7		mg/L	2.0	EPA 300.0	2	02/09/2024 11:22	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/09/2024 11:22	J1W	B
Nitrate-N	9.9		mg/L	1.0	EPA 300.0	2	02/09/2024 11:22	J1W	B
pH	7.28	3	pH_Units		S4500HB-11	1	02/15/2024 03:26	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 13:30	AKH	G
Specific Conductance	516		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	39.6		mg/L	2.0	EPA 300.0	2	02/09/2024 11:22	J1W	B
Total Dissolved Solids	290		mg/L	25	SM2540C-15	1	02/14/2024 13:30	RAG	B
Total Organic Carbon (TOC)	1.9		mg/L	0.50	SW846 9060A	1	02/13/2024 03:24	PAG	E
Turbidity	19		NTU	0.30	SM2130B-2011	1	02/09/2024 00:40	NRB	B

Results

Client Sample ID	FFMP031W	Collected	02/08/2024 11:05
Lab Sample ID	3344744003	Lab Receipt	02/08/2024 16:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	62.19		Feet		Field	1	02/08/2024 11:05	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	02/08/2024 11:05	BGS	D
Elev Top MW Casing above MSL	612.66		Feet		Field	1	02/08/2024 11:05	BGS	D
Flow Rate	2.78		gal/min		Field	1	02/08/2024 11:05	BGS	D
Ground Water Elevation	550.47		ft/MSL		Field	1	02/08/2024 11:05	BGS	D
Oxidation-Reduction Potential	-327		mV		Field	1	02/08/2024 11:05	BGS	D
pH, Field (SM4500B)	8.21		pH_Units		Field	1	02/08/2024 11:05	BGS	D
Sample Depth	130.00		Feet		Field	1	02/08/2024 11:05	BGS	D
Specific Conductance, Field	449		umhos/cm	1	Field	1	02/08/2024 11:05	BGS	D
Temperature	14.32		Deg. C		Field	1	02/08/2024 11:05	BGS	D
Total Well Depth	142.70		Feet		Field	1	02/08/2024 11:05	BGS	D
Turbidity, Field	3		NTU	1	Field	1	02/08/2024 11:05	BGS	D
Volume in Water Column	118.35		Gallons		Field	1	02/08/2024 11:05	BGS	D
Water Level After Purge	119.50		Feet		Field	1	02/08/2024 11:05	BGS	D
Well Volumes Purged	1.06		Vol		Field	1	02/08/2024 11:05	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	50.4		mg/L	0.11	SW846 6010C	1	02/14/2024 10:19	AXW	J1
Iron, Total	4.1		mg/L	0.067	SW846 6010C	1	02/14/2024 10:19	AXW	J1
Magnesium, Total	4.8		mg/L	0.11	SW846 6010C	1	02/14/2024 10:19	AXW	J1
Manganese, Total	0.31		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:30	AXW	J1
Potassium, Total	1.5		mg/L	0.56	SW846 6010C	1	02/14/2024 10:19	AXW	J1
Sodium, Total	9.7		mg/L	0.56	SW846 6010C	1	02/14/2024 10:19	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:21	PDK	H

Results

Client Sample ID	FFMP031W	Collected	02/08/2024 11:05
Lab Sample ID	3344744003	Lab Receipt	02/08/2024 16:15

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.1%	62 – 133	02/15/2024 04:21	
4-Bromofluorobenzene	460-00-4	92.5%	79 – 114	02/15/2024 04:21	
Dibromofluoromethane	1868-53-7	89.1%	78 – 116	02/15/2024 04:21	
Toluene-d8	2037-26-5	95.7%	76 – 127	02/15/2024 04:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	77		mg/L	5	SM2320B-2011	1	02/15/2024 03:36	KMV	B
Alkalinity, Total	77	1	mg/L	5	SM2320B-2011	1	02/15/2024 03:36	KMV	B
Ammonia-N	0.203		mg/L	0.100	ASTM D6919-17	10	02/22/2024 09:45	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2024 11:05	KMS	A
Chloride	21.5		mg/L	2.0	EPA 300.0	2	02/09/2024 11:12	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/09/2024 11:12	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/09/2024 11:12	J1W	B
pH	8.13	3	pH_Units		S4500HB-11	1	02/15/2024 03:36	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 13:33	AKH	G
Specific Conductance	315		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	49.0		mg/L	2.0	EPA 300.0	2	02/09/2024 11:12	J1W	B
Total Dissolved Solids	186		mg/L	25	SM2540C-15	1	02/14/2024 13:30	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/13/2024 03:24	PAG	E
Turbidity	31		NTU	0.30	SM2130B-2011	1	02/09/2024 00:40	NRB	B

Results

Client Sample ID	FFMP002W	Collected	02/08/2024 11:57
Lab Sample ID	3344744004	Lab Receipt	02/08/2024 16:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	52.62		Feet		Field	1	02/08/2024 11:57	BGS	D
Dissolved Oxygen	6.95		mg/L	0.01	Field	1	02/08/2024 11:57	BGS	D
Elev Top MW Casing above MSL	613.20		Feet		Field	1	02/08/2024 11:57	BGS	D
Flow Rate	1.50		gal/min		Field	1	02/08/2024 11:57	BGS	D
Ground Water Elevation	560.58		ft/MSL		Field	1	02/08/2024 11:57	BGS	D
Oxidation-Reduction Potential	308		mV		Field	1	02/08/2024 11:57	BGS	D
pH, Field (SM4500B)	4.64		pH_Units		Field	1	02/08/2024 11:57	BGS	D
Sample Depth	85.00		Feet		Field	1	02/08/2024 11:57	BGS	D
Specific Conductance, Field	340		umhos/cm	1	Field	1	02/08/2024 11:57	BGS	D
Temperature	14.91		Deg. C		Field	1	02/08/2024 11:57	BGS	D
Total Well Depth	90.02		Feet		Field	1	02/08/2024 11:57	BGS	D
Turbidity, Field	1		NTU	1	Field	1	02/08/2024 11:57	BGS	D
Volume in Water Column	54.98		Gallons		Field	1	02/08/2024 11:57	BGS	D
Water Level After Purge	78.80		Feet		Field	1	02/08/2024 11:57	BGS	D
Well Volumes Purged	0.98		Vol		Field	1	02/08/2024 11:57	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	18.4		mg/L	0.11	SW846 6010C	1	02/14/2024 10:20	AXW	J1
Iron, Total	0.29		mg/L	0.067	SW846 6010C	1	02/14/2024 10:20	AXW	J1
Magnesium, Total	7.9		mg/L	0.11	SW846 6010C	1	02/14/2024 10:20	AXW	J1
Manganese, Total	0.20		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:35	AXW	J1
Potassium, Total	1.3		mg/L	0.56	SW846 6010C	1	02/14/2024 10:20	AXW	J1
Sodium, Total	13.5		mg/L	0.56	SW846 6010C	1	02/14/2024 10:20	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 04:41	PDK	H

Results

Client Sample ID	FFMP002W	Collected	02/08/2024 11:57
Lab Sample ID	3344744004	Lab Receipt	02/08/2024 16:15

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	103%	62 – 133	02/15/2024 04:41	
4-Bromofluorobenzene	460-00-4	93.6%	79 – 114	02/15/2024 04:41	
Dibromofluoromethane	1868-53-7	94%	78 – 116	02/15/2024 04:41	
Toluene-d8	2037-26-5	99.6%	76 – 127	02/15/2024 04:41	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	6		mg/L	5	SM2320B-2011	1	02/15/2024 04:19	KMV	B
Alkalinity, Total	6	1	mg/L	5	SM2320B-2011	1	02/15/2024 04:19	KMV	B
Ammonia-N	0.108		mg/L	0.100	ASTM D6919-17	10	02/22/2024 09:58	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2024 11:05	KMS	A
Chloride	16.7		mg/L	2.0	EPA 300.0	2	02/09/2024 11:02	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/09/2024 11:02	J1W	B
Nitrate-N	18.3		mg/L	1.0	EPA 300.0	2	02/09/2024 11:02	J1W	B
pH	6.26	3	pH_Units		S4500HB-11	1	02/15/2024 04:19	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 13:37	AKH	G
Specific Conductance	243		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	11.0		mg/L	2.0	EPA 300.0	2	02/09/2024 11:02	J1W	B
Total Dissolved Solids	157		mg/L	25	SM2540C-15	1	02/14/2024 15:00	RAG	B
Total Organic Carbon (TOC)	0.50		mg/L	0.50	SW846 9060A	1	02/13/2024 03:24	PAG	E
Turbidity	1.7		NTU	0.30	SM2130B-2011	1	02/09/2024 00:40	NRB	B

Results

Client Sample ID	FFMP032W	Collected	02/08/2024 13:45
Lab Sample ID	3344744005	Lab Receipt	02/08/2024 16:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	49.95		Feet		Field	1	02/08/2024 13:45	BGS	D
Dissolved Oxygen	5.14		mg/L	0.01	Field	1	02/08/2024 13:45	BGS	D
Elev Top MW Casing above MSL	594.09		Feet		Field	1	02/08/2024 13:45	BGS	D
Flow Rate	0.19		gal/min		Field	1	02/08/2024 13:45	BGS	D
Ground Water Elevation	544.14		ft/MSL		Field	1	02/08/2024 13:45	BGS	D
Oxidation-Reduction Potential	-10		mV		Field	1	02/08/2024 13:45	BGS	D
pH, Field (SM4500B)	6.90		pH_Units		Field	1	02/08/2024 13:45	BGS	D
Sample Depth	62.00		Feet		Field	1	02/08/2024 13:45	BGS	D
Specific Conductance, Field	102		umhos/cm	1	Field	1	02/08/2024 13:45	BGS	D
Temperature	17.46		Deg. C		Field	1	02/08/2024 13:45	BGS	D
Total Well Depth	77.60		Feet		Field	1	02/08/2024 13:45	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	02/08/2024 13:45	BGS	D
Volume in Water Column	40.65		Gallons		Field	1	02/08/2024 13:45	BGS	D
Water Level After Purge	59.41		Feet		Field	1	02/08/2024 13:45	BGS	D
Well Volumes Purged	0.38		Vol		Field	1	02/08/2024 13:45	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	18.9		mg/L	0.11	SW846 6010C	1	02/14/2024 10:21	AXW	J1
Iron, Total	11.6		mg/L	0.067	SW846 6010C	1	02/14/2024 10:21	AXW	J1
Magnesium, Total	6.9		mg/L	0.11	SW846 6010C	1	02/14/2024 10:21	AXW	J1
Manganese, Total	0.74		mg/L	0.0056	SW846 6010C	1	02/22/2024 10:36	AXW	J1
Potassium, Total	1.6		mg/L	0.56	SW846 6010C	1	02/14/2024 10:21	AXW	J1
Sodium, Total	13.5		mg/L	0.56	SW846 6010C	1	02/14/2024 10:21	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 05:01	PDK	H

Results

Client Sample ID	FFMP032W	Collected	02/08/2024 13:45
Lab Sample ID	3344744005	Lab Receipt	02/08/2024 16:15

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	99.8%	62 – 133	02/15/2024 05:01	
4-Bromofluorobenzene	460-00-4	95.6%	79 – 114	02/15/2024 05:01	
Dibromofluoromethane	1868-53-7	92.2%	78 – 116	02/15/2024 05:01	
Toluene-d8	2037-26-5	98.6%	76 – 127	02/15/2024 05:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	71		mg/L	5	SM2320B-2011	1	02/15/2024 04:31	KMV	B
Alkalinity, Total	71	1	mg/L	5	SM2320B-2011	1	02/15/2024 04:31	KMV	B
Ammonia-N	0.608		mg/L	0.100	ASTM D6919-17	10	02/22/2024 10:26	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2024 11:05	KMS	A
Chloride	22.9		mg/L	2.0	EPA 300.0	2	02/09/2024 10:51	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/09/2024 10:51	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/09/2024 10:51	J1W	B
pH	8.06	3	pH_Units		S4500HB-11	1	02/15/2024 04:31	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 14:00	AKH	G
Specific Conductance	205		umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	02/09/2024 10:51	J1W	B
Total Dissolved Solids	108		mg/L	25	SM2540C-15	1	02/14/2024 15:00	RAG	B
Total Organic Carbon (TOC)	0.61		mg/L	0.50	SW846 9060A	1	02/13/2024 03:24	PAG	E
Turbidity	85		NTU	0.30	SM2130B-2011	1	02/09/2024 00:40	NRB	B

Results

Client Sample ID	FIELD BLANK	Collected	02/08/2024 14:00
Lab Sample ID	3344744006	Lab Receipt	02/08/2024 16:15

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	02/14/2024 10:22	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	02/14/2024 10:22	AXW	J1
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	02/14/2024 10:22	AXW	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	02/22/2024 10:37	AXW	J1
Potassium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	02/14/2024 10:22	AXW	J1
Sodium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	02/14/2024 10:22	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 01:42	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.6%	62 – 133	02/15/2024 01:42	
4-Bromofluorobenzene	460-00-4	93.9%	79 – 114	02/15/2024 01:42	
Dibromofluoromethane	1868-53-7	92.2%	78 – 116	02/15/2024 01:42	
Toluene-d8	2037-26-5	99.8%	76 – 127	02/15/2024 01:42	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	02/15/2024 04:39	KMV	B
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	02/15/2024 04:39	KMV	B
Ammonia-N	0.036		mg/L	0.010	ASTM D6919-17	1	02/22/2024 10:12	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	02/09/2024 11:05	KMS	A
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	02/09/2024 10:41	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	02/09/2024 10:41	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	02/09/2024 10:41	J1W	B
pH	5.98	3	pH_Units		S4500HB-11	1	02/15/2024 04:39	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	02/21/2024 14:04	AKH	G

Results

Client Sample ID	FIELD BLANK	Collected	02/08/2024 14:00
Lab Sample ID	3344744006	Lab Receipt	02/08/2024 16:15

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Specific Conductance	ND	ND	umhos/cm	5	SW846 9050A	1	02/21/2024 08:50	E1R	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	02/09/2024 10:41	J1W	B
Total Dissolved Solids	ND	ND	mg/L	25	SM2540C-15	1	02/14/2024 15:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	02/13/2024 03:24	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	02/09/2024 00:40	NRB	B

Results

Client Sample ID	TRIP BLANK	Collected	02/08/2024 00:00
Lab Sample ID	3344744007	Lab Receipt	02/08/2024 16:15

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	02/15/2024 00:43	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.6%	62 – 133	02/15/2024 00:43	
4-Bromofluorobenzene	460-00-4	97.9%	79 – 114	02/15/2024 00:43	
Dibromofluoromethane	1868-53-7	93%	78 – 116	02/15/2024 00:43	
Toluene-d8	2037-26-5	99.4%	76 – 127	02/15/2024 00:43	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3344744001	FFMP02DW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344744002	FFMP02SW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344744003	FFMP031W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344744004	FFMP002W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3344744005	FFMP032W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344744006	FIELD BLANK	SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3344744007	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
3344744001	FFMP02DW	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1138183
		N/A	N/A	N/A		ASTM D6919-17	1141986
		N/A	N/A	N/A		EPA 300.0	1134601
		N/A	N/A	N/A		EPA 410.4	1134909
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1134199
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1138028
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1136386
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717
3344744002	FFMP02SW	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1138183
		N/A	N/A	N/A		ASTM D6919-17	1141986
		N/A	N/A	N/A		EPA 300.0	1134601
		N/A	N/A	N/A		EPA 410.4	1134909
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1134199
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1138028
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1136386
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717
3344744003	FFMP031W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1138183
		N/A	N/A	N/A		ASTM D6919-17	1141986
		N/A	N/A	N/A		EPA 300.0	1134601
		N/A	N/A	N/A		EPA 410.4	1134909
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1134199
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1138028
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1136386
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717
3344744004	FFMP002W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1138183
		N/A	N/A	N/A		ASTM D6919-17	1141986
		N/A	N/A	N/A		EPA 300.0	1134601
		N/A	N/A	N/A		EPA 410.4	1134909
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1134199
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1138029
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1136386
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3344744005	FFMP032W	N/A	N/A	N/A		Field	1141971
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1138183
		N/A	N/A	N/A		ASTM D6919-17	1141986
		N/A	N/A	N/A		EPA 300.0	1134601
		N/A	N/A	N/A		EPA 410.4	1134909
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1134199
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1138029
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1136386
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717
3344744006	FIELD BLANK	SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1138015
		SW846 3015A	1134118	02/09/2024 01:45	ANN	SW846 6010C	1141829
		N/A	N/A	N/A		SW846 8260B	1138183
		N/A	N/A	N/A		ASTM D6919-17	1141986
		N/A	N/A	N/A		EPA 300.0	1134601
		N/A	N/A	N/A		EPA 410.4	1134909
		N/A	N/A	N/A		S4500HB-11	1134970
		N/A	N/A	N/A		SM2130B-2011	1134199
		N/A	N/A	N/A		SM2320B-2011	1134970
		N/A	N/A	N/A		SM2540C-15	1138029
		N/A	N/A	N/A		SW846 9050A	1141974
		N/A	N/A	N/A		SW846 9060A	1136386
		SW846 9066	1140403	02/21/2024 09:02	AKH	SW846 9066	1142717
3344744007	TRIP BLANK	N/A	N/A	N/A		SW846 8260B	1138183

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

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

COC #: 3344744

Logged By: RAW
PM: SJB

ALS Quo

301 Fulling Mill Road • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

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

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike, P.O. Box 4424
Lancaster, PA 17604

Contact: Dan Brown

Phone#: (717) 735-0193

Project Name/#: Frey Farm Quarterly (GWMP)

Bill To: Lancaster County Solid Waste MA

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

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

Email? [X] -Y dbrown@LCSWMA.com

Fax? [X] -Y No.: (717) 397-9973

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	VOC - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Metals: Fe, Mn, Na, Ca, K, Mg	pH, Cl, SpC, F, SO4, TDS, NO3, Turb.	Alkalinity Bicarbonate	
					Enter Number of Containers Per Sample or Field Results Below.									
1. FFMP02DW	02/08/24	1048	G	GW	2	1	2	x	x	1	2	1	1	
2. FFMP02SW	02/08/24	0946	G	GW	2	1	2	x	x	1	2	1	1	
3. FFMP031W	02/08/24	1105	G	GW	2	1	2	x	x	1	2	1	1	
4. FFMP002W	02/08/24	1157	G	GW	2	1	2	x	x	1	2	1	1	
5. FFMP032W	02/08/24	1345	G	GW	2	1	2	x	x	1	2	1	1	
6. Field Blank	02/08/24	1400	G	DI	2	1	2			1	2	1	1	
7. Trip Blank	02/08/24	1615	G	DI			2			1	2	1	1	
8														
9														
10														

Project Comments:

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
[illegible] ALS	2-8-24	1615	2 DAG/ALS	2/8/24	1615
			4		
			6		
			8		
			10		

Receipt information (lab)

Cooler Temp: 3 Therm ID:

No. of Coolers: _____

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

Temp By: DAG | 3 | Therm ID 573

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

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

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]

Special Processing: USACE [ ] Navy [ ] [ ]

State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]

Reportable to PADEP? Yes [ ] PWSID # _____

Sample Disposal: Lab [X] Special [ ]

EDDS: Format Type- _____

* G=Grab; C=Composite

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

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