2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
01/20/2025
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 (DO 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 o 57 ' 36.43 " — Longitude: 76 o 27 ' 10.82 "

Depth to Water Level: 62.88 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.90 ft — Elevation of Water Level: 513.52 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 126.33 gal

Total Well Depth: 148.9 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): 11/4/2024 — Sample Collection Time: 11:29

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): 3385884001 — Final Lab Analysis CompletionDate: 11/14/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP015W
Sample Date	11/4/2024

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	27	SM20-2320B
CALCIUM, TOTAL	19.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	26.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	24.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	9	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	24.2 E	EPA 300
pH-FIELD (SU)	5.62	FIELD
pH-LAB (SU)	7.48	SM20-4500HB
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	20.2	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	400	FIELD
SPEC. COND., LAB (umhos/cm)	402	SW846 9050A
SULFATE	37.6	EPA 300
ALKALINITY	27	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	258	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM 2130B

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

I.D. No	101389
Monitoring Point No.	FFMP015W
Sample Date	11/4/2024

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.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DD° 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: 53.6 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.20 ft — Elevation of Water Level: 537.30 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 137.47 gal

Total Well Depth: 147.2 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): 11/4/2024 — Sample Collection Time: 11:50

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3385884002 — Final Lab Analysis CompletionDate: 11/14/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP03AW
Sample Date	11/4/2024

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	1.27	D6919-09
BICARBONATE ALKALINITY	17	SM20-2320B
CALCIUM, TOTAL	21.2	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	43.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	16.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	350	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	22.3 E	EPA 300
pH-FIELD (SU)	5	FIELD
pH-LAB (SU)	7.17	SM20-4500HB
POTASSIUM, TOTAL	1.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	15.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	359	FIELD
SPEC. COND., LAB (umhos/cm)	356	SW846 9050A
SULFATE	2.3	EPA 300
ALKALINITY	17	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	244	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1	SM 2130B

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

I.D. No	101389
Monitoring Point No.	FFMP03AW
Sample Date	11/4/2024

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.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DD 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 o 57 ' 15.52 " — Longitude: 76 o 27 ' 26.8 "

Depth to Water Level: 37.63 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.20 ft — Elevation of Water Level: 524.67 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 76.91 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 3.1

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 11/4/2024 — Sample Collection Time: 14:44

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): 3385884003 — Final Lab Analysis CompletionDate: 11/21/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP30RW
Sample Date	11/4/2024

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	0.15	D6919-09
BICARBONATE ALKALINITY	98	SM20-2320B
CALCIUM, TOTAL	97.9	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	331	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	3100	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	21.5	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	4100	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.3	EPA 300
pH-FIELD (SU)	5.82	FIELD
pH-LAB (SU)	8.07	SM20-4500HB
POTASSIUM, TOTAL	9.1	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	142	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1249	FIELD
SPEC. COND., LAB (umhos/cm)	1390	SW846 9050A
SULFATE	68.4	EPA 300
ALKALINITY	98	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	810	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.93	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	15	SM 2130B

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

I.D. No	101389
Monitoring Point No.	FFMP30RW
Sample Date	11/4/2024

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.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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General Reference: Section 273.284
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SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DD 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 o 57 ' 15.4 " — Longitude: 76 o 27 ' 26.58 "

Depth to Water Level: 39.59 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.52 ft — Elevation of Water Level: 521.13 ft./MSL

Sampling Depth: 146 ft — Volume of Water Column: 384.68 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): 11/4/2024 — Sample Collection Time: 14:01

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): 3385884004 — Final Lab Analysis CompletionDate: 11/14/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP04AW
Sample Date	11/4/2024

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	187	SM20-2320B
CALCIUM, TOTAL	158	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	325	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	26.2	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	230	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	2.5 ND	EPA 300
pH-FIELD (SU)	6.88	FIELD
pH-LAB (SU)	8.22	SM20-4500HB
POTASSIUM, TOTAL	2.6	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	90.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1456	FIELD
SPEC. COND., LAB (umhos/cm)	1460	SW846 9050A
SULFATE	58.1	EPA 300
ALKALINITY	187	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	966	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.72	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.	FFMP04AW
Sample Date	11/4/2024

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.

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Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Casing Stickup: 0.49 ft — Elevation of Water Level: 496.11 ft./MSL

Sampling Depth: 79 ft — Volume of Water Column: 111.02 gal

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

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

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 11/5/2024 — Sample Collection Time: 12:16

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): 3386038001 — Final Lab Analysis CompletionDate: 11/14/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP033W
Sample Date	11/5/2024

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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	32	SM20-2320B
CALCIUM, TOTAL	39.1	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	87.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	4800	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	13.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	230	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	10.8	EPA 300
pH-FIELD (SU)	5.46	FIELD
pH-LAB (SU)	7.62	SM20-4500HB
POTASSIUM, TOTAL	1.7	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	19.9	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	464	FIELD
SPEC. COND., LAB (umhos/cm)	460	SW846 9050A
SULFATE	13.4	EPA 300
ALKALINITY	32	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	246	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	15	SM 2130B

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

I.D. No	101389
Monitoring Point No.	FFMP033W
Sample Date	11/5/2024

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
01/20/2025
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 (DD 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: ___ o ___ ' ___ " — Longitude: ___ o ___ ' ___ "

Depth to Water Level: 11.18 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 461.70 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: 1.7

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 11/5/2024 — Sample Collection Time: 12:32

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): 3386038002 — Final Lab Analysis CompletionDate: 11/14/2024

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

Comments: ___

I.D. No	101389
Monitoring Point No.	FFMP034W
Sample Date	11/5/2024

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	37	SM20-2320B
CALCIUM, TOTAL	57.7	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	158	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	620	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	20.7	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	68	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	11.3	EPA 300
pH-FIELD (SU)	5.64	FIELD
pH-LAB (SU)	7.73	SM20-4500HB
POTASSIUM, TOTAL	2.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	44.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	735	FIELD
SPEC. COND., LAB (umhos/cm)	730	SW846 9050A
SULFATE	32.7	EPA 300
ALKALINITY	37	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	448	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.69	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	12	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	11/5/2024

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
01/20/2025
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 (DD° 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: 86.35 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 3.30 ft — Elevation of Water Level: 461.05 ft./MSL

Sampling Depth: 105 ft — Volume of Water Column: 40.61 gal

Total Well Depth: 114 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): 11/5/2024 — Sample Collection Time: 14:22

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3386038003 — Final Lab Analysis CompletionDate: 11/14/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP26RW
Sample Date	11/5/2024

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	69.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	148	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	17.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	670	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1.2	EPA 300
pH-FIELD (SU)	5.21	FIELD
pH-LAB (SU)	7.94	SM20-4500HB
POTASSIUM, TOTAL	6.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	53.4	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	788	FIELD
SPEC. COND., LAB (umhos/cm)	778	SW846 9050A
SULFATE	93.5	EPA 300
ALKALINITY	67	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	436	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.6	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.95	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	11/5/2024

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
01/20/2025
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 (DO 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 o 57 ' 10.67 " — Longitude: 76 o 27 ' 21.3 "

Depth to Water Level: 76.42 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.70 ft — Elevation of Water Level: 460.98 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 108.06 gal

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

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

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 11/5/2024 — Sample Collection Time: 14:28

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3386038004 — Final Lab Analysis CompletionDate: 11/14/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP005W
Sample Date	11/5/2024

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	60	SM20-2320B
CALCIUM, TOTAL	76.4	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	162	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	17.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	160	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1.6	EPA 300
pH-FIELD (SU)	5.31	FIELD
pH-LAB (SU)	7.94	SM20-4500HB
POTASSIUM, TOTAL	2.9	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	45.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	788	FIELD
SPEC. COND., LAB (umhos/cm)	785	SW846 9050A
SULFATE	73.1	EPA 300
ALKALINITY	60	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	460	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.3	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM 2130B

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

I.D. No	101389
Monitoring Point No.	FFMP005W
Sample Date	11/5/2024

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
01/20/2025
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DD° 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: 22.11 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.15 ft — Elevation of Water Level: 431.93 ft./MSL

Sampling Depth: 46 ft — Volume of Water Column: 40.96 gal

Total Well Depth: 50 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): 11/6/2024 — Sample Collection Time: 11:12

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): 3386281001 — Final Lab Analysis CompletionDate: 11/16/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP038W
Sample Date	11/6/2024

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	81	SM20-2320B
CALCIUM, TOTAL	70.7	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	97.3	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	890	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	59	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	7.78	FIELD
pH-LAB (SU)	8.2	SM20-4500HB
POTASSIUM, TOTAL	0.85	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	12.4	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	485	FIELD
SPEC. COND., LAB (umhos/cm)	487	SW846 9050A
SULFATE	14.8	EPA 300
ALKALINITY	81	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	358	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	9.1	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.	FFMP038W
Sample Date	11/6/2024

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	4.1	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
01/20/2025
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 (DD° 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: 16.33 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.04 ft — Elevation of Water Level: 439.13 ft./MSL

Sampling Depth: 118 ft — Volume of Water Column: 166.94 gal

Total Well Depth: 130 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): 11/6/2024 — Sample Collection Time: 11:25

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3386281002 — Final Lab Analysis CompletionDate: 11/16/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP039W
Sample Date	11/6/2024

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	0.33	D6919-09
BICARBONATE ALKALINITY	42	SM20-2320B
CALCIUM, TOTAL	69.9	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	279	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	2200	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	23.2	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	740	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.3	EPA 300
pH-FIELD (SU)	5.76	FIELD
pH-LAB (SU)	7.77	SM20-4500HB
POTASSIUM, TOTAL	5.9	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	71.7	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	976	FIELD
SPEC. COND., LAB (umhos/cm)	972	SW846 9050A
SULFATE	44	EPA 300
ALKALINITY	42	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	622	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.2	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	3.7	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.	FFMP039W
Sample Date	11/6/2024

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.

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Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DD 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 o 57 ' 15.95 " — Longitude: 76 o 26 ' 57.26 "

Depth to Water Level: 44.28 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.45 ft — Elevation of Water Level: 433.28 ft./MSL

Sampling Depth: 65 ft — Volume of Water Column: 37.77 gal

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

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

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 11/6/2024 — Sample Collection Time: 13:31

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3386281003 — Final Lab Analysis CompletionDate: 11/16/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP035W
Sample Date	11/6/2024

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	141	SM20-2320B
CALCIUM, TOTAL	100	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	163	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	19.4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	6	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	7.9	EPA 300
pH-FIELD (SU)	6.58	FIELD
pH-LAB (SU)	8.21	SM20-4500HB
POTASSIUM, TOTAL	3.5	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	52.6	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	936	FIELD
SPEC. COND., LAB (umhos/cm)	921	SW846 9050A
SULFATE	51.3	EPA 300
ALKALINITY	141	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	586	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	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.	FFMP035W
Sample Date	11/6/2024

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.

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DD° 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: 52.1 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.91 ft — Elevation of Water Level: 426.13 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 129.09 gal

Total Well Depth: 140 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): 11/6/2024 — Sample Collection Time: 14:26

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): 3386281004 — Final Lab Analysis CompletionDate: 11/16/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP036W
Sample Date	11/6/2024

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	96	SM20-2320B
CALCIUM, TOTAL	50.7	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	35.8	EPA 300
FLUORIDE	0.22	EPA 300
IRON, TOTAL (ug/l)	1200	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	4.8	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	110	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	8.17	FIELD
pH-LAB (SU)	8.3	SM20-4500HB
POTASSIUM, TOTAL	0.67	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	15.4	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	353	FIELD
SPEC. COND., LAB (umhos/cm)	354	SW846 9050A
SULFATE	32.6	EPA 300
ALKALINITY	96	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	196	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	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.	FFMP036W
Sample Date	11/6/2024

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DO 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 o 57 ' 12.93 " — Longitude: 76 o 27 ' 0.67 "

Depth to Water Level: 41.37 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.00 ft — Elevation of Water Level: 435.93 ft./MSL

Sampling Depth: 55 ft — Volume of Water Column: 25.16 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 2.7

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 11/7/2024 — Sample Collection Time: 10:22

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3386565001 — Final Lab Analysis CompletionDate: 11/27/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP029W
Sample Date	11/7/2024

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	12	SM20-2320B
CALCIUM, TOTAL	12.5	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	54.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	9.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	16	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.8	EPA 300
pH-FIELD (SU)	4.86	FIELD
pH-LAB (SU)	7.26	SM20-4500HB
POTASSIUM, TOTAL	1.8	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	14.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	235	FIELD
SPEC. COND., LAB (umhos/cm)	237	SW846 9050A
SULFATE	2.6	EPA 300
ALKALINITY	12	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	170	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.1	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
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I.D. No	101389
Monitoring Point No.	FFMP029W
Sample Date	11/7/2024

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.

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Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DD 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 o 57 ' 8.5 " — Longitude: 76 o 27 ' 6.17 "

Depth to Water Level: 43.9 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.00 ft — Elevation of Water Level: 436.80 ft./MSL

Sampling Depth: 135 ft — Volume of Water Column: 156.56 gal

Total Well Depth: 150.5 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): 11/7/2024 — Sample Collection Time: 10:45

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): 3386565002 — Final Lab Analysis CompletionDate: 11/21/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP017W
Sample Date	11/7/2024

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	0.23	D6919-09
BICARBONATE ALKALINITY	90	SM20-2320B
CALCIUM, TOTAL	150	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	539	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67 ND	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	52.8	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	1500	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	3.9	EPA 300
pH-FIELD (SU)	5.99	FIELD
pH-LAB (SU)	8.1	SM20-4500HB
POTASSIUM, TOTAL	12.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	148	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	2066	FIELD
SPEC. COND., LAB (umhos/cm)	2020	SW846 9050A
SULFATE	118	EPA 300
ALKALINITY	90	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	1170	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	3.4	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.4	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	11/7/2024

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
01/20/2025
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 (DD 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 o 57 ' 32.25 " — Longitude: 76 o 27 ' 24.03 "

Depth to Water Level: 70.58 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.60 ft — Elevation of Water Level: 542.62 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 145.43 gal

Total Well Depth: 169.6 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): 11/7/2024 — Sample Collection Time: 13:08

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3386565003 — Final Lab Analysis CompletionDate: 11/21/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP002W
Sample Date	11/7/2024

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	7	SM20-2320B
CALCIUM, TOTAL	17.8	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	17.2	EPA 300
FLUORIDE	0.3	EPA 300
IRON, TOTAL (ug/l)	1100	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	7.1	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	250	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	16.4	EPA 300
pH-FIELD (SU)	4.52	FIELD
pH-LAB (SU)	6.83	SM20-4500HB
POTASSIUM, TOTAL	3.3	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	14.5	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	258	FIELD
SPEC. COND., LAB (umhos/cm)	266	SW846 9050A
SULFATE	27.1	EPA 300
ALKALINITY	7	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	189	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.54	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	3.1	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.	FFMP002W
Sample Date	11/7/2024

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
01/20/2025
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 (DD° 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: 70.6 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.38 ft — Elevation of Water Level: 542.06 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 101.92 gal

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

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

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 11/7/2024 — Sample Collection Time: 13:13

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): 3386565004 — Final Lab Analysis CompletionDate: 11/21/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP031W
Sample Date	11/7/2024

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	79	SM20-2320B
CALCIUM, TOTAL	57.7	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	22	EPA 300
FLUORIDE	0.31	EPA 300
IRON, TOTAL (ug/l)	2800	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	4.6	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	460	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	7.31	FIELD
pH-LAB (SU)	8.25	SM20-4500HB
POTASSIUM, TOTAL	1.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	9.8	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	2	FIELD
SPEC. COND., LAB (umhos/cm)	324	SW846 9050A
SULFATE	53.7	EPA 300
ALKALINITY	79	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	158	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	25	SM 2130B

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

I.D. No	101389
Monitoring Point No.	FFMP031W
Sample Date	11/7/2024

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
01/20/2025
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 (DD° 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: 50.85 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.06 ft — Elevation of Water Level: 543.24 ft./MSL

Sampling Depth: 62 ft — Volume of Water Column: 35.47 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 0.1

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 11/7/2024 — Sample Collection Time: 14:10

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): 3386565005 — Final Lab Analysis CompletionDate: 11/21/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP032W
Sample Date	11/7/2024

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	0.64	D6919-09
BICARBONATE ALKALINITY	65	SM20-2320B
CALCIUM, TOTAL	19.5	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	33.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	10000	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	6.7	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	790	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	6.56	FIELD
pH-LAB (SU)	8.16	SM20-4500HB
POTASSIUM, TOTAL	1.4	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	13.3	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	258	FIELD
SPEC. COND., LAB (umhos/cm)	224	SW846 9050A
SULFATE	2 ND	EPA 300
ALKALINITY	65	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	104	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	120	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	11/7/2024

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
01/20/2025
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facitlity ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

Monitoring Wells must be designed and constructed in accordance with Department Standards. INDICATE THE LATITUDE AND LONGITUDE TO THE NEAREST ONE TENTH OF A SECOND (DD° 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: 28.38 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 481.22 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): 11/8/2024 — 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): 3386873001 — Final Lab Analysis CompletionDate: 11/25/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP02DW
Sample Date	11/8/2024

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	131	SM20-2320B
CALCIUM, TOTAL	132	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	365	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	450	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	20.4	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	180	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	7.5	EPA 300
pH-FIELD (SU)	7.1	FIELD
pH-LAB (SU)	8.21	SM20-4500HB
POTASSIUM, TOTAL	1.2	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	132	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	1484	FIELD
SPEC. COND., LAB (umhos/cm)	1480	SW846 9050A
SULFATE	47	EPA 300
ALKALINITY	131	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	856	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.84	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	5.6	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	11/8/2024

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
01/20/2025
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 (DD° 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: 17.15 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: ___ ft — Elevation of Water Level: 492.75 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: 1.4

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 11/19/2024 — Sample Collection Time: 9:20

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3388525001 — Final Lab Analysis CompletionDate: 12/12/2024

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

Comments:

I.D. No	101389
Monitoring Point No.	FFMP02SW
Sample Date	11/19/2024

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	20	SM20-2320B
CALCIUM, TOTAL	31.1	SW846 6010C
CALCIUM, DISSOLVED		SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	160	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	750	SW846 6010C
IRON, DISSOLVED (ug/l)		SW846 6010C
MAGNESIUM, TOTAL	11.3	SW846 6010C
MAGNESIUM, DISSOLVED		SW846 6010C
MANGANESE, TOTAL (ug/l)	63	SW846 6010C
MANGANESE, DISSOLVED (ug/l)		SW846 6010C
NITRATE-NITROGEN	12.6	EPA 300
pH-FIELD (SU)	5.12	FIELD
pH-LAB (SU)	7.11	SM20-4500HB
POTASSIUM, TOTAL	3.8	SW846 6010C
POTASSIUM, DISSOLVED		SW846 6010C
SODIUM, TOTAL	91.1	SW846 6010C
SODIUM, DISSOLVED		SW846 6010C
SPEC. COND., FIELD (umhos/cm)	672	FIELD
SPEC. COND., LAB (umhos/cm)	726	SW846 9050A
SULFATE	47.8	EPA 300
ALKALINITY	20	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	406	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SW846 9060A
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	27	SM 2130B

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

I.D. No	101389
Monitoring Point No.	FFMP02SW
Sample Date	11/19/2024

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 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 |

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 4TH QTR 2024 GWMP-FORM 19Q
Workorder 3385884
Report ID 369024 on 11/22/2024

Certificate of Analysis

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

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
3385884001	FFMP015W	Ground Water	11/04/2024 11:29	11/04/2024 16:12	BGS	Analytical Laboratory Service
3385884002	FFMP03AW	Ground Water	11/04/2024 11:50	11/04/2024 16:12	BGS	Analytical Laboratory Service
3385884003	FFMP30RW	Ground Water	11/04/2024 14:44	11/04/2024 16:12	BGS	Analytical Laboratory Service
3385884004	FFMP04AW	Ground Water	11/04/2024 14:01	11/04/2024 16:12	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 QC sample type MS for method EPA 350.1 was outside the control limits for the analyte Ammonia-N, Low Level. The % Recovery was reported as 195 and the control limits were 80 to 120.
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 sample was originally run within hold time, but required further analysis that exceeded hold time.
5	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.
6	The method blank associated with this sample was positive for Iron at 0.20 mg/L. The Iron analyte concentration in the sample was non-detect. According to the method, the sample was commented and reported. MSY 11/14/24
7	The QC sample type MSD for method EPA 300.0 was outside the control limits for the analyte Chloride. The % Recovery was reported as 69.3 and the control limits were 80 to 120.
8	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Chloride. The % Recovery was reported as 64.3 and the control limits were 80 to 120.
9	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	FFMP015W	Collected	11/04/2024 11:29
Lab Sample ID	3385884001	Lab Receipt	11/04/2024 16:12

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	62.88	Feet		Field	#
Dissolved Oxygen	8.34	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	576.40	Feet		Field	#
Flow Rate	1.34	gal/min		Field	#
Ground Water Elevation	513.52	ft/MSL		Field	#
Oxidation-Reduction Potential	242	mV		Field	#
pH, Field (SM4500B)	5.62	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	400	umhos/cm	1	Field	#
Temperature	16.96	Deg. C		Field	#
Total Well Depth	149.90	Feet		Field	#
Volume in Water Column	127.92	Gallons		Field	#
Water Level After Purge	91.63	Feet		Field	#
Well Volumes Purged	1.15	Vol		Field	#
METALS					
Calcium, Total	19.4	mg/L	0.11	SW846 6010C	#
Magnesium, Total	24.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0090	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	20.2	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	27	mg/L	5	SM2320B-2011	#
Alkalinity, Total	27	mg/L	5	SM2320B-2011	#
Chloride	26.8	mg/L	2.0	EPA 300.0	#
Nitrate-N	24.2	mg/L	1.0	EPA 300.0	#
pH	7.48	pH_Units		S4500HB-11	#
Specific Conductance	402	umhos/cm	5	SW846 9050A	#
Sulfate	37.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	258	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.1	mg/L	0.50	SW846 9060A	#

Detected Results Summary

Client Sample ID	FFMP03AW	Collected	11/04/2024 11:50
Lab Sample ID	3385884002	Lab Receipt	11/04/2024 16:12

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	53.60	Feet		Field	#
Dissolved Oxygen	2.06	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	590.90	Feet		Field	#
Flow Rate	1.50	gal/min		Field	#
Ground Water Elevation	537.30	ft/MSL		Field	#
Oxidation-Reduction Potential	392	mV		Field	#
pH, Field (SM4500B)	5.00	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	359	umhos/cm	1	Field	#
Temperature	14.61	Deg. C		Field	#
Total Well Depth	148.40	Feet		Field	#
Volume in Water Column	139.36	Gallons		Field	#
Water Level After Purge	79.80	Feet		Field	#
Well Volumes Purged	1.24	Vol		Field	#
METALS					
Calcium, Total	21.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	16.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.35	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	15.3	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	17	mg/L	5	SM2320B-2011	#
Alkalinity, Total	17	mg/L	5	SM2320B-2011	#
Ammonia-N, Low Level	1.27	mg/L	0.10	SM 4500-NH3G	#
Chloride	43.8	mg/L	2.0	EPA 300.0	#
Nitrate-N	22.3	mg/L	1.0	EPA 300.0	#
pH	7.17	pH_Units		S4500HB-11	#
Specific Conductance	356	umhos/cm	5	SW846 9050A	#
Sulfate	2.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	244	mg/L	25	SM2540C-15	#
Turbidity	1.0	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP30RW	Collected	11/04/2024 14:44
Lab Sample ID	3385884003	Lab Receipt	11/04/2024 16:12

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	37.63	Feet		Field	#
Dissolved Oxygen	4.73	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	562.30	Feet		Field	#
Flow Rate	2.05	gal/min		Field	#
Ground Water Elevation	524.67	ft/MSL		Field	#
Oxidation-Reduction Potential	226	mV		Field	#
pH, Field (SM4500B)	5.82	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	1249	umhos/cm	1	Field	#
Temperature	15.45	Deg. C		Field	#
Total Well Depth	94.20	Feet		Field	#
Volume in Water Column	83.16	Gallons		Field	#
Water Level After Purge	79.32	Feet		Field	#
Well Volumes Purged	3.08	Vol		Field	#
METALS					
Calcium, Total	97.9	mg/L	0.11	SW846 6010C	#
Iron, Total	3.1	mg/L	0.12	SW846 6010C	#
Magnesium, Total	21.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	4.1	mg/L	0.0056	SW846 6010C	#
Potassium, Total	9.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	142	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	98	mg/L	5	SM2320B-2011	#
Alkalinity, Total	98	mg/L	5	SM2320B-2011	#
Ammonia-N, Low Level	0.15	mg/L	0.10	SM 4500-NH3G	#
Chloride	331	mg/L	5.0	EPA 300.0	#
Nitrate-N	3.3	mg/L	2.5	EPA 300.0	#
pH	8.07	pH_Units		S4500HB-11	#
Specific Conductance	1390	umhos/cm	5	SW846 9050A	#
Sulfate	68.4	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	810	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.93	mg/L	0.50	SW846 9060A	#
Turbidity	15	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP04AW	Collected	11/04/2024 14:01
Lab Sample ID	3385884004	Lab Receipt	11/04/2024 16:12

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	39.59	Feet		Field	#
Dissolved Oxygen	0.29	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	560.72	Feet		Field	#
Flow Rate	1.91	gal/min		Field	#
Ground Water Elevation	521.13	ft/MSL		Field	#
Oxidation-Reduction Potential	192	mV		Field	#
pH, Field (SM4500B)	6.88	pH_Units		Field	#
Sample Depth	146.00	Feet		Field	#
Specific Conductance, Field	1456	umhos/cm	1	Field	#
Temperature	14.70	Deg. C		Field	#
Total Well Depth	148.50	Feet		Field	#
Volume in Water Column	160.10	Gallons		Field	#
Water Level After Purge	85.70	Feet		Field	#
Well Volumes Purged	1.01	Vol		Field	#
METALS					
Calcium, Total	158	mg/L	0.11	SW846 6010C	#
Magnesium, Total	26.2	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.23	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	90.3	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	187	mg/L	5	SM2320B-2011	#
Alkalinity, Total	187	mg/L	5	SM2320B-2011	#
Chloride	325	mg/L	5.0	EPA 300.0	#
pH	8.22	pH_Units		S4500HB-11	#
Specific Conductance	1460	umhos/cm	5	SW846 9050A	#
Sulfate	58.1	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	966	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.72	mg/L	0.50	SW846 9060A	#
Turbidity	13	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	FFMP015W	Collected	11/04/2024 11:29
Lab Sample ID	3385884001	Lab Receipt	11/04/2024 16:12

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	62.88		Feet		Field	1	11/04/2024 11:29	BGS	D
Dissolved Oxygen	8.34		mg/L	0.01	Field	1	11/04/2024 11:29	BGS	D
Elev Top MW Casing above MSL	576.40		Feet		Field	1	11/04/2024 11:29	BGS	D
Flow Rate	1.34		gal/min		Field	1	11/04/2024 11:29	BGS	D
Ground Water Elevation	513.52		ft/MSL		Field	1	11/04/2024 11:29	BGS	D
Oxidation-Reduction Potential	242		mV		Field	1	11/04/2024 11:29	BGS	D
pH, Field (SM4500B)	5.62		pH_Units		Field	1	11/04/2024 11:29	BGS	D
Sample Depth	135.00		Feet		Field	1	11/04/2024 11:29	BGS	D
Specific Conductance, Field	400		umhos/cm	1	Field	1	11/04/2024 11:29	BGS	D
Temperature	16.96		Deg. C		Field	1	11/04/2024 11:29	BGS	D
Total Well Depth	149.90		Feet		Field	1	11/04/2024 11:29	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/04/2024 11:29	BGS	D
Volume in Water Column	127.92		Gallons		Field	1	11/04/2024 11:29	BGS	D
Water Level After Purge	91.63		Feet		Field	1	11/04/2024 11:29	BGS	D
Well Volumes Purged	1.15		Vol		Field	1	11/04/2024 11:29	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	19.4		mg/L	0.11	SW846 6010C	1	11/14/2024 13:50	MSY	J1
Iron, Total	ND	ND,6	mg/L	0.067	SW846 6010C	1	11/14/2024 13:50	MSY	J1
Magnesium, Total	24.1		mg/L	0.11	SW846 6010C	1	11/14/2024 13:50	MSY	J1
Manganese, Total	0.0090		mg/L	0.0056	SW846 6010C	1	11/14/2024 13:50	MSY	J1
Potassium, Total	2.1		mg/L	0.56	SW846 6010C	1	11/14/2024 13:50	MSY	J1
Sodium, Total	20.2		mg/L	0.56	SW846 6010C	1	11/14/2024 13:50	MSY	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	11/08/2024 01:01	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:01	PDK	H

Results

Client Sample ID	FFMP015W	Collected	11/04/2024 11:29
Lab Sample ID	3385884001	Lab Receipt	11/04/2024 16:12

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	11/08/2024 01:01	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	11/08/2024 01:01	
Dibromofluoromethane	1868-53-7	98.1%	78 – 116	11/08/2024 01:01	
Toluene-d8	2037-26-5	102%	76 – 127	11/08/2024 01:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	27		mg/L	5	SM2320B-2011	1	11/10/2024 03:44	KMV	B
Alkalinity, Total	27	1	mg/L	5	SM2320B-2011	1	11/10/2024 03:44	KMV	B
Ammonia-N, Low Level	ND	ND,2	mg/L	0.10	SM 4500-NH3G	1	11/07/2024 15:15	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/06/2024 11:35	KMS	A
Chloride	26.8		mg/L	2.0	EPA 300.0	2	11/05/2024 09:38	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/05/2024 09:38	J1W	B
Nitrate-N	24.2	E,3,4	mg/L	1.0	EPA 300.0	2	11/05/2024 09:38	J1W	B
pH	7.48	5	pH_Units		S4500HB-11	1	11/10/2024 03:44	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 14:46	AKH	G
Specific Conductance	402		umhos/cm	5	SW846 9050A	1	11/08/2024 17:20	KMV	B
Sulfate	37.6		mg/L	2.0	EPA 300.0	2	11/05/2024 09:38	J1W	B
Total Dissolved Solids	258		mg/L	25	SM2540C-15	1	11/05/2024 15:50	RAG	B
Total Organic Carbon (TOC)	1.1		mg/L	0.50	SW846 9060A	1	11/06/2024 01:06	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	11/05/2024 13:36	NPF	B

Results

Client Sample ID	FFMP03AW	Collected	11/04/2024 11:50
Lab Sample ID	3385884002	Lab Receipt	11/04/2024 16:12

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	53.60		Feet		Field	1	11/04/2024 11:50	BGS	D
Dissolved Oxygen	2.06		mg/L	0.01	Field	1	11/04/2024 11:50	BGS	D
Elev Top MW Casing above MSL	590.90		Feet		Field	1	11/04/2024 11:50	BGS	D
Flow Rate	1.50		gal/min		Field	1	11/04/2024 11:50	BGS	D
Ground Water Elevation	537.30		ft/MSL		Field	1	11/04/2024 11:50	BGS	D
Oxidation-Reduction Potential	392		mV		Field	1	11/04/2024 11:50	BGS	D
pH, Field (SM4500B)	5.00		pH_Units		Field	1	11/04/2024 11:50	BGS	D
Sample Depth	130.00		Feet		Field	1	11/04/2024 11:50	BGS	D
Specific Conductance, Field	359		umhos/cm	1	Field	1	11/04/2024 11:50	BGS	D
Temperature	14.61		Deg. C		Field	1	11/04/2024 11:50	BGS	D
Total Well Depth	148.40		Feet		Field	1	11/04/2024 11:50	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/04/2024 11:50	BGS	D
Volume in Water Column	139.36		Gallons		Field	1	11/04/2024 11:50	BGS	D
Water Level After Purge	79.80		Feet		Field	1	11/04/2024 11:50	BGS	D
Well Volumes Purged	1.24		Vol		Field	1	11/04/2024 11:50	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	21.2		mg/L	0.11	SW846 6010C	1	11/14/2024 13:51	MSY	J1
Iron, Total	ND	ND,6	mg/L	0.067	SW846 6010C	1	11/14/2024 13:51	MSY	J1
Magnesium, Total	16.3		mg/L	0.11	SW846 6010C	1	11/14/2024 13:51	MSY	J1
Manganese, Total	0.35		mg/L	0.0056	SW846 6010C	1	11/14/2024 13:51	MSY	J1
Potassium, Total	1.5		mg/L	0.56	SW846 6010C	1	11/14/2024 13:51	MSY	J1
Sodium, Total	15.3		mg/L	0.56	SW846 6010C	1	11/14/2024 13:51	MSY	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	11/08/2024 01:21	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:21	PDK	H

Results

Client Sample ID	FFMP03AW	Collected	11/04/2024 11:50
Lab Sample ID	3385884002	Lab Receipt	11/04/2024 16:12

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	11/08/2024 01:21	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	11/08/2024 01:21	
Dibromofluoromethane	1868-53-7	98.3%	78 – 116	11/08/2024 01:21	
Toluene-d8	2037-26-5	103%	76 – 127	11/08/2024 01:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	17		mg/L	5	SM2320B-2011	1	11/10/2024 03:57	KMV	B
Alkalinity, Total	17	1	mg/L	5	SM2320B-2011	1	11/10/2024 03:57	KMV	B
Ammonia-N, Low Level	1.27		mg/L	0.10	SM 4500-NH3G	1	11/07/2024 15:57	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/06/2024 11:35	KMS	A
Chloride	43.8		mg/L	2.0	EPA 300.0	2	11/05/2024 09:49	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/05/2024 09:49	J1W	B
Nitrate-N	22.3	E,3,4	mg/L	1.0	EPA 300.0	2	11/05/2024 09:49	J1W	B
pH	7.17	5	pH_Units		S4500HB-11	1	11/10/2024 03:57	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 14:50	AKH	G
Specific Conductance	356		umhos/cm	5	SW846 9050A	1	11/08/2024 17:20	KMV	B
Sulfate	2.3		mg/L	2.0	EPA 300.0	2	11/05/2024 09:49	J1W	B
Total Dissolved Solids	244		mg/L	25	SM2540C-15	1	11/05/2024 15:50	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	11/06/2024 01:06	PAG	E
Turbidity	1.0		NTU	0.30	SM2130B-2011	1	11/05/2024 13:36	NPF	B

Results

Client Sample ID	FFMP30RW	Collected	11/04/2024 14:44
Lab Sample ID	3385884003	Lab Receipt	11/04/2024 16:12

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	37.63		Feet		Field	1	11/04/2024 14:44	BGS	D
Dissolved Oxygen	4.73		mg/L	0.01	Field	1	11/04/2024 14:44	BGS	D
Elev Top MW Casing above MSL	562.30		Feet		Field	1	11/04/2024 14:44	BGS	D
Flow Rate	2.05		gal/min		Field	1	11/04/2024 14:44	BGS	D
Ground Water Elevation	524.67		ft/MSL		Field	1	11/04/2024 14:44	BGS	D
Oxidation-Reduction Potential	226		mV		Field	1	11/04/2024 14:44	BGS	D
pH, Field (SM4500B)	5.82		pH_Units		Field	1	11/04/2024 14:44	BGS	D
Sample Depth	85.00		Feet		Field	1	11/04/2024 14:44	BGS	D
Specific Conductance, Field	1249		umhos/cm	1	Field	1	11/04/2024 14:44	BGS	D
Temperature	15.45		Deg. C		Field	1	11/04/2024 14:44	BGS	D
Total Well Depth	94.20		Feet		Field	1	11/04/2024 14:44	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/04/2024 14:44	BGS	D
Volume in Water Column	83.16		Gallons		Field	1	11/04/2024 14:44	BGS	D
Water Level After Purge	79.32		Feet		Field	1	11/04/2024 14:44	BGS	D
Well Volumes Purged	3.08		Vol		Field	1	11/04/2024 14:44	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	97.9		mg/L	0.11	SW846 6010C	1	11/14/2024 13:52	MSY	J1
Iron, Total	3.1		mg/L	0.12	SW846 6010C	1	11/21/2024 11:56	MSY	J2
Magnesium, Total	21.5		mg/L	0.11	SW846 6010C	1	11/14/2024 13:52	MSY	J1
Manganese, Total	4.1		mg/L	0.0056	SW846 6010C	1	11/14/2024 13:52	MSY	J1
Potassium, Total	9.1		mg/L	0.56	SW846 6010C	1	11/14/2024 13:52	MSY	J1
Sodium, Total	142		mg/L	0.56	SW846 6010C	1	11/14/2024 13:52	MSY	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	11/08/2024 01:42	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/08/2024 01:42	PDK	H

Results

Client Sample ID	FFMP30RW	Collected	11/04/2024 14:44
Lab Sample ID	3385884003	Lab Receipt	11/04/2024 16:12

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	99.4%	62 – 133	11/08/2024 01:42	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	11/08/2024 01:42	
Dibromofluoromethane	1868-53-7	98.3%	78 – 116	11/08/2024 01:42	
Toluene-d8	2037-26-5	103%	76 – 127	11/08/2024 01:42	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	98		mg/L	5	SM2320B-2011	1	11/10/2024 04:08	KMV	B
Alkalinity, Total	98	1	mg/L	5	SM2320B-2011	1	11/10/2024 04:08	KMV	B
Ammonia-N, Low Level	0.15		mg/L	0.10	SM 4500-NH3G	1	11/07/2024 13:21	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/06/2024 11:35	KMS	A
Chloride	331		mg/L	5.0	EPA 300.0	5	11/05/2024 10:01	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	11/05/2024 10:01	J1W	B
Nitrate-N	3.3		mg/L	2.5	EPA 300.0	5	11/05/2024 10:01	J1W	B
pH	8.07	5	pH_Units		S4500HB-11	1	11/10/2024 04:08	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 14:53	AKH	G
Specific Conductance	1390		umhos/cm	5	SW846 9050A	1	11/08/2024 17:20	KMV	B
Sulfate	68.4		mg/L	5.0	EPA 300.0	5	11/05/2024 10:01	J1W	B
Total Dissolved Solids	810		mg/L	25	SM2540C-15	1	11/05/2024 15:50	RAG	B
Total Organic Carbon (TOC)	0.93		mg/L	0.50	SW846 9060A	1	11/06/2024 01:06	PAG	E
Turbidity	15		NTU	0.30	SM2130B-2011	1	11/05/2024 13:36	NPF	B

Results

Client Sample ID	FFMP04AW	Collected	11/04/2024 14:01
Lab Sample ID	3385884004	Lab Receipt	11/04/2024 16:12

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	39.59		Feet		Field	1	11/04/2024 14:00	BGS	D
Dissolved Oxygen	0.29		mg/L	0.01	Field	1	11/04/2024 14:00	BGS	D
Elev Top MW Casing above MSL	560.72		Feet		Field	1	11/04/2024 14:00	BGS	D
Flow Rate	1.91		gal/min		Field	1	11/04/2024 14:00	BGS	D
Ground Water Elevation	521.13		ft/MSL		Field	1	11/04/2024 14:00	BGS	D
Oxidation-Reduction Potential	192		mV		Field	1	11/04/2024 14:00	BGS	D
pH, Field (SM4500B)	6.88		pH_Units		Field	1	11/04/2024 14:00	BGS	D
Sample Depth	146.00		Feet		Field	1	11/04/2024 14:00	BGS	D
Specific Conductance, Field	1456		umhos/cm	1	Field	1	11/04/2024 14:00	BGS	D
Temperature	14.70		Deg. C		Field	1	11/04/2024 14:00	BGS	D
Total Well Depth	148.50		Feet		Field	1	11/04/2024 14:00	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/04/2024 14:00	BGS	D
Volume in Water Column	160.10		Gallons		Field	1	11/04/2024 14:00	BGS	D
Water Level After Purge	85.70		Feet		Field	1	11/04/2024 14:00	BGS	D
Well Volumes Purged	1.01		Vol		Field	1	11/04/2024 14:00	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	158	9	mg/L	0.11	SW846 6010C	1	11/14/2024 13:53	MSY	J1
Iron, Total	ND	ND,6	mg/L	0.067	SW846 6010C	1	11/14/2024 13:53	MSY	J1
Magnesium, Total	26.2	9	mg/L	0.11	SW846 6010C	1	11/14/2024 13:53	MSY	J1
Manganese, Total	0.23		mg/L	0.0056	SW846 6010C	1	11/14/2024 13:53	MSY	J1
Potassium, Total	2.6		mg/L	0.56	SW846 6010C	1	11/14/2024 13:53	MSY	J1
Sodium, Total	90.3		mg/L	0.56	SW846 6010C	1	11/14/2024 13:53	MSY	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	11/12/2024 00:39	PDK	I
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/12/2024 00:39	PDK	I

Results

Client Sample ID	FFMP04AW	Collected	11/04/2024 14:01
Lab Sample ID	3385884004	Lab Receipt	11/04/2024 16:12

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	11/12/2024 00:39	
4-Bromofluorobenzene	460-00-4	99.8%	79 – 114	11/12/2024 00:39	
Dibromofluoromethane	1868-53-7	99.3%	78 – 116	11/12/2024 00:39	
Toluene-d8	2037-26-5	101%	76 – 127	11/12/2024 00:39	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	187		mg/L	5	SM2320B-2011	1	11/10/2024 04:18	KMV	B
Alkalinity, Total	187	1	mg/L	5	SM2320B-2011	1	11/10/2024 04:18	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/07/2024 16:07	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/06/2024 11:35	KMS	A
Chloride	325	7,8	mg/L	5.0	EPA 300.0	5	11/05/2024 10:12	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	11/05/2024 10:12	J1W	B
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	11/05/2024 10:12	J1W	B
pH	8.22	5	pH_Units		S4500HB-11	1	11/10/2024 04:18	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 14:56	AKH	G
Specific Conductance	1460		umhos/cm	5	SW846 9050A	1	11/08/2024 17:20	KMV	B
Sulfate	58.1		mg/L	5.0	EPA 300.0	5	11/05/2024 10:12	J1W	B
Total Dissolved Solids	966		mg/L	25	SM2540C-15	1	11/05/2024 15:50	RAG	B
Total Organic Carbon (TOC)	0.72		mg/L	0.50	SW846 9060A	1	11/06/2024 01:06	PAG	E
Turbidity	13		NTU	0.30	SM2130B-2011	1	11/05/2024 13:36	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3385884001	FFMP015W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3385884002	FFMP03AW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3385884003	FFMP30RW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3385884004	FFMP04AW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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
3385884001	FFMP015W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329159	11/13/2024 13:55	ANN	SW846 6010C	1332217
		N/A	N/A	N/A		SW846 8260B	1329727
		N/A	N/A	N/A		EPA 300.0	1327331
		N/A	N/A	N/A		EPA 410.4	1327549
		N/A	N/A	N/A		S4500HB-11	1330641
		N/A	N/A	N/A		SM 4500-NH3G	1329149
		N/A	N/A	N/A		SM2130B-2011	1327339
		N/A	N/A	N/A		SM2320B-2011	1330641
		N/A	N/A	N/A		SM2540C-15	1327363
		N/A	N/A	N/A		SW846 9050A	1330233
		N/A	N/A	N/A		SW846 9060A	1327412
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3385884002	FFMP03AW	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329159	11/13/2024 13:55	ANN	SW846 6010C	1332217
		N/A	N/A	N/A		SW846 8260B	1329727
		N/A	N/A	N/A		EPA 300.0	1327331
		N/A	N/A	N/A		EPA 410.4	1327549
		N/A	N/A	N/A		S4500HB-11	1330641
		N/A	N/A	N/A		SM 4500-NH3G	1329149
		N/A	N/A	N/A		SM2130B-2011	1327339
		N/A	N/A	N/A		SM2320B-2011	1330641
		N/A	N/A	N/A		SM2540C-15	1327363
		N/A	N/A	N/A		SW846 9050A	1330233
		N/A	N/A	N/A		SW846 9060A	1327412
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3385884003	FFMP30RW	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329159	11/13/2024 13:55	ANN	SW846 6010C	1332217
		SW846 3015A	1335582	11/20/2024 08:38	ANN	SW846 6010C	1336527
		N/A	N/A	N/A		SW846 8260B	1329727
		N/A	N/A	N/A		EPA 300.0	1327331
		N/A	N/A	N/A		EPA 410.4	1327549
		N/A	N/A	N/A		S4500HB-11	1330641
		N/A	N/A	N/A		SM 4500-NH3G	1329142
		N/A	N/A	N/A		SM2130B-2011	1327339
		N/A	N/A	N/A		SM2320B-2011	1330641
		N/A	N/A	N/A		SM2540C-15	1327363
		N/A	N/A	N/A		SW846 9050A	1330233
		N/A	N/A	N/A		SW846 9060A	1327412
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3385884004	FFMP04AW	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329159	11/13/2024 13:55	ANN	SW846 6010C	1332217
		N/A	N/A	N/A		SW846 8260B	1331441
		N/A	N/A	N/A		EPA 300.0	1327331
		N/A	N/A	N/A		EPA 410.4	1327549
		N/A	N/A	N/A		S4500HB-11	1330641
		N/A	N/A	N/A		SM 4500-NH3G	1329149
		N/A	N/A	N/A		SM2130B-2011	1327339
		N/A	N/A	N/A		SM2320B-2011	1330641
		N/A	N/A	N/A		SM2540C-15	1327363
		N/A	N/A	N/A		SW846 9050A	1330233
		N/A	N/A	N/A		SW846 9060A	1327412
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 3385884 Logged By: D1G PM: SJB

ALS Qu

of

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO 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

Purchase Order #:

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

Date Required: **Approved?**

Email? [x] dbrown@lcswma.org

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	500ml	250ml			250ml	125ml	
	Preservative	HCL	H2SO4	HCL	UNP	UNP			H2SO4	HNO3	
	Orthophosphate Filtered?			Yes	No	Hexavalent Chromium Filtered?				Yes	No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	VOC Form 19Q	pH, Cl, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, Bicarbonate	FM	Sample Debth for AUX Data	NH3-N, COD	Metals Fe,Mn,Na,Ca,K,Mg	
							Enter Number of Containers Per Sample or Field Results Below.									
1	FFMP015W	11/4/24	1129		G	GW	2	1	2	1	1	x	x	1	2	
2	FFMP03AW	11/4/24	1150		G	GW	2	1	2	1	1	x	x	1	2	
3	FFMP30RW	11/4/24	1444		G	GW	2	1	2	1	1	x	x	1	2	
4	FFMP04AW	11/4/24	1401		G	GW	2	1	2	1	1	x	x	1	2	
5																
6																
7																
8																
9																
10																

Temp Taken By: DAG Therm ID: 569 WO Temp (°C) 3

Receipt Info completed by: DAG WV Containers 0-6°C Y N NA

Cooler Custody Seals Intact	Y	N	NA
Sample Custody Seal Intact	Y	N	NA
Received on Ice	Y	N	NA
Coolers & Samples Intact	Y	N	
Correct Containers Provided	Y	N	
Sample Label/COC Agree	Y	N	
Adequate Sample Volumes	Y	N	
VOA only: Trip Blank	Y	N	NA

Deviations? NO YES
If YES, list below:

NJ ≤ 4 days? Y N
Courier/Tracking #

Client contact:
Date/Tech:

Sample(s) for Radiation testing? Y N
Reportable SDWA Sample(s)? Y N
SDWA State of Origin?
PWSID #

Rad Screen (uCi)
New Source? Y N
New Source Contact:

PWS Contact: PWS Phone #:

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO

Internal Use: If less than 48 hours - notify lab upon receipt

Circle Sample Collector: ALS Tech / Client
Name: BG Wade **ID:**

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
11-4-24	1617	1	BG Wade ALS	2	ALS
		3		4	
		5		6	
		7		8	
		9		10	

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW [ ] ____

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [x] PA [ ] WV [ ] FL [ ] other

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 07.06.2023

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

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 4TH QTR 2024 GWMP-FORM 19Q
Workorder 3386038
Report ID 368283 on 11/20/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Nov 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.

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
3386038001	FFMP033W	Ground Water	11/05/2024 12:16	11/05/2024 16:15	BGS	Analytical Laboratory Service
3386038002	FFMP034W	Ground Water	11/05/2024 12:32	11/05/2024 16:15	BGS	Analytical Laboratory Service
3386038003	FFMP26RW	Ground Water	11/05/2024 14:22	11/05/2024 16:15	BGS	Analytical Laboratory Service
3386038004	FFMP005W	Ground Water	11/05/2024 14:28	11/05/2024 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 pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
3	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Chloride. The % Recovery was reported as 74.3 and the control limits were 80 to 120.

Detected Results Summary

Client Sample ID	FFMP033W	Collected	11/05/2024 12:16
Lab Sample ID	3386038001	Lab Receipt	11/05/2024 16:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	20.41	Feet		Field	#
Dissolved Oxygen	1.08	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	516.52	Feet		Field	#
Flow Rate	1.70	gal/min		Field	#
Ground Water Elevation	496.11	ft/MSL		Field	#
Oxidation-Reduction Potential	145	mV		Field	#
pH, Field (SM4500B)	5.46	pH_Units		Field	#
Sample Depth	79.00	Feet		Field	#
Specific Conductance, Field	464	umhos/cm	1	Field	#
Temperature	15.54	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Turbidity, Field	5	NTU	1	Field	#
Volume in Water Column	117.00	Gallons		Field	#
Water Level After Purge	34.51	Feet		Field	#
Well Volumes Purged	1.74	Vol		Field	#
METALS					
Calcium, Total	39.1	mg/L	0.11	SW846 6010C	#
Iron, Total	4.8	mg/L	0.067	SW846 6010C	#
Magnesium, Total	13.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.23	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	19.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	32	mg/L	5	SM2320B-2011	#
Alkalinity, Total	32	mg/L	5	SM2320B-2011	#
Chloride	87.8	mg/L	2.0	EPA 300.0	#
Nitrate-N	10.8	mg/L	1.0	EPA 300.0	#
pH	7.62	pH_Units		S4500HB-11	#
Specific Conductance	460	umhos/cm	5	SW846 9050A	#
Sulfate	13.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	246	mg/L	25	SM2540C-15	#
Turbidity	15	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP034W	Collected	11/05/2024 12:32
Lab Sample ID	3386038002	Lab Receipt	11/05/2024 16:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	11.18	Feet		Field	#
Dissolved Oxygen	1.45	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	472.88	Feet		Field	#
Flow Rate	1.74	gal/min		Field	#
Ground Water Elevation	461.70	ft/MSL		Field	#
Oxidation-Reduction Potential	162	mV		Field	#
pH, Field (SM4500B)	5.64	pH_Units		Field	#
Sample Depth	25.85	Feet		Field	#
Specific Conductance, Field	735	umhos/cm	1	Field	#
Temperature	15.06	Deg. C		Field	#
Total Well Depth	121.00	Feet		Field	#
Turbidity, Field	4	NTU	1	Field	#
Volume in Water Column	161.44	Gallons		Field	#
Water Level After Purge	21.05	Feet		Field	#
Well Volumes Purged	1.67	Vol		Field	#
METALS					
Calcium, Total	57.7	mg/L	0.11	SW846 6010C	#
Iron, Total	0.62	mg/L	0.067	SW846 6010C	#
Magnesium, Total	20.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.068	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	44.1	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	37	mg/L	5	SM2320B-2011	#
Alkalinity, Total	37	mg/L	5	SM2320B-2011	#
Chloride	158	mg/L	2.0	EPA 300.0	#
Nitrate-N	11.3	mg/L	1.0	EPA 300.0	#
pH	7.73	pH_Units		S4500HB-11	#
Specific Conductance	730	umhos/cm	5	SW846 9050A	#
Sulfate	32.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	448	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.69	mg/L	0.50	SW846 9060A	#
Turbidity	12	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP26RW	Collected	11/05/2024 14:22
Lab Sample ID	3386038003	Lab Receipt	11/05/2024 16:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	86.35	Feet		Field	#
Dissolved Oxygen	0.01	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	547.40	Feet		Field	#
Flow Rate	1.25	gal/min		Field	#
Ground Water Elevation	461.05	ft/MSL		Field	#
Oxidation-Reduction Potential	255	mV		Field	#
pH, Field (SM4500B)	5.21	pH_Units		Field	#
Sample Depth	105.00	Feet		Field	#
Specific Conductance, Field	788	umhos/cm	1	Field	#
Temperature	15.18	Deg. C		Field	#
Total Well Depth	118.30	Feet		Field	#
Volume in Water Column	46.97	Gallons		Field	#
Water Level After Purge	98.03	Feet		Field	#
Well Volumes Purged	1.06	Vol		Field	#
METALS					
Calcium, Total	69.4	mg/L	0.11	SW846 6010C	#
Magnesium, Total	17.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.67	mg/L	0.0056	SW846 6010C	#
Potassium, Total	6.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	53.4	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	148	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.2	mg/L	1.0	EPA 300.0	#
pH	7.94	pH_Units		S4500HB-11	#
Specific Conductance	778	umhos/cm	5	SW846 9050A	#
Sulfate	93.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	436	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.6	mg/L	0.50	SW846 9060A	#
Turbidity	0.95	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP005W	Collected	11/05/2024 14:28
Lab Sample ID	3386038004	Lab Receipt	11/05/2024 16:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	76.42	Feet		Field	#
Elev Top MW Casing above MSL	537.40	Feet		Field	#
Flow Rate	2.07	gal/min		Field	#
Ground Water Elevation	460.98	ft/MSL		Field	#
Oxidation-Reduction Potential	243	mV		Field	#
pH, Field (SM4500B)	5.31	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	788	umhos/cm	1	Field	#
Temperature	14.00	Deg. C		Field	#
Total Well Depth	149.70	Feet		Field	#
Volume in Water Column	107.72	Gallons		Field	#
Water Level After Purge	102.29	Feet		Field	#
Well Volumes Purged	1.25	Vol		Field	#
METALS					
Calcium, Total	76.4	mg/L	0.11	SW846 6010C	#
Magnesium, Total	17.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.16	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.9	mg/L	0.56	SW846 6010C	#
Sodium, Total	45.8	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	60	mg/L	5	SM2320B-2011	#
Alkalinity, Total	60	mg/L	5	SM2320B-2011	#
Chloride	162	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.6	mg/L	1.0	EPA 300.0	#
pH	7.94	pH_Units		S4500HB-11	#
Specific Conductance	785	umhos/cm	5	SW846 9050A	#
Sulfate	73.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	460	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.3	mg/L	0.50	SW846 9060A	#

Results

Client Sample ID	FFMP033W	Collected	11/05/2024 12:16
Lab Sample ID	3386038001	Lab Receipt	11/05/2024 16:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	20.41		Feet		Field	1	11/05/2024 12:15	BGS	D
Dissolved Oxygen	1.08		mg/L	0.01	Field	1	11/05/2024 12:15	BGS	D
Elev Top MW Casing above MSL	516.52		Feet		Field	1	11/05/2024 12:15	BGS	D
Flow Rate	1.70		gal/min		Field	1	11/05/2024 12:15	BGS	D
Ground Water Elevation	496.11		ft/MSL		Field	1	11/05/2024 12:15	BGS	D
Oxidation-Reduction Potential	145		mV		Field	1	11/05/2024 12:15	BGS	D
pH, Field (SM4500B)	5.46		pH_Units		Field	1	11/05/2024 12:15	BGS	D
Sample Depth	79.00		Feet		Field	1	11/05/2024 12:15	BGS	D
Specific Conductance, Field	464		umhos/cm	1	Field	1	11/05/2024 12:15	BGS	D
Temperature	15.54		Deg. C		Field	1	11/05/2024 12:15	BGS	D
Total Well Depth	100.00		Feet		Field	1	11/05/2024 12:15	BGS	D
Turbidity, Field	5		NTU	1	Field	1	11/05/2024 12:15	BGS	D
Volume in Water Column	117.00		Gallons		Field	1	11/05/2024 12:15	BGS	D
Water Level After Purge	34.51		Feet		Field	1	11/05/2024 12:15	BGS	D
Well Volumes Purged	1.74		Vol		Field	1	11/05/2024 12:15	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	39.1		mg/L	0.11	SW846 6010C	1	11/13/2024 10:32	MSY	J1
Iron, Total	4.8		mg/L	0.067	SW846 6010C	1	11/13/2024 10:32	MSY	J1
Magnesium, Total	13.6		mg/L	0.11	SW846 6010C	1	11/13/2024 10:32	MSY	J1
Manganese, Total	0.23		mg/L	0.0056	SW846 6010C	1	11/13/2024 10:32	MSY	J1
Potassium, Total	1.7		mg/L	0.56	SW846 6010C	1	11/13/2024 10:32	MSY	J1
Sodium, Total	19.9		mg/L	0.56	SW846 6010C	1	11/13/2024 10:32	MSY	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	11/09/2024 01:54	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 01:54	PDK	H

Results

Client Sample ID	FFMP033W	Collected	11/05/2024 12:16
Lab Sample ID	3386038001	Lab Receipt	11/05/2024 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	115%	62 – 133	11/09/2024 01:54	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	11/09/2024 01:54	
Dibromofluoromethane	1868-53-7	99.8%	78 – 116	11/09/2024 01:54	
Toluene-d8	2037-26-5	102%	76 – 127	11/09/2024 01:54	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	32		mg/L	5	SM2320B-2011	1	11/11/2024 17:54	KMV	B
Alkalinity, Total	32	1	mg/L	5	SM2320B-2011	1	11/11/2024 17:54	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/07/2024 13:33	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/07/2024 12:00	KMS	A
Chloride	87.8		mg/L	2.0	EPA 300.0	2	11/06/2024 12:45	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/06/2024 12:45	J1W	B
Nitrate-N	10.8		mg/L	1.0	EPA 300.0	2	11/06/2024 12:45	J1W	B
pH	7.62	2	pH_Units		S4500HB-11	1	11/10/2024 09:38	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 15:03	AKH	G
Specific Conductance	460		umhos/cm	5	SW846 9050A	1	11/13/2024 16:49	KMV	B
Sulfate	13.4		mg/L	2.0	EPA 300.0	2	11/06/2024 12:45	J1W	B
Total Dissolved Solids	246		mg/L	25	SM2540C-15	1	11/06/2024 17:20	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	11/06/2024 18:36	PAG	E
Turbidity	15		NTU	0.30	SM2130B-2011	1	11/06/2024 14:33	NPF	B

Results

Client Sample ID	FFMP034W	Collected	11/05/2024 12:32
Lab Sample ID	3386038002	Lab Receipt	11/05/2024 16:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	11.18		Feet		Field	1	11/05/2024 12:32	BGS	D
Dissolved Oxygen	1.45		mg/L	0.01	Field	1	11/05/2024 12:32	BGS	D
Elev Top MW Casing above MSL	472.88		Feet		Field	1	11/05/2024 12:32	BGS	D
Flow Rate	1.74		gal/min		Field	1	11/05/2024 12:32	BGS	D
Ground Water Elevation	461.70		ft/MSL		Field	1	11/05/2024 12:32	BGS	D
Oxidation-Reduction Potential	162		mV		Field	1	11/05/2024 12:32	BGS	D
pH, Field (SM4500B)	5.64		pH_Units		Field	1	11/05/2024 12:32	BGS	D
Sample Depth	25.85		Feet		Field	1	11/05/2024 12:32	BGS	D
Specific Conductance, Field	735		umhos/cm	1	Field	1	11/05/2024 12:32	BGS	D
Temperature	15.06		Deg. C		Field	1	11/05/2024 12:32	BGS	D
Total Well Depth	121.00		Feet		Field	1	11/05/2024 12:32	BGS	D
Turbidity, Field	4		NTU	1	Field	1	11/05/2024 12:32	BGS	D
Volume in Water Column	161.44		Gallons		Field	1	11/05/2024 12:32	BGS	D
Water Level After Purge	21.05		Feet		Field	1	11/05/2024 12:32	BGS	D
Well Volumes Purged	1.67		Vol		Field	1	11/05/2024 12:32	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	57.7		mg/L	0.11	SW846 6010C	1	11/13/2024 10:33	MSY	J1
Iron, Total	0.62		mg/L	0.067	SW846 6010C	1	11/13/2024 10:33	MSY	J1
Magnesium, Total	20.7		mg/L	0.11	SW846 6010C	1	11/13/2024 10:33	MSY	J1
Manganese, Total	0.068		mg/L	0.0056	SW846 6010C	1	11/13/2024 10:33	MSY	J1
Potassium, Total	2.4		mg/L	0.56	SW846 6010C	1	11/13/2024 10:33	MSY	J1
Sodium, Total	44.1		mg/L	0.56	SW846 6010C	1	11/13/2024 10:33	MSY	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	11/09/2024 02:14	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:14	PDK	H

Results

Client Sample ID	FFMP034W	Collected	11/05/2024 12:32
Lab Sample ID	3386038002	Lab Receipt	11/05/2024 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	117%	62 – 133	11/09/2024 02:14	
4-Bromofluorobenzene	460-00-4	99.5%	79 – 114	11/09/2024 02:14	
Dibromofluoromethane	1868-53-7	102%	78 – 116	11/09/2024 02:14	
Toluene-d8	2037-26-5	101%	76 – 127	11/09/2024 02:14	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	37		mg/L	5	SM2320B-2011	1	11/11/2024 18:05	KMV	B
Alkalinity, Total	37	1	mg/L	5	SM2320B-2011	1	11/11/2024 18:05	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/07/2024 13:36	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/07/2024 12:00	KMS	A
Chloride	158	3	mg/L	2.0	EPA 300.0	2	11/06/2024 12:58	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/06/2024 12:58	J1W	B
Nitrate-N	11.3		mg/L	1.0	EPA 300.0	2	11/06/2024 12:58	J1W	B
pH	7.73	2	pH_Units		S4500HB-11	1	11/10/2024 09:50	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 15:00	AKH	G
Specific Conductance	730		umhos/cm	5	SW846 9050A	1	11/13/2024 16:49	KMV	B
Sulfate	32.7		mg/L	2.0	EPA 300.0	2	11/06/2024 12:58	J1W	B
Total Dissolved Solids	448		mg/L	25	SM2540C-15	1	11/06/2024 17:20	RAG	B
Total Organic Carbon (TOC)	0.69		mg/L	0.50	SW846 9060A	1	11/06/2024 18:36	PAG	E
Turbidity	12		NTU	0.30	SM2130B-2011	1	11/06/2024 14:33	NPF	B

Results

Client Sample ID	FFMP26RW	Collected	11/05/2024 14:22
Lab Sample ID	3386038003	Lab Receipt	11/05/2024 16:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	86.35		Feet		Field	1	11/05/2024 14:22	BGS	D
Dissolved Oxygen	0.01		mg/L	0.01	Field	1	11/05/2024 14:22	BGS	D
Elev Top MW Casing above MSL	547.40		Feet		Field	1	11/05/2024 14:22	BGS	D
Flow Rate	1.25		gal/min		Field	1	11/05/2024 14:22	BGS	D
Ground Water Elevation	461.05		ft/MSL		Field	1	11/05/2024 14:22	BGS	D
Oxidation-Reduction Potential	255		mV		Field	1	11/05/2024 14:22	BGS	D
pH, Field (SM4500B)	5.21		pH_Units		Field	1	11/05/2024 14:22	BGS	D
Sample Depth	105.00		Feet		Field	1	11/05/2024 14:22	BGS	D
Specific Conductance, Field	788		umhos/cm	1	Field	1	11/05/2024 14:22	BGS	D
Temperature	15.18		Deg. C		Field	1	11/05/2024 14:22	BGS	D
Total Well Depth	118.30		Feet		Field	1	11/05/2024 14:22	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/05/2024 14:22	BGS	D
Volume in Water Column	46.97		Gallons		Field	1	11/05/2024 14:22	BGS	D
Water Level After Purge	98.03		Feet		Field	1	11/05/2024 14:22	BGS	D
Well Volumes Purged	1.06		Vol		Field	1	11/05/2024 14:22	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	69.4		mg/L	0.11	SW846 6010C	1	11/13/2024 10:34	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	11/13/2024 10:34	MSY	J1
Magnesium, Total	17.3		mg/L	0.11	SW846 6010C	1	11/13/2024 10:34	MSY	J1
Manganese, Total	0.67		mg/L	0.0056	SW846 6010C	1	11/13/2024 10:34	MSY	J1
Potassium, Total	6.2		mg/L	0.56	SW846 6010C	1	11/13/2024 10:34	MSY	J1
Sodium, Total	53.4		mg/L	0.56	SW846 6010C	1	11/13/2024 10:34	MSY	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	11/09/2024 02:54	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 02:54	PDK	H

Results

Client Sample ID	FFMP26RW	Collected	11/05/2024 14:22
Lab Sample ID	3386038003	Lab Receipt	11/05/2024 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	115%	62 – 133	11/09/2024 02:54	
4-Bromofluorobenzene	460-00-4	97.6%	79 – 114	11/09/2024 02:54	
Dibromofluoromethane	1868-53-7	100%	78 – 116	11/09/2024 02:54	
Toluene-d8	2037-26-5	102%	76 – 127	11/09/2024 02:54	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	67		mg/L	5	SM2320B-2011	1	11/11/2024 18:16	KMV	B
Alkalinity, Total	67	1	mg/L	5	SM2320B-2011	1	11/11/2024 18:16	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/11/2024 11:59	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/07/2024 12:00	KMS	A
Chloride	148		mg/L	2.0	EPA 300.0	2	11/06/2024 13:49	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/06/2024 13:49	J1W	B
Nitrate-N	1.2		mg/L	1.0	EPA 300.0	2	11/06/2024 13:49	J1W	B
pH	7.94	2	pH_Units		S4500HB-11	1	11/10/2024 10:00	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 15:26	AKH	G
Specific Conductance	778		umhos/cm	5	SW846 9050A	1	11/13/2024 16:49	KMV	B
Sulfate	93.5		mg/L	2.0	EPA 300.0	2	11/06/2024 13:49	J1W	B
Total Dissolved Solids	436		mg/L	25	SM2540C-15	1	11/06/2024 17:20	RAG	B
Total Organic Carbon (TOC)	1.6		mg/L	0.50	SW846 9060A	1	11/06/2024 18:36	PAG	E
Turbidity	0.95		NTU	0.30	SM2130B-2011	1	11/06/2024 14:33	NPF	B

Results

Client Sample ID	FFMP005W	Collected	11/05/2024 14:28
Lab Sample ID	3386038004	Lab Receipt	11/05/2024 16:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	76.42		Feet		Field	1	11/05/2024 14:33	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	11/05/2024 14:33	BGS	D
Elev Top MW Casing above MSL	537.40		Feet		Field	1	11/05/2024 14:33	BGS	D
Flow Rate	2.07		gal/min		Field	1	11/05/2024 14:33	BGS	D
Ground Water Elevation	460.98		ft/MSL		Field	1	11/05/2024 14:33	BGS	D
Oxidation-Reduction Potential	243		mV		Field	1	11/05/2024 14:33	BGS	D
pH, Field (SM4500B)	5.31		pH_Units		Field	1	11/05/2024 14:33	BGS	D
Sample Depth	135.00		Feet		Field	1	11/05/2024 14:33	BGS	D
Specific Conductance, Field	788		umhos/cm	1	Field	1	11/05/2024 14:33	BGS	D
Temperature	14.00		Deg. C		Field	1	11/05/2024 14:33	BGS	D
Total Well Depth	149.70		Feet		Field	1	11/05/2024 14:33	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/05/2024 14:33	BGS	D
Volume in Water Column	107.72		Gallons		Field	1	11/05/2024 14:33	BGS	D
Water Level After Purge	102.29		Feet		Field	1	11/05/2024 14:33	BGS	D
Well Volumes Purged	1.25		Vol		Field	1	11/05/2024 14:33	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	76.4		mg/L	0.11	SW846 6010C	1	11/13/2024 10:39	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	11/13/2024 10:39	MSY	J1
Magnesium, Total	17.6		mg/L	0.11	SW846 6010C	1	11/13/2024 10:39	MSY	J1
Manganese, Total	0.16		mg/L	0.0056	SW846 6010C	1	11/13/2024 10:39	MSY	J1
Potassium, Total	2.9		mg/L	0.56	SW846 6010C	1	11/13/2024 10:39	MSY	J1
Sodium, Total	45.8		mg/L	0.56	SW846 6010C	1	11/13/2024 10:39	MSY	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	11/09/2024 03:14	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/09/2024 03:14	PDK	H

Results

Client Sample ID	FFMP005W	Collected	11/05/2024 14:28
Lab Sample ID	3386038004	Lab Receipt	11/05/2024 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	113%	62 – 133	11/09/2024 03:14	
4-Bromofluorobenzene	460-00-4	97.6%	79 – 114	11/09/2024 03:14	
Dibromofluoromethane	1868-53-7	97.7%	78 – 116	11/09/2024 03:14	
Toluene-d8	2037-26-5	100%	76 – 127	11/09/2024 03:14	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	60		mg/L	5	SM2320B-2011	1	11/11/2024 18:27	KMV	B
Alkalinity, Total	60	1	mg/L	5	SM2320B-2011	1	11/11/2024 18:27	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/07/2024 11:52	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/07/2024 12:00	KMS	A
Chloride	162		mg/L	2.0	EPA 300.0	2	11/06/2024 14:02	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/06/2024 14:02	J1W	B
Nitrate-N	1.6		mg/L	1.0	EPA 300.0	2	11/06/2024 14:02	J1W	B
pH	7.94	2	pH_Units		S4500HB-11	1	11/10/2024 10:11	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 15:23	AKH	G
Specific Conductance	785		umhos/cm	5	SW846 9050A	1	11/13/2024 16:49	KMV	B
Sulfate	73.1		mg/L	2.0	EPA 300.0	2	11/06/2024 14:02	J1W	B
Total Dissolved Solids	460		mg/L	25	SM2540C-15	1	11/06/2024 17:20	RAG	B
Total Organic Carbon (TOC)	1.3		mg/L	0.50	SW846 9060A	1	11/06/2024 18:36	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	11/06/2024 14:33	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3386038001	FFMP033W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386038002	FFMP034W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386038003	FFMP26RW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386038004	FFMP005W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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
3386038001	FFMP033W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329162	11/11/2024 06:45	ANN	SW846 6010C	1331783
		N/A	N/A	N/A		SW846 8260B	1330342
		N/A	N/A	N/A		EPA 300.0	1327538
		N/A	N/A	N/A		EPA 410.4	1329132
		N/A	N/A	N/A		S4500HB-11	1330641
		N/A	N/A	N/A		SM 4500-NH3G	1329149
		N/A	N/A	N/A		SM2130B-2011	1327545
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1327572
		N/A	N/A	N/A		SW846 9050A	1331843
		N/A	N/A	N/A		SW846 9060A	1327628
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3386038002	FFMP034W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329162	11/11/2024 06:45	ANN	SW846 6010C	1331783
		N/A	N/A	N/A		SW846 8260B	1330342
		N/A	N/A	N/A		EPA 300.0	1327538
		N/A	N/A	N/A		EPA 410.4	1329132
		N/A	N/A	N/A		S4500HB-11	1330641
		N/A	N/A	N/A		SM 4500-NH3G	1329149
		N/A	N/A	N/A		SM2130B-2011	1327545
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1327572
		N/A	N/A	N/A		SW846 9050A	1331843
		N/A	N/A	N/A		SW846 9060A	1327628
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3386038003	FFMP26RW	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329162	11/11/2024 06:45	ANN	SW846 6010C	1331783
		N/A	N/A	N/A		SW846 8260B	1330342
		N/A	N/A	N/A		EPA 300.0	1327538
		N/A	N/A	N/A		EPA 410.4	1329132
		N/A	N/A	N/A		S4500HB-11	1330641
		N/A	N/A	N/A		SM 4500-NH3G	1331161
		N/A	N/A	N/A		SM2130B-2011	1327545
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1327572
		N/A	N/A	N/A		SW846 9050A	1331843
		N/A	N/A	N/A		SW846 9060A	1327628
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3386038004	FFMP005W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329162	11/11/2024 06:45	ANN	SW846 6010C	1331783
		N/A	N/A	N/A		SW846 8260B	1330342
		N/A	N/A	N/A		EPA 300.0	1327538
		N/A	N/A	N/A		EPA 410.4	1329132
		N/A	N/A	N/A		S4500HB-11	1330641
		N/A	N/A	N/A		SM 4500-NH3G	1329142
		N/A	N/A	N/A		SM2130B-2011	1327545
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1327572
		N/A	N/A	N/A		SW846 9050A	1331843
		N/A	N/A	N/A		SW846 9060A	1327628
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 3386038
Logged By: D1G
PM: SJB
ALS Qu
of

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO 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
Purchase Order #:

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [x] dbrown@lcswma.org

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	500ml	250ml			250ml	125ml	
	Preservative	HCL	H2SO4	HCL	UNP	UNP			H2SO4	HNO3	

Orthophosphate Filtered? Yes No Hexavalent Chromium Filtered? Yes No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	VOC Form 19Q	pH, CL, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, Bicarbonate	FM	Sample Debth for AUX Data	NH3-N, COD	Metals Fe,Mn,Na,Ca,K,Mg	
							Enter Number of Containers Per Sample or Field Results Below.									
1	FFMP033W	11/5/24	1216		G	GW	2	1	2	1	1	x	x	1	2	
2	FFMP034W	11/5/24	1232		G	GW	2	1	2	1	1	x	x	1	2	
3	FFMP26RW	11/5/24	1422		G	GW	2	1	2	1	1	x	x	1	2	
4	FFMP005W	11/5/24	1428		G	GW	2	1	2	1	1	x	x	1	2	
5																
6																
7																
8																
9																
10																

Temp Taken By: Therm ID: WO Temp (°C)
ers 0-6°C Y N NA
Temp By: MP | WO Temp (°C): 2 | Therm ID: 571
Deviations? NO YES
If YES, llist below:

	MP	
Receipt Info Completed By:		
Cooler Custody Seal Intact	Y N NA	
Sample Custody Seal Intact	Y N NA	
Received on Ice	Y N NA	
Cooler & Samples Intact	Y N	
Correct Containers Provided	Y N	
Sample Label/COC Agree	Y N	
Adequate Sample Volumes	Y N	
CR6 Samples Filtered	Y N NA	
OP Samples Filtered	Y N NA	
VOA 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	

Client contact:
Date/Tech:
ad Screen (uCi)
ew Source? Y N
ew Source Contact:
PWS Contact: PWS Phone #:

SDWA Sample Type Key: D=Distribution E=Entry Point
R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO
Internal Use: If less than 48 hours - notify lab upon receipt

Circle Sample Collector: ALS Tech / Client
Name: [illegible] ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
11/5/24	1615	1	[signature]	2	[signature] ALS
		3		4	
		5		6	
		7		8	
		9		10	

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW [ ] ____

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [x] PA [ ] WV [ ] FL [ ] other ____

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 07.06.2023

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

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 4TH QTR 2024 GWMP-FORM 19Q
Workorder 3386281
Report ID 368142 on 11/19/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Nov 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.

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
3386281001	FFMP038W	Ground Water	11/06/2024 11:12	11/06/2024 15:55	BGS	Analytical Laboratory Service
3386281002	FFMP039W	Ground Water	11/06/2024 11:25	11/06/2024 15:55	BGS	Analytical Laboratory Service
3386281003	FFMP035W	Ground Water	11/06/2024 13:31	11/06/2024 15:55	BGS	Analytical Laboratory Service
3386281004	FFMP036W	Ground Water	11/06/2024 14:26	11/06/2024 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.	
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.

Detected Results Summary

Client Sample ID	FFMP038W	Collected	11/06/2024 11:12
Lab Sample ID	3386281001	Lab Receipt	11/06/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	22.11	Feet		Field	#
Dissolved Oxygen	1.08	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	454.05	Feet		Field	#
Flow Rate	0.53	gal/min		Field	#
Ground Water Elevation	431.94	ft/MSL		Field	#
Oxidation-Reduction Potential	-137	mV		Field	#
pH, Field (SM4500B)	7.78	pH_Units		Field	#
Sample Depth	46.00	Feet		Field	#
Specific Conductance, Field	485	umhos/cm	1	Field	#
Temperature	22.94	Deg. C		Field	#
Total Well Depth	52.00	Feet		Field	#
Turbidity, Field	2	NTU	1	Field	#
Volume in Water Column	43.94	Gallons		Field	#
Water Level After Purge	27.27	Feet		Field	#
Well Volumes Purged	1.03	Vol		Field	#
METALS					
Calcium, Total	70.7	mg/L	0.11	SW846 6010C	#
Iron, Total	0.89	mg/L	0.067	SW846 6010C	#
Magnesium, Total	6.0	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.059	mg/L	0.0056	SW846 6010C	#
Potassium, Total	0.85	mg/L	0.56	SW846 6010C	#
Sodium, Total	12.4	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
Toluene	4.1	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	81	mg/L	5	SM2320B-2011	#
Alkalinity, Total	81	mg/L	5	SM2320B-2011	#
Chloride	97.3	mg/L	2.0	EPA 300.0	#
pH	8.20	pH_Units		S4500HB-11	#
Specific Conductance	487	umhos/cm	5	SW846 9050A	#
Sulfate	14.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	358	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.1	mg/L	0.50	SW846 9060A	#
Turbidity	9.1	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP039W	Collected	11/06/2024 11:25
Lab Sample ID	3386281002	Lab Receipt	11/06/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	16.33	Feet		Field	#
Elev Top MW Casing above MSL	455.65	Feet		Field	#
Flow Rate	1.59	gal/min		Field	#
Ground Water Elevation	439.32	ft/MSL		Field	#
Oxidation-Reduction Potential	126	mV		Field	#
pH, Field (SM4500B)	5.76	pH_Units		Field	#
Sample Depth	118.00	Feet		Field	#
Specific Conductance, Field	976	umhos/cm	1	Field	#
Temperature	14.30	Deg. C		Field	#
Total Well Depth	131.50	Feet		Field	#
Turbidity, Field	3	NTU	1	Field	#
Volume in Water Column	169.30	Gallons		Field	#
Water Level After Purge	20.98	Feet		Field	#
Well Volumes Purged	1.00	Vol		Field	#
METALS					
Calcium, Total	69.9	mg/L	0.11	SW846 6010C	#
Iron, Total	2.2	mg/L	0.067	SW846 6010C	#
Magnesium, Total	23.2	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.74	mg/L	0.0056	SW846 6010C	#
Potassium, Total	5.9	mg/L	0.56	SW846 6010C	#
Sodium, Total	71.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	42	mg/L	5	SM2320B-2011	#
Alkalinity, Total	42	mg/L	5	SM2320B-2011	#
Ammonia-N, Low Level	0.33	mg/L	0.10	SM 4500-NH3G	#
Chloride	279	mg/L	5.0	EPA 300.0	#
Nitrate-N	3.3	mg/L	1.0	EPA 300.0	#
pH	7.77	pH_Units		S4500HB-11	#
Specific Conductance	972	umhos/cm	5	SW846 9050A	#
Sulfate	44.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	622	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.2	mg/L	0.50	SW846 9060A	#
Turbidity	3.7	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP035W	Collected	11/06/2024 13:31
Lab Sample ID	3386281003	Lab Receipt	11/06/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	44.28	Feet		Field	#
Dissolved Oxygen	0.29	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.56	Feet		Field	#
Flow Rate	0.79	gal/min		Field	#
Ground Water Elevation	433.28	ft/MSL		Field	#
Oxidation-Reduction Potential	105	mV		Field	#
pH, Field (SM4500B)	6.58	pH_Units		Field	#
Sample Depth	65.00	Feet		Field	#
Specific Conductance, Field	936	umhos/cm	1	Field	#
Temperature	23.19	Deg. C		Field	#
Total Well Depth	71.80	Feet		Field	#
Volume in Water Column	40.45	Gallons		Field	#
Water Level After Purge	51.28	Feet		Field	#
Well Volumes Purged	1.27	Vol		Field	#
METALS					
Calcium, Total	100	mg/L	0.11	SW846 6010C	#
Magnesium, Total	19.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0060	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	52.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	141	mg/L	5	SM2320B-2011	#
Alkalinity, Total	141	mg/L	5	SM2320B-2011	#
Chloride	163	mg/L	2.0	EPA 300.0	#
Nitrate-N	7.9	mg/L	1.0	EPA 300.0	#
pH	8.21	pH_Units		S4500HB-11	#
Specific Conductance	921	umhos/cm	5	SW846 9050A	#
Sulfate	51.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	586	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.1	mg/L	0.50	SW846 9060A	#
Turbidity	0.45	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP036W	Collected	11/06/2024 14:26
Lab Sample ID	3386281004	Lab Receipt	11/06/2024 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	52.10	Feet		Field	#
Dissolved Oxygen	0.01	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	478.23	Feet		Field	#
Flow Rate	1.39	gal/min		Field	#
Ground Water Elevation	426.13	ft/MSL		Field	#
Oxidation-Reduction Potential	-227	mV		Field	#
pH, Field (SM4500B)	8.17	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	353	umhos/cm	1	Field	#
Temperature	17.83	Deg. C		Field	#
Total Well Depth	142.60	Feet		Field	#
Turbidity, Field	3	NTU	1	Field	#
Volume in Water Column	133.04	Gallons		Field	#
Water Level After Purge	82.01	Feet		Field	#
Well Volumes Purged	1.20	Vol		Field	#
METALS					
Calcium, Total	50.7	mg/L	0.11	SW846 6010C	#
Iron, Total	1.2	mg/L	0.067	SW846 6010C	#
Magnesium, Total	4.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.11	mg/L	0.0056	SW846 6010C	#
Potassium, Total	0.67	mg/L	0.56	SW846 6010C	#
Sodium, Total	15.4	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	96	mg/L	5	SM2320B-2011	#
Alkalinity, Total	96	mg/L	5	SM2320B-2011	#
Chloride	35.8	mg/L	2.0	EPA 300.0	#
Fluoride	0.22	mg/L	0.20	EPA 300.0	#
pH	8.30	pH_Units		S4500HB-11	#
Specific Conductance	354	umhos/cm	5	SW846 9050A	#
Sulfate	32.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	196	mg/L	25	SM2540C-15	#
Turbidity	13	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	FFMP038W	Collected	11/06/2024 11:12
Lab Sample ID	3386281001	Lab Receipt	11/06/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	22.11		Feet		Field	1	11/06/2024 11:12	BGS	D
Dissolved Oxygen	1.08		mg/L	0.01	Field	1	11/06/2024 11:12	BGS	D
Elev Top MW Casing above MSL	454.05		Feet		Field	1	11/06/2024 11:12	BGS	D
Flow Rate	0.53		gal/min		Field	1	11/06/2024 11:12	BGS	D
Ground Water Elevation	431.94		ft/MSL		Field	1	11/06/2024 11:12	BGS	D
Oxidation-Reduction Potential	-137		mV		Field	1	11/06/2024 11:12	BGS	D
pH, Field (SM4500B)	7.78		pH_Units		Field	1	11/06/2024 11:12	BGS	D
Sample Depth	46.00		Feet		Field	1	11/06/2024 11:12	BGS	D
Specific Conductance, Field	485		umhos/cm	1	Field	1	11/06/2024 11:12	BGS	D
Temperature	22.94		Deg. C		Field	1	11/06/2024 11:12	BGS	D
Total Well Depth	52.00		Feet		Field	1	11/06/2024 11:12	BGS	D
Turbidity, Field	2		NTU	1	Field	1	11/06/2024 11:12	BGS	D
Volume in Water Column	43.94		Gallons		Field	1	11/06/2024 11:12	BGS	D
Water Level After Purge	27.27		Feet		Field	1	11/06/2024 11:12	BGS	D
Well Volumes Purged	1.03		Vol		Field	1	11/06/2024 11:12	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	70.7		mg/L	0.11	SW846 6010C	1	11/13/2024 11:05	MSY	J1
Iron, Total	0.89		mg/L	0.067	SW846 6010C	1	11/13/2024 11:05	MSY	J1
Magnesium, Total	6.0		mg/L	0.11	SW846 6010C	1	11/13/2024 11:05	MSY	J1
Manganese, Total	0.059		mg/L	0.0056	SW846 6010C	1	11/13/2024 11:05	MSY	J1
Potassium, Total	0.85		mg/L	0.56	SW846 6010C	1	11/13/2024 11:05	MSY	J1
Sodium, Total	12.4		mg/L	0.56	SW846 6010C	1	11/13/2024 11:05	MSY	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	11/16/2024 12:13	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
Toluene	4.1		ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:13	JTH	H

Results

Client Sample ID	FFMP038W	Collected	11/06/2024 11:12
Lab Sample ID	3386281001	Lab Receipt	11/06/2024 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	104%	62 – 133	11/16/2024 12:13	
4-Bromofluorobenzene	460-00-4	94.8%	79 – 114	11/16/2024 12:13	
Dibromofluoromethane	1868-53-7	93.5%	78 – 116	11/16/2024 12:13	
Toluene-d8	2037-26-5	102%	76 – 127	11/16/2024 12:13	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	81		mg/L	5	SM2320B-2011	1	11/14/2024 22:34	KMV	B
Alkalinity, Total	81	1	mg/L	5	SM2320B-2011	1	11/14/2024 22:34	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/11/2024 17:14	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	97.3		mg/L	2.0	EPA 300.0	2	11/07/2024 10:18	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/07/2024 10:18	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	11/07/2024 10:18	J1W	B
pH	8.20	2	pH_Units		S4500HB-11	1	11/12/2024 05:03	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 16:30	AKH	G
Specific Conductance	487		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	14.8		mg/L	2.0	EPA 300.0	2	11/07/2024 10:18	J1W	B
Total Dissolved Solids	358		mg/L	25	SM2540C-15	1	11/07/2024 17:05	RAG	B
Total Organic Carbon (TOC)	1.1		mg/L	0.50	SW846 9060A	1	11/07/2024 19:58	PAG	E
Turbidity	9.1		NTU	0.30	SM2130B-2011	1	11/07/2024 13:05	NPF	B

Results

Client Sample ID	FFMP039W	Collected	11/06/2024 11:25
Lab Sample ID	3386281002	Lab Receipt	11/06/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	16.33		Feet		Field	1	11/06/2024 11:25	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	11/06/2024 11:25	BGS	D
Elev Top MW Casing above MSL	455.65		Feet		Field	1	11/06/2024 11:25	BGS	D
Flow Rate	1.59		gal/min		Field	1	11/06/2024 11:25	BGS	D
Ground Water Elevation	439.32		ft/MSL		Field	1	11/06/2024 11:25	BGS	D
Oxidation-Reduction Potential	126		mV		Field	1	11/06/2024 11:25	BGS	D
pH, Field (SM4500B)	5.76		pH_Units		Field	1	11/06/2024 11:25	BGS	D
Sample Depth	118.00		Feet		Field	1	11/06/2024 11:25	BGS	D
Specific Conductance, Field	976		umhos/cm	1	Field	1	11/06/2024 11:25	BGS	D
Temperature	14.30		Deg. C		Field	1	11/06/2024 11:25	BGS	D
Total Well Depth	131.50		Feet		Field	1	11/06/2024 11:25	BGS	D
Turbidity, Field	3		NTU	1	Field	1	11/06/2024 11:25	BGS	D
Volume in Water Column	169.30		Gallons		Field	1	11/06/2024 11:25	BGS	D
Water Level After Purge	20.98		Feet		Field	1	11/06/2024 11:25	BGS	D
Well Volumes Purged	1.00		Vol		Field	1	11/06/2024 11:25	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	69.9		mg/L	0.11	SW846 6010C	1	11/13/2024 11:06	MSY	J1
Iron, Total	2.2		mg/L	0.067	SW846 6010C	1	11/13/2024 11:06	MSY	J1
Magnesium, Total	23.2		mg/L	0.11	SW846 6010C	1	11/13/2024 11:06	MSY	J1
Manganese, Total	0.74		mg/L	0.0056	SW846 6010C	1	11/13/2024 11:06	MSY	J1
Potassium, Total	5.9		mg/L	0.56	SW846 6010C	1	11/13/2024 11:06	MSY	J1
Sodium, Total	71.7		mg/L	0.56	SW846 6010C	1	11/13/2024 11:06	MSY	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	11/16/2024 12:33	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:33	JTH	H

Results

Client Sample ID	FFMP039W	Collected	11/06/2024 11:25
Lab Sample ID	3386281002	Lab Receipt	11/06/2024 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	101%	62 – 133	11/16/2024 12:33	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	11/16/2024 12:33	
Dibromofluoromethane	1868-53-7	93.4%	78 – 116	11/16/2024 12:33	
Toluene-d8	2037-26-5	102%	76 – 127	11/16/2024 12:33	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	42		mg/L	5	SM2320B-2011	1	11/15/2024 00:34	KMV	B
Alkalinity, Total	42	1	mg/L	5	SM2320B-2011	1	11/15/2024 00:34	KMV	B
Ammonia-N, Low Level	0.33		mg/L	0.10	SM 4500-NH3G	1	11/11/2024 16:11	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	279		mg/L	5.0	EPA 300.0	5	11/09/2024 13:51	GMM	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/07/2024 10:29	J1W	B
Nitrate-N	3.3		mg/L	1.0	EPA 300.0	2	11/07/2024 10:29	J1W	B
pH	7.77	2	pH_Units		S4500HB-11	1	11/12/2024 05:14	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 16:33	AKH	G
Specific Conductance	972		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	44.0		mg/L	2.0	EPA 300.0	2	11/07/2024 10:29	J1W	B
Total Dissolved Solids	622		mg/L	25	SM2540C-15	1	11/07/2024 17:05	RAG	B
Total Organic Carbon (TOC)	1.2		mg/L	0.50	SW846 9060A	1	11/07/2024 19:58	PAG	E
Turbidity	3.7		NTU	0.30	SM2130B-2011	1	11/07/2024 13:05	NPF	B

Results

Client Sample ID	FFMP035W	Collected	11/06/2024 13:31
Lab Sample ID	3386281003	Lab Receipt	11/06/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	44.28		Feet		Field	1	11/06/2024 13:31	BGS	D
Dissolved Oxygen	0.29		mg/L	0.01	Field	1	11/06/2024 13:31	BGS	D
Elev Top MW Casing above MSL	477.56		Feet		Field	1	11/06/2024 13:31	BGS	D
Flow Rate	0.79		gal/min		Field	1	11/06/2024 13:31	BGS	D
Ground Water Elevation	433.28		ft/MSL		Field	1	11/06/2024 13:31	BGS	D
Oxidation-Reduction Potential	105		mV		Field	1	11/06/2024 13:31	BGS	D
pH, Field (SM4500B)	6.58		pH_Units		Field	1	11/06/2024 13:31	BGS	D
Sample Depth	65.00		Feet		Field	1	11/06/2024 13:31	BGS	D
Specific Conductance, Field	936		umhos/cm	1	Field	1	11/06/2024 13:31	BGS	D
Temperature	23.19		Deg. C		Field	1	11/06/2024 13:31	BGS	D
Total Well Depth	71.80		Feet		Field	1	11/06/2024 13:31	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/06/2024 13:31	BGS	D
Volume in Water Column	40.45		Gallons		Field	1	11/06/2024 13:31	BGS	D
Water Level After Purge	51.28		Feet		Field	1	11/06/2024 13:31	BGS	D
Well Volumes Purged	1.27		Vol		Field	1	11/06/2024 13:31	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	100		mg/L	0.11	SW846 6010C	1	11/13/2024 11:08	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	11/13/2024 11:08	MSY	J1
Magnesium, Total	19.4		mg/L	0.11	SW846 6010C	1	11/13/2024 11:08	MSY	J1
Manganese, Total	0.0060		mg/L	0.0056	SW846 6010C	1	11/13/2024 11:08	MSY	J1
Potassium, Total	3.5		mg/L	0.56	SW846 6010C	1	11/13/2024 11:08	MSY	J1
Sodium, Total	52.6		mg/L	0.56	SW846 6010C	1	11/13/2024 11:08	MSY	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	11/16/2024 12:52	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 12:52	JTH	H

Results

Client Sample ID	FFMP035W	Collected	11/06/2024 13:31
Lab Sample ID	3386281003	Lab Receipt	11/06/2024 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	11/16/2024 12:52	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	11/16/2024 12:52	
Dibromofluoromethane	1868-53-7	98.2%	78 – 116	11/16/2024 12:52	
Toluene-d8	2037-26-5	112%	76 – 127	11/16/2024 12:52	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	141		mg/L	5	SM2320B-2011	1	11/14/2024 22:46	KMV	B
Alkalinity, Total	141	1	mg/L	5	SM2320B-2011	1	11/14/2024 22:46	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/11/2024 17:17	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	163		mg/L	2.0	EPA 300.0	2	11/07/2024 10:41	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/07/2024 10:41	J1W	B
Nitrate-N	7.9		mg/L	1.0	EPA 300.0	2	11/07/2024 10:41	J1W	B
pH	8.21	2	pH_Units		S4500HB-11	1	11/12/2024 06:01	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 16:36	AKH	G
Specific Conductance	921		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	51.3		mg/L	2.0	EPA 300.0	2	11/07/2024 10:41	J1W	B
Total Dissolved Solids	586		mg/L	25	SM2540C-15	1	11/07/2024 17:05	RAG	B
Total Organic Carbon (TOC)	1.1		mg/L	0.50	SW846 9060A	1	11/07/2024 19:58	PAG	E
Turbidity	0.45		NTU	0.30	SM2130B-2011	1	11/07/2024 13:05	NPF	B

Results

Client Sample ID	FFMP036W	Collected	11/06/2024 14:26
Lab Sample ID	3386281004	Lab Receipt	11/06/2024 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	52.10		Feet		Field	1	11/06/2024 12:31	BGS	D
Dissolved Oxygen	0.01		mg/L	0.01	Field	1	11/06/2024 12:31	BGS	D
Elev Top MW Casing above MSL	478.23		Feet		Field	1	11/06/2024 12:31	BGS	D
Flow Rate	1.39		gal/min		Field	1	11/06/2024 12:31	BGS	D
Ground Water Elevation	426.13		ft/MSL		Field	1	11/06/2024 12:31	BGS	D
Oxidation-Reduction Potential	-227		mV		Field	1	11/06/2024 12:31	BGS	D
pH, Field (SM4500B)	8.17		pH_Units		Field	1	11/06/2024 12:31	BGS	D
Sample Depth	135.00		Feet		Field	1	11/06/2024 12:31	BGS	D
Specific Conductance, Field	353		umhos/cm	1	Field	1	11/06/2024 12:31	BGS	D
Temperature	17.83		Deg. C		Field	1	11/06/2024 12:31	BGS	D
Total Well Depth	142.60		Feet		Field	1	11/06/2024 12:31	BGS	D
Turbidity, Field	3		NTU	1	Field	1	11/06/2024 12:31	BGS	D
Volume in Water Column	133.04		Gallons		Field	1	11/06/2024 12:31	BGS	D
Water Level After Purge	82.01		Feet		Field	1	11/06/2024 12:31	BGS	D
Well Volumes Purged	1.20		Vol		Field	1	11/06/2024 12:31	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	50.7		mg/L	0.11	SW846 6010C	1	11/13/2024 11:09	MSY	J1
Iron, Total	1.2		mg/L	0.067	SW846 6010C	1	11/13/2024 11:09	MSY	J1
Magnesium, Total	4.8		mg/L	0.11	SW846 6010C	1	11/13/2024 11:09	MSY	J1
Manganese, Total	0.11		mg/L	0.0056	SW846 6010C	1	11/13/2024 11:09	MSY	J1
Potassium, Total	0.67		mg/L	0.56	SW846 6010C	1	11/13/2024 11:09	MSY	J1
Sodium, Total	15.4		mg/L	0.56	SW846 6010C	1	11/13/2024 11:09	MSY	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	11/16/2024 13:12	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/16/2024 13:12	JTH	H

Results

Client Sample ID	FFMP036W	Collected	11/06/2024 14:26
Lab Sample ID	3386281004	Lab Receipt	11/06/2024 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	103%	62 – 133	11/16/2024 13:12	
4-Bromofluorobenzene	460-00-4	92.9%	79 – 114	11/16/2024 13:12	
Dibromofluoromethane	1868-53-7	95.2%	78 – 116	11/16/2024 13:12	
Toluene-d8	2037-26-5	98.5%	76 – 127	11/16/2024 13:12	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	96		mg/L	5	SM2320B-2011	1	11/14/2024 22:55	KMV	B
Alkalinity, Total	96	1	mg/L	5	SM2320B-2011	1	11/14/2024 22:55	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/11/2024 17:20	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	35.8		mg/L	2.0	EPA 300.0	2	11/07/2024 10:52	J1W	B
Fluoride	0.22		mg/L	0.20	EPA 300.0	2	11/07/2024 10:52	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	11/07/2024 10:52	J1W	B
pH	8.30	2	pH_Units		S4500HB-11	1	11/12/2024 06:12	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/14/2024 16:20	AKH	G
Specific Conductance	354		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	32.6		mg/L	2.0	EPA 300.0	2	11/07/2024 10:52	J1W	B
Total Dissolved Solids	196		mg/L	25	SM2540C-15	1	11/07/2024 17:05	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	11/07/2024 19:58	PAG	E
Turbidity	13		NTU	0.30	SM2130B-2011	1	11/07/2024 13:05	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3386281001	FFMP038W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386281002	FFMP039W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386281003	FFMP035W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386281004	FFMP036W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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
3386281001	FFMP038W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329162	11/11/2024 06:45	ANN	SW846 6010C	1331783
		N/A	N/A	N/A		SW846 8260B	1333458
		N/A	N/A	N/A		EPA 300.0	1329028
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331168
		N/A	N/A	N/A		SM2130B-2011	1329144
		N/A	N/A	N/A		SM2320B-2011	1332226
		N/A	N/A	N/A		SM2540C-15	1329167
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1329428
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3386281002	FFMP039W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329162	11/11/2024 06:45	ANN	SW846 6010C	1331783
		N/A	N/A	N/A		SW846 8260B	1333458
		N/A	N/A	N/A		EPA 300.0	1330545
		N/A	N/A	N/A		EPA 300.0	1329028
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331168
		N/A	N/A	N/A		SM2130B-2011	1329144
		N/A	N/A	N/A		SM2320B-2011	1332226
		N/A	N/A	N/A		SM2540C-15	1329167
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1329428
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3386281003	FFMP035W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329162	11/11/2024 06:45	ANN	SW846 6010C	1331783
		N/A	N/A	N/A		SW846 8260B	1333458
		N/A	N/A	N/A		EPA 300.0	1329028
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331168
		N/A	N/A	N/A		SM2130B-2011	1329144
		N/A	N/A	N/A		SM2320B-2011	1332226
		N/A	N/A	N/A		SM2540C-15	1329167
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1329428
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232
3386281004	FFMP036W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1329162	11/11/2024 06:45	ANN	SW846 6010C	1331783
		N/A	N/A	N/A		SW846 8260B	1333458
		N/A	N/A	N/A		EPA 300.0	1329028
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331168
		N/A	N/A	N/A		SM2130B-2011	1329144
		N/A	N/A	N/A		SM2320B-2011	1332226
		N/A	N/A	N/A		SM2540C-15	1329167
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1329428
		SW846 9066	1332227	11/14/2024 11:08	AKH	SW846 9066	1332232

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 3386281
Logged By: D1G
PM: SJB
ALS Quote
of

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO 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
Purchase Order #:

TAT [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: **Approved?**
Email? [x] dbrown@lcswma.org

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	500ml	250ml			250ml	125ml	
	Preservative	HCL	H2SO4	HCL	UNP	UNP			H2SO4	HNO3	
	Orthophosphate Filtered?		Yes		No	Hexavalent Chromium Filtered?				Yes	No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	VOC Form 19Q	pH, CL, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, Bicarbonate	FM	Sample Debth for AUX Data	NH3-N, COD	Metals Fe,Mn,Na,Ca,K,Mg	
	Enter Number of Containers Per Sample or Field Results Below.															
1	FFMP038W	11/6/24	1112		G	GW	2	1	2	1	1	x	x	1	2	
2	FFMP039W	11/6/24	1125		G	GW	2	1	2	1	1	x	x	1	2	
3	FFMP035W	11/6/24	1331		G	GW	2	1	2	1	1	x	x	1	2	
4	FFMP036W	11/6/24	1426		G	GW	2	1	2	1	1	x	x	1	2	
5																
6																
7																
8																
9																
10																

Receipt Information (completed by Receiving Lab)

Temp Taken By: Therm ID: WO Temp (°C)

Temp By:	WO Temp (°C)	Therm ID
DB	1	S69

Receipt Info Completed By: DPB

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

ers 0-6°C Y N NA
Deviations? NO YES
If YES, list below:
Client contact:
Date/Tech.
Rad Screen (uCi)_____
New Source? Y N
New Source Contact:

PWS Contact:_____ PWS Phone #:_____

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO
Internal Use: If less than 48 hours - notify lab upon receipt

Circle Sample Collector: ALS Tech / Client
Name: [illegible] **ID:**

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
11-6-24	1555	1	[signature] ALS	2	DAG/ALS
		3		4	
		5		6	
		7		8	
		9		10	

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW [ ]

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [x] PA [ ] WV [ ] FL [ ] other

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 07.06.2023

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

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 4TH QTR 2024 GWMP-FORM 19Q
Workorder 3386565
Report ID 371012 on 11/30/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Nov 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.

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
3386565001	FFMP029W	Ground Water	11/07/2024 10:22	11/07/2024 15:21	BGS	Analytical Laboratory Service
3386565002	FFMP017W	Ground Water	11/07/2024 10:45	11/07/2024 15:21	BGS	Analytical Laboratory Service
3386565003	FFMP002W	Ground Water	11/07/2024 13:08	11/07/2024 15:21	BGS	Analytical Laboratory Service
3386565004	FFMP031W	Ground Water	11/07/2024 13:13	11/07/2024 15:21	BGS	Analytical Laboratory Service
3386565005	FFMP032W	Ground Water	11/07/2024 14:10	11/07/2024 15:21	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	FFMP029W	Collected	11/07/2024 10:22
Lab Sample ID	3386565001	Lab Receipt	11/07/2024 15:21

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	41.37	Feet		Field	#
Dissolved Oxygen	5.84	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.30	Feet		Field	#
Flow Rate	1.89	gal/min		Field	#
Ground Water Elevation	435.93	ft/MSL		Field	#
Oxidation-Reduction Potential	347	mV		Field	#
pH, Field (SM4500B)	4.86	pH_Units		Field	#
Sample Depth	55.00	Feet		Field	#
Specific Conductance, Field	235	umhos/cm	1	Field	#
Temperature	14.63	Deg. C		Field	#
Total Well Depth	60.50	Feet		Field	#
Volume in Water Column	28.12	Gallons		Field	#
Water Level After Purge	46.42	Feet		Field	#
Well Volumes Purged	2.69	Vol		Field	#
METALS					
Calcium, Total	12.5	mg/L	0.11	SW846 6010C	#
Magnesium, Total	9.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.016	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.8	mg/L	0.56	SW846 6010C	#
Sodium, Total	14.1	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	12	mg/L	5	SM2320B-2011	#
Alkalinity, Total	12	mg/L	5	SM2320B-2011	#
Chloride	54.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	3.8	mg/L	1.0	EPA 300.0	#
pH	7.26	pH_Units		S4500HB-11	#
Specific Conductance	237	umhos/cm	5	SW846 9050A	#
Sulfate	2.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	170	mg/L	25	SM2540C-15	#
Turbidity	1.1	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP017W	Collected	11/07/2024 10:45
Lab Sample ID	3386565002	Lab Receipt	11/07/2024 15:21

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	43.90	Feet		Field	#
Dissolved Oxygen	0.20	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	480.70	Feet		Field	#
Flow Rate	1.92	gal/min		Field	#
Ground Water Elevation	436.80	ft/MSL		Field	#
Oxidation-Reduction Potential	172	mV		Field	#
pH, Field (SM4500B)	5.99	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	2066	umhos/cm	1	Field	#
Temperature	13.08	Deg. C		Field	#
Total Well Depth	150.50	Feet		Field	#
Volume in Water Column	156.70	Gallons		Field	#
Water Level After Purge	50.16	Feet		Field	#
Well Volumes Purged	1.04	Vol		Field	#
METALS					
Calcium, Total	150	mg/L	0.11	SW846 6010C	#
Magnesium, Total	52.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	1.5	mg/L	0.0056	SW846 6010C	#
Potassium, Total	12.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	148	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	90	mg/L	5	SM2320B-2011	#
Alkalinity, Total	90	mg/L	5	SM2320B-2011	#
Ammonia-N, Low Level	0.23	mg/L	0.10	SM 4500-NH3G	#
Chloride	539	mg/L	10.0	EPA 300.0	#
Nitrate-N	3.9	mg/L	2.5	EPA 300.0	#
pH	8.10	pH_Units		S4500HB-11	#
Specific Conductance	2020	umhos/cm	5	SW846 9050A	#
Sulfate	118	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1170	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	3.4	mg/L	0.50	SW846 9060A	#
Turbidity	1.4	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP002W	Collected	11/07/2024 13:08
Lab Sample ID	3386565003	Lab Receipt	11/07/2024 15:21

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	70.58	Feet		Field	#
Dissolved Oxygen	4.76	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	613.20	Feet		Field	#
Flow Rate	0.39	gal/min		Field	#
Ground Water Elevation	542.62	ft/MSL		Field	#
Oxidation-Reduction Potential	312	mV		Field	#
pH, Field (SM4500B)	4.52	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	258	umhos/cm	1	Field	#
Temperature	22.01	Deg. C		Field	#
Total Well Depth	90.02	Feet		Field	#
Turbidity, Field	64	NTU	1	Field	#
Volume in Water Column	28.58	Gallons		Field	#
Water Level After Purge	77.25	Feet		Field	#
Well Volumes Purged	1.15	Vol		Field	#
METALS					
Calcium, Total	17.8	mg/L	0.11	SW846 6010C	#
Iron, Total	1.1	mg/L	0.067	SW846 6010C	#
Magnesium, Total	7.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.25	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	14.5	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	17.2	mg/L	2.0	EPA 300.0	#
Fluoride	0.30	mg/L	0.20	EPA 300.0	#
Nitrate-N	16.4	mg/L	1.0	EPA 300.0	#
pH	6.83	pH_Units		S4500HB-11	#
Specific Conductance	266	umhos/cm	5	SW846 9050A	#
Sulfate	27.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	189	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.54	mg/L	0.50	SW846 9060A	#
Turbidity	3.1	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP031W	Collected	11/07/2024 13:13
Lab Sample ID	3386565004	Lab Receipt	11/07/2024 15:21

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	70.60	Feet		Field	#
Dissolved Oxygen	7.83	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	612.66	Feet		Field	#
Flow Rate	1.86	gal/min		Field	#
Ground Water Elevation	542.06	ft/MSL		Field	#
Oxidation-Reduction Potential	-43	mV		Field	#
pH, Field (SM4500B)	7.31	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	2	umhos/cm	1	Field	#
Temperature	25.11	Deg. C		Field	#
Total Well Depth	142.70	Feet		Field	#
Volume in Water Column	105.99	Gallons		Field	#
Water Level After Purge	115.62	Feet		Field	#
Well Volumes Purged	1.68	Vol		Field	#
METALS					
Calcium, Total	57.7	mg/L	0.11	SW846 6010C	#
Iron, Total	2.8	mg/L	0.067	SW846 6010C	#
Magnesium, Total	4.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.46	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	9.8	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	79	mg/L	5	SM2320B-2011	#
Alkalinity, Total	79	mg/L	5	SM2320B-2011	#
Chloride	22.0	mg/L	2.0	EPA 300.0	#
Fluoride	0.31	mg/L	0.20	EPA 300.0	#
pH	8.25	pH_Units		S4500HB-11	#
Specific Conductance	324	umhos/cm	5	SW846 9050A	#
Sulfate	53.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	158	mg/L	25	SM2540C-15	#
Turbidity	25	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FFMP032W	Collected	11/07/2024 14:10
Lab Sample ID	3386565005	Lab Receipt	11/07/2024 15:21

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	50.85	Feet		Field	#
Dissolved Oxygen	0.08	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	594.09	Feet		Field	#
Flow Rate	0.45	gal/min		Field	#
Ground Water Elevation	543.24	ft/MSL		Field	#
Oxidation-Reduction Potential	-111	mV		Field	#
pH, Field (SM4500B)	6.56	pH_Units		Field	#
Sample Depth	62.00	Feet		Field	#
Specific Conductance, Field	258	umhos/cm	1	Field	#
Temperature	15.90	Deg. C		Field	#
Total Well Depth	77.60	Feet		Field	#
Turbidity, Field	552	NTU	1	Field	#
Volume in Water Column	39.32	Gallons		Field	#
Water Level After Purge	56.38	Feet		Field	#
Well Volumes Purged	0.14	Vol		Field	#
METALS					
Calcium, Total	19.5	mg/L	0.11	SW846 6010C	#
Iron, Total	10.0	mg/L	0.067	SW846 6010C	#
Magnesium, Total	6.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.79	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.3	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	65	mg/L	5	SM2320B-2011	#
Alkalinity, Total	65	mg/L	5	SM2320B-2011	#
Ammonia-N, Low Level	0.64	mg/L	0.10	SM 4500-NH3G	#
Chloride	33.2	mg/L	2.0	EPA 300.0	#
pH	8.16	pH_Units		S4500HB-11	#
Specific Conductance	224	umhos/cm	5	SW846 9050A	#
Total Dissolved Solids	104	mg/L	25	SM2540C-15	#
Turbidity	120	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	FFMP029W	Collected	11/07/2024 10:22
Lab Sample ID	3386565001	Lab Receipt	11/07/2024 15:21

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	41.37		Feet		Field	1	11/07/2024 10:17	BGS	D
Dissolved Oxygen	5.84		mg/L	0.01	Field	1	11/07/2024 10:17	BGS	D
Elev Top MW Casing above MSL	477.30		Feet		Field	1	11/07/2024 10:17	BGS	D
Flow Rate	1.89		gal/min		Field	1	11/07/2024 10:17	BGS	D
Ground Water Elevation	435.93		ft/MSL		Field	1	11/07/2024 10:17	BGS	D
Oxidation-Reduction Potential	347		mV		Field	1	11/07/2024 10:17	BGS	D
pH, Field (SM4500B)	4.86		pH_Units		Field	1	11/07/2024 10:17	BGS	D
Sample Depth	55.00		Feet		Field	1	11/07/2024 10:17	BGS	D
Specific Conductance, Field	235		umhos/cm	1	Field	1	11/07/2024 10:17	BGS	D
Temperature	14.63		Deg. C		Field	1	11/07/2024 10:17	BGS	D
Total Well Depth	60.50		Feet		Field	1	11/07/2024 10:17	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/07/2024 10:17	BGS	D
Volume in Water Column	28.12		Gallons		Field	1	11/07/2024 10:17	BGS	D
Water Level After Purge	46.42		Feet		Field	1	11/07/2024 10:17	BGS	D
Well Volumes Purged	2.69		Vol		Field	1	11/07/2024 10:17	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	12.5		mg/L	0.11	SW846 6010C	1	11/15/2024 11:31	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	11/15/2024 11:31	MSY	J1
Magnesium, Total	9.6		mg/L	0.11	SW846 6010C	1	11/15/2024 11:31	MSY	J1
Manganese, Total	0.016		mg/L	0.0056	SW846 6010C	1	11/15/2024 11:31	MSY	J1
Potassium, Total	1.8		mg/L	0.56	SW846 6010C	1	11/15/2024 11:31	MSY	J1
Sodium, Total	14.1		mg/L	0.56	SW846 6010C	1	11/15/2024 11:31	MSY	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	11/18/2024 02:21	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 02:21	PDK	H

Results

Client Sample ID	FFMP029W	Collected	11/07/2024 10:22
Lab Sample ID	3386565001	Lab Receipt	11/07/2024 15:21

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	11/18/2024 02:21	
4-Bromofluorobenzene	460-00-4	99.8%	79 – 114	11/18/2024 02:21	
Dibromofluoromethane	1868-53-7	95.4%	78 – 116	11/18/2024 02:21	
Toluene-d8	2037-26-5	105%	76 – 127	11/18/2024 02:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	12		mg/L	5	SM2320B-2011	1	11/12/2024 11:40	KMV	B
Alkalinity, Total	12	1	mg/L	5	SM2320B-2011	1	11/12/2024 11:40	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/11/2024 17:56	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	54.9		mg/L	2.0	EPA 300.0	2	11/08/2024 11:49	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/08/2024 11:49	J1W	B
Nitrate-N	3.8		mg/L	1.0	EPA 300.0	2	11/08/2024 11:49	J1W	B
pH	7.26	2	pH_Units		S4500HB-11	1	11/12/2024 11:40	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/27/2024 16:28	AKH	G
Specific Conductance	237		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	2.6		mg/L	2.0	EPA 300.0	2	11/08/2024 11:49	J1W	B
Total Dissolved Solids	170		mg/L	25	SM2540C-15	1	11/08/2024 17:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	11/08/2024 18:04	PAG	E
Turbidity	1.1		NTU	0.30	SM2130B-2011	1	11/08/2024 09:28	NPF	B

Results

Client Sample ID	FFMP017W	Collected	11/07/2024 10:45
Lab Sample ID	3386565002	Lab Receipt	11/07/2024 15:21

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	43.90		Feet		Field	1	11/07/2024 10:45	BGS	D
Dissolved Oxygen	0.20		mg/L	0.01	Field	1	11/07/2024 10:45	BGS	D
Elev Top MW Casing above MSL	480.70		Feet		Field	1	11/07/2024 10:45	BGS	D
Flow Rate	1.92		gal/min		Field	1	11/07/2024 10:45	BGS	D
Ground Water Elevation	436.80		ft/MSL		Field	1	11/07/2024 10:45	BGS	D
Oxidation-Reduction Potential	172		mV		Field	1	11/07/2024 10:45	BGS	D
pH, Field (SM4500B)	5.99		pH_Units		Field	1	11/07/2024 10:45	BGS	D
Sample Depth	135.00		Feet		Field	1	11/07/2024 10:45	BGS	D
Specific Conductance, Field	2066		umhos/cm	1	Field	1	11/07/2024 10:45	BGS	D
Temperature	13.08		Deg. C		Field	1	11/07/2024 10:45	BGS	D
Total Well Depth	150.50		Feet		Field	1	11/07/2024 10:45	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/07/2024 10:45	BGS	D
Volume in Water Column	156.70		Gallons		Field	1	11/07/2024 10:45	BGS	D
Water Level After Purge	50.16		Feet		Field	1	11/07/2024 10:45	BGS	D
Well Volumes Purged	1.04		Vol		Field	1	11/07/2024 10:45	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	150		mg/L	0.11	SW846 6010C	1	11/15/2024 11:32	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	11/15/2024 11:32	MSY	J1
Magnesium, Total	52.8		mg/L	0.11	SW846 6010C	1	11/15/2024 11:32	MSY	J1
Manganese, Total	1.5		mg/L	0.0056	SW846 6010C	1	11/15/2024 11:32	MSY	J1
Potassium, Total	12.4		mg/L	0.56	SW846 6010C	1	11/15/2024 11:32	MSY	J1
Sodium, Total	148		mg/L	0.56	SW846 6010C	1	11/15/2024 11:32	MSY	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	11/18/2024 03:01	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:01	PDK	H

Results

Client Sample ID	FFMP017W	Collected	11/07/2024 10:45
Lab Sample ID	3386565002	Lab Receipt	11/07/2024 15:21

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	105%	62 – 133	11/18/2024 03:01	
4-Bromofluorobenzene	460-00-4	94.5%	79 – 114	11/18/2024 03:01	
Dibromofluoromethane	1868-53-7	96.9%	78 – 116	11/18/2024 03:01	
Toluene-d8	2037-26-5	101%	76 – 127	11/18/2024 03:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	90		mg/L	5	SM2320B-2011	1	11/12/2024 11:50	KMV	B
Alkalinity, Total	90	1	mg/L	5	SM2320B-2011	1	11/12/2024 11:50	KMV	B
Ammonia-N, Low Level	0.23		mg/L	0.10	SM 4500-NH3G	1	11/11/2024 17:53	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	539		mg/L	10.0	EPA 300.0	10	11/13/2024 23:12	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	11/08/2024 12:02	J1W	B
Nitrate-N	3.9		mg/L	2.5	EPA 300.0	5	11/08/2024 12:02	J1W	B
pH	8.10	2	pH_Units		S4500HB-11	1	11/12/2024 11:50	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/21/2024 17:45	AKH	G
Specific Conductance	2020		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	118		mg/L	5.0	EPA 300.0	5	11/08/2024 12:02	J1W	B
Total Dissolved Solids	1170		mg/L	25	SM2540C-15	1	11/08/2024 17:00	RAG	B
Total Organic Carbon (TOC)	3.4		mg/L	0.50	SW846 9060A	1	11/08/2024 18:04	PAG	E
Turbidity	1.4		NTU	0.30	SM2130B-2011	1	11/08/2024 09:28	NPF	B

Results

Client Sample ID	FFMP002W	Collected	11/07/2024 13:08
Lab Sample ID	3386565003	Lab Receipt	11/07/2024 15:21

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	70.58		Feet		Field	1	11/07/2024 13:13	BGS	D
Dissolved Oxygen	4.76		mg/L	0.01	Field	1	11/07/2024 13:13	BGS	D
Elev Top MW Casing above MSL	613.20		Feet		Field	1	11/07/2024 13:13	BGS	D
Flow Rate	0.39		gal/min		Field	1	11/07/2024 13:13	BGS	D
Ground Water Elevation	542.62		ft/MSL		Field	1	11/07/2024 13:13	BGS	D
Oxidation-Reduction Potential	312		mV		Field	1	11/07/2024 13:13	BGS	D
pH, Field (SM4500B)	4.52		pH_Units		Field	1	11/07/2024 13:13	BGS	D
Sample Depth	85.00		Feet		Field	1	11/07/2024 13:13	BGS	D
Specific Conductance, Field	258		umhos/cm	1	Field	1	11/07/2024 13:13	BGS	D
Temperature	22.01		Deg. C		Field	1	11/07/2024 13:13	BGS	D
Total Well Depth	90.02		Feet		Field	1	11/07/2024 13:13	BGS	D
Turbidity, Field	64		NTU	1	Field	1	11/07/2024 13:13	BGS	D
Volume in Water Column	28.58		Gallons		Field	1	11/07/2024 13:13	BGS	D
Water Level After Purge	77.25		Feet		Field	1	11/07/2024 13:13	BGS	D
Well Volumes Purged	1.15		Vol		Field	1	11/07/2024 13:13	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	17.8		mg/L	0.11	SW846 6010C	1	11/15/2024 11:34	MSY	J1
Iron, Total	1.1		mg/L	0.067	SW846 6010C	1	11/15/2024 11:34	MSY	J1
Magnesium, Total	7.1		mg/L	0.11	SW846 6010C	1	11/15/2024 11:34	MSY	J1
Manganese, Total	0.25		mg/L	0.0056	SW846 6010C	1	11/15/2024 11:34	MSY	J1
Potassium, Total	3.3		mg/L	0.56	SW846 6010C	1	11/15/2024 11:34	MSY	J1
Sodium, Total	14.5		mg/L	0.56	SW846 6010C	1	11/15/2024 11:34	MSY	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	11/18/2024 03:21	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:21	PDK	H

Results

Client Sample ID	FFMP002W	Collected	11/07/2024 13:08
Lab Sample ID	3386565003	Lab Receipt	11/07/2024 15:21

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.8%	62 – 133	11/18/2024 03:21	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	11/18/2024 03:21	
Dibromofluoromethane	1868-53-7	90.1%	78 – 116	11/18/2024 03:21	
Toluene-d8	2037-26-5	101%	76 – 127	11/18/2024 03:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	7		mg/L	5	SM2320B-2011	1	11/12/2024 12:01	KMV	B
Alkalinity, Total	7	1	mg/L	5	SM2320B-2011	1	11/12/2024 12:01	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/11/2024 16:56	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	17.2		mg/L	2.0	EPA 300.0	2	11/08/2024 12:15	J1W	B
Fluoride	0.30		mg/L	0.20	EPA 300.0	2	11/08/2024 12:15	J1W	B
Nitrate-N	16.4		mg/L	1.0	EPA 300.0	2	11/08/2024 12:15	J1W	B
pH	6.83	2	pH_Units		S4500HB-11	1	11/12/2024 12:01	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/21/2024 17:45	AKH	G
Specific Conductance	266		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	27.1		mg/L	2.0	EPA 300.0	2	11/08/2024 12:15	J1W	B
Total Dissolved Solids	189		mg/L	25	SM2540C-15	1	11/08/2024 17:00	RAG	B
Total Organic Carbon (TOC)	0.54		mg/L	0.50	SW846 9060A	1	11/08/2024 18:04	PAG	E
Turbidity	3.1		NTU	0.30	SM2130B-2011	1	11/08/2024 09:28	NPF	B

Results

Client Sample ID	FFMP031W	Collected	11/07/2024 13:13
Lab Sample ID	3386565004	Lab Receipt	11/07/2024 15:21

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	70.60		Feet		Field	1	11/07/2024 13:19	BGS	D
Dissolved Oxygen	7.83		mg/L	0.01	Field	1	11/07/2024 13:19	BGS	D
Elev Top MW Casing above MSL	612.66		Feet		Field	1	11/07/2024 13:19	BGS	D
Flow Rate	1.86		gal/min		Field	1	11/07/2024 13:19	BGS	D
Ground Water Elevation	542.06		ft/MSL		Field	1	11/07/2024 13:19	BGS	D
Oxidation-Reduction Potential	-43		mV		Field	1	11/07/2024 13:19	BGS	D
pH, Field (SM4500B)	7.31		pH_Units		Field	1	11/07/2024 13:19	BGS	D
Sample Depth	130.00		Feet		Field	1	11/07/2024 13:19	BGS	D
Specific Conductance, Field	2		umhos/cm	1	Field	1	11/07/2024 13:19	BGS	D
Temperature	25.11		Deg. C		Field	1	11/07/2024 13:19	BGS	D
Total Well Depth	142.70		Feet		Field	1	11/07/2024 13:19	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	11/07/2024 13:19	BGS	D
Volume in Water Column	105.99		Gallons		Field	1	11/07/2024 13:19	BGS	D
Water Level After Purge	115.62		Feet		Field	1	11/07/2024 13:19	BGS	D
Well Volumes Purged	1.68		Vol		Field	1	11/07/2024 13:19	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	57.7		mg/L	0.11	SW846 6010C	1	11/15/2024 11:40	MSY	J1
Iron, Total	2.8		mg/L	0.067	SW846 6010C	1	11/15/2024 11:40	MSY	J1
Magnesium, Total	4.6		mg/L	0.11	SW846 6010C	1	11/15/2024 11:40	MSY	J1
Manganese, Total	0.46		mg/L	0.0056	SW846 6010C	1	11/15/2024 11:40	MSY	J1
Potassium, Total	1.4		mg/L	0.56	SW846 6010C	1	11/15/2024 11:40	MSY	J1
Sodium, Total	9.8		mg/L	0.56	SW846 6010C	1	11/15/2024 11:40	MSY	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	11/18/2024 03:41	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 03:41	PDK	H

Results

Client Sample ID	FFMP031W	Collected	11/07/2024 13:13
Lab Sample ID	3386565004	Lab Receipt	11/07/2024 15:21

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	11/18/2024 03:41	
4-Bromofluorobenzene	460-00-4	99.4%	79 – 114	11/18/2024 03:41	
Dibromofluoromethane	1868-53-7	95.2%	78 – 116	11/18/2024 03:41	
Toluene-d8	2037-26-5	106%	76 – 127	11/18/2024 03:41	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	79		mg/L	5	SM2320B-2011	1	11/12/2024 12:11	KMV	B
Alkalinity, Total	79	1	mg/L	5	SM2320B-2011	1	11/12/2024 12:11	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/11/2024 17:44	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	22.0		mg/L	2.0	EPA 300.0	2	11/08/2024 12:28	J1W	B
Fluoride	0.31		mg/L	0.20	EPA 300.0	2	11/08/2024 12:28	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	11/08/2024 12:28	J1W	B
pH	8.25	2	pH_Units		S4500HB-11	1	11/12/2024 12:11	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/21/2024 17:45	AKH	G
Specific Conductance	324		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	53.7		mg/L	2.0	EPA 300.0	2	11/08/2024 12:28	J1W	B
Total Dissolved Solids	158		mg/L	25	SM2540C-15	1	11/08/2024 17:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	11/08/2024 18:04	PAG	E
Turbidity	25		NTU	0.30	SM2130B-2011	1	11/08/2024 09:28	NPF	B

Results

Client Sample ID	FFMP032W	Collected	11/07/2024 14:10
Lab Sample ID	3386565005	Lab Receipt	11/07/2024 15:21

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	50.85		Feet		Field	1	11/07/2024 14:10	BGS	D
Dissolved Oxygen	0.08		mg/L	0.01	Field	1	11/07/2024 14:10	BGS	D
Elev Top MW Casing above MSL	594.09		Feet		Field	1	11/07/2024 14:10	BGS	D
Flow Rate	0.45		gal/min		Field	1	11/07/2024 14:10	BGS	D
Ground Water Elevation	543.24		ft/MSL		Field	1	11/07/2024 14:10	BGS	D
Oxidation-Reduction Potential	-111		mV		Field	1	11/07/2024 14:10	BGS	D
pH, Field (SM4500B)	6.56		pH_Units		Field	1	11/07/2024 14:10	BGS	D
Sample Depth	62.00		Feet		Field	1	11/07/2024 14:10	BGS	D
Specific Conductance, Field	258		umhos/cm	1	Field	1	11/07/2024 14:10	BGS	D
Temperature	15.90		Deg. C		Field	1	11/07/2024 14:10	BGS	D
Total Well Depth	77.60		Feet		Field	1	11/07/2024 14:10	BGS	D
Turbidity, Field	552		NTU	1	Field	1	11/07/2024 14:10	BGS	D
Volume in Water Column	39.32		Gallons		Field	1	11/07/2024 14:10	BGS	D
Water Level After Purge	56.38		Feet		Field	1	11/07/2024 14:10	BGS	D
Well Volumes Purged	0.14		Vol		Field	1	11/07/2024 14:10	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	19.5		mg/L	0.11	SW846 6010C	1	11/15/2024 11:41	MSY	J1
Iron, Total	10.0	3	mg/L	0.067	SW846 6010C	1	11/15/2024 11:41	MSY	J1
Magnesium, Total	6.7		mg/L	0.11	SW846 6010C	1	11/15/2024 11:41	MSY	J1
Manganese, Total	0.79		mg/L	0.0056	SW846 6010C	1	11/15/2024 11:41	MSY	J1
Potassium, Total	1.4		mg/L	0.56	SW846 6010C	1	11/15/2024 11:41	MSY	J1
Sodium, Total	13.3		mg/L	0.56	SW846 6010C	1	11/15/2024 11:41	MSY	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	11/18/2024 04:01	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 04:01	PDK	H

Results

Client Sample ID	FFMP032W	Collected	11/07/2024 14:10
Lab Sample ID	3386565005	Lab Receipt	11/07/2024 15:21

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	11/18/2024 04:01	
4-Bromofluorobenzene	460-00-4	98.8%	79 – 114	11/18/2024 04:01	
Dibromofluoromethane	1868-53-7	95%	78 – 116	11/18/2024 04:01	
Toluene-d8	2037-26-5	106%	76 – 127	11/18/2024 04:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	65		mg/L	5	SM2320B-2011	1	11/12/2024 12:29	KMV	B
Alkalinity, Total	65	1	mg/L	5	SM2320B-2011	1	11/12/2024 12:29	KMV	B
Ammonia-N, Low Level	0.64		mg/L	0.10	SM 4500-NH3G	1	11/11/2024 16:38	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/11/2024 12:51	KMS	A
Chloride	33.2		mg/L	2.0	EPA 300.0	2	11/08/2024 12:41	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/08/2024 12:41	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	11/08/2024 12:41	J1W	B
pH	8.16	2	pH_Units		S4500HB-11	1	11/12/2024 12:29	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/21/2024 17:45	AKH	G
Specific Conductance	224		umhos/cm	5	SW846 9050A	1	11/15/2024 15:13	KMV	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	11/08/2024 12:41	J1W	B
Total Dissolved Solids	104		mg/L	25	SM2540C-15	1	11/08/2024 17:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	11/08/2024 18:04	PAG	E
Turbidity	120		NTU	0.30	SM2130B-2011	1	11/08/2024 09:28	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3386565001	FFMP029W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386565002	FFMP017W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386565003	FFMP002W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386565004	FFMP031W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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
3386565005	FFMP032W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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
3386565001	FFMP029W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1331909	11/14/2024 23:26	ANN	SW846 6010C	1332655
		N/A	N/A	N/A		SW846 8260B	1332658
		N/A	N/A	N/A		EPA 300.0	1329935
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331161
		N/A	N/A	N/A		SM2130B-2011	1330034
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1330053
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1330265
		SW846 9066	1343397	11/26/2024 11:37	AKH	SW846 9066	1343404
3386565002	FFMP017W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1331909	11/14/2024 23:26	ANN	SW846 6010C	1332655
		N/A	N/A	N/A		SW846 8260B	1332658
		N/A	N/A	N/A		EPA 300.0	1329935
		N/A	N/A	N/A		EPA 300.0	1331750
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331161
		N/A	N/A	N/A		SM2130B-2011	1330034
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1330053
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1330265
		SW846 9066	1336553	11/21/2024 10:45	AKH	SW846 9066	1336557
3386565003	FFMP002W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1331909	11/14/2024 23:26	ANN	SW846 6010C	1332655
		N/A	N/A	N/A		SW846 8260B	1332658
		N/A	N/A	N/A		EPA 300.0	1329935
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331161
		N/A	N/A	N/A		SM2130B-2011	1330034
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1330053
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1330265
		SW846 9066	1336553	11/21/2024 10:45	AKH	SW846 9066	1336557
3386565004	FFMP031W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1331909	11/14/2024 23:26	ANN	SW846 6010C	1332655
		N/A	N/A	N/A		SW846 8260B	1332658
		N/A	N/A	N/A		EPA 300.0	1329935
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331161
		N/A	N/A	N/A		SM2130B-2011	1330034
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1330053
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1330265
		SW846 9066	1336553	11/21/2024 10:45	AKH	SW846 9066	1336557

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3386565005	FFMP032W	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1331909	11/14/2024 23:26	ANN	SW846 6010C	1332655
		N/A	N/A	N/A		SW846 8260B	1332658
		N/A	N/A	N/A		EPA 300.0	1329935
		N/A	N/A	N/A		EPA 410.4	1331156
		N/A	N/A	N/A		S4500HB-11	1331196
		N/A	N/A	N/A		SM 4500-NH3G	1331161
		N/A	N/A	N/A		SM2130B-2011	1330034
		N/A	N/A	N/A		SM2320B-2011	1331196
		N/A	N/A	N/A		SM2540C-15	1330053
		N/A	N/A	N/A		SW846 9050A	1332707
		N/A	N/A	N/A		SW846 9060A	1330265
		SW846 9066	1336553	11/21/2024 10:45	AKH	SW846 9066	1336557

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 3386565
Logged By: D1G
PM: SJB
ALS Quote
of

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO 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
Purchase Order #:

TAT [x] Normal-Standard TAT is 10-12 business days. [ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [x] dbrown@lcswma.org

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	500ml	250ml			250ml	125ml	
	Preservative	HCL	H2SO4	HCL	UNP	UNP			H2SO4	HNO3	

Orthophosphate Filtered? Yes No Hexavalent Chromium Filtered? Yes No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	VOC Form 19Q	pH, CL, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, Bicarbonate	FM	Sample Debth for AUX Data	NH3-N, COD	Metals Fe,Mn,Na,Ca,K,Mg	
							Enter Number of Containers Per Sample or Field Results Below.									
1	FFMP029W	11/7/24	1022		G	GW	2	1	2	1	1	x	x	1	2	
2	FFMP017W	11/7/24	1045		G	GW	2	1	2	1	1	x	x	1	2	
3	FFMP002W	11/7/24	1308		G	GW	2	1	2	1	1	x	x	1	2	
4	FFMP031W	11/7/24	1313		G	GW	2	1	2	1	1	x	x	1	2	
5	FFMP032W	11/7/24	1410		G	GW	2	1	2	1	1	x	x	1	2	
6																
7																
8																
9																
10																

Receipt Information (completed by Receiving Lab)

Temp Taken By:
Temp By: DB | WO Temp (°C): 6 | Therm ID: 569
Receipt Info completed by:
Cooler Custody Seals Intact
Sample Custody Seal Intact
Received on Ice
Coolers & Samples Intact
Correct Containers Provided
Sample Label/COC Agree
Adequate Sample Volumes
VOA only: Trip Blank
NJ ≤ 4 days? Y N
Courier/Tracking #

Receipt Info Completed By: DPB
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
Rad Screen (uCi)
Courier/Tracking #:

Sample(s) for Radiation testin
Reportable SDWA Sample(s)?
SDWA State of Origin?
PWSID #
SDWA Compliance Y N
PWSID
WV Containers 0-6°C Y N NA
PWS Contact: PWS Phone #:

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO
Internal Use: If less than 48 hours - notify lab upon receipt

Circle Sample Collector: ALS Tech / Client
Name: [illegible] ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
11-7-24	1521	1	[illegible]	2	DD/ALS
		3		4	
		5		6	
		7		8	
		9		10	

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW [ ] _____

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [x] PA [ ] WV [ ] FL [ ] other

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 07.06.2023

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

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 4TH QTR 2024 GWMP-FORM 19Q
Workorder 3386873
Report ID 369941 on 11/26/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Nov 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.

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
3386873001	FFMP02DW	Ground Water	11/08/2024 11:13	11/08/2024 16:10	BGS	Analytical Laboratory Service
3386873002	FIELD BLANK	Ground Water	11/08/2024 15:10	11/08/2024 16:10	BGS	Analytical Laboratory Service
3386873003	TRIP BLANK	Water	11/08/2024 16:10	11/08/2024 16:10	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		
3386873002	FIELD BLANK	**S1**	Phenolics was not analyzed. Due to a field sampling error, the container was empty at the time of receipt. SJS 11/26/24

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 sample was originally run within hold time, but required further analysis that exceeded hold time.

Detected Results Summary

Client Sample ID	FFMP02DW	Collected	11/08/2024 11:13
Lab Sample ID	3386873001	Lab Receipt	11/08/2024 16:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	28.38	Feet		Field	#
Dissolved Oxygen	0.05	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	509.60	Feet		Field	#
Flow Rate	1.95	gal/min		Field	#
Ground Water Elevation	481.22	ft/MSL		Field	#
Oxidation-Reduction Potential	17	mV		Field	#
pH, Field (SM4500B)	7.10	pH_Units		Field	#
Sample Depth	120.00	Feet		Field	#
Specific Conductance, Field	1484	umhos/cm	1	Field	#
Temperature	17.35	Deg. C		Field	#
Total Well Depth	153.00	Feet		Field	#
Turbidity, Field	4	NTU	1	Field	#
Volume in Water Column	183.19	Gallons		Field	#
Water Level After Purge	79.01	Feet		Field	#
Well Volumes Purged	1.01	Vol		Field	#
METALS					
Calcium, Total	132	mg/L	0.11	SW846 6010C	#
Iron, Total	0.45	mg/L	0.067	SW846 6010C	#
Magnesium, Total	20.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.18	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	132	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	131	mg/L	5	SM2320B-2011	#
Alkalinity, Total	131	mg/L	5	SM2320B-2011	#
Chloride	365	mg/L	5.0	EPA 300.0	#
Nitrate-N	7.5	mg/L	2.5	EPA 300.0	#
pH	8.21	pH_Units		S4500HB-11	#
Specific Conductance	1480	umhos/cm	5	SW846 9050A	#
Sulfate	47.0	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	856	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.84	mg/L	0.50	SW846 9060A	#
Turbidity	5.6	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	FIELD BLANK	Collected	11/08/2024 15:10
Lab Sample ID	3386873002	Lab Receipt	11/08/2024 16:10

Compound	Result	Units	RDL	Method	Flag
METALS					
Calcium, Total	0.18	mg/L	0.11	SW846 6010C	#
WET CHEMISTRY					
pH	6.18	pH_Units		S4500HB-11	#
Total Dissolved Solids	80	mg/L	25	SM2540C-15	#

Results

Client Sample ID	FFMP02DW	Collected	11/08/2024 11:13
Lab Sample ID	3386873001	Lab Receipt	11/08/2024 16:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	28.38		Feet		Field	1	11/08/2024 11:13	BGS	D
Dissolved Oxygen	0.05		mg/L	0.01	Field	1	11/08/2024 11:13	BGS	D
Elev Top MW Casing above MSL	509.60		Feet		Field	1	11/08/2024 11:13	BGS	D
Flow Rate	1.95		gal/min		Field	1	11/08/2024 11:13	BGS	D
Ground Water Elevation	481.22		ft/MSL		Field	1	11/08/2024 11:13	BGS	D
Oxidation-Reduction Potential	17		mV		Field	1	11/08/2024 11:13	BGS	D
pH, Field (SM4500B)	7.10		pH_Units		Field	1	11/08/2024 11:13	BGS	D
Sample Depth	120.00		Feet		Field	1	11/08/2024 11:13	BGS	D
Specific Conductance, Field	1484		umhos/cm	1	Field	1	11/08/2024 11:13	BGS	D
Temperature	17.35		Deg. C		Field	1	11/08/2024 11:13	BGS	D
Total Well Depth	153.00		Feet		Field	1	11/08/2024 11:13	BGS	D
Turbidity, Field	4		NTU	1	Field	1	11/08/2024 11:13	BGS	D
Volume in Water Column	183.19		Gallons		Field	1	11/08/2024 11:13	BGS	D
Water Level After Purge	79.01		Feet		Field	1	11/08/2024 11:13	BGS	D
Well Volumes Purged	1.01		Vol		Field	1	11/08/2024 11:13	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	132		mg/L	0.11	SW846 6010C	1	11/18/2024 10:21	MSY	J1
Iron, Total	0.45		mg/L	0.067	SW846 6010C	1	11/18/2024 10:21	MSY	J1
Magnesium, Total	20.4		mg/L	0.11	SW846 6010C	1	11/18/2024 10:21	MSY	J1
Manganese, Total	0.18		mg/L	0.0056	SW846 6010C	1	11/18/2024 10:21	MSY	J1
Potassium, Total	1.2		mg/L	0.56	SW846 6010C	1	11/18/2024 10:21	MSY	J1
Sodium, Total	132		mg/L	0.56	SW846 6010C	1	11/18/2024 10:21	MSY	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	11/18/2024 15:30	BST	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/18/2024 15:30	BST	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 15:30	BST	H

Results

Client Sample ID	FFMP02DW	Collected	11/08/2024 11:13
Lab Sample ID	3386873001	Lab Receipt	11/08/2024 16:10

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	99.5%	62 – 133	11/18/2024 15:30	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	11/18/2024 15:30	
Dibromofluoromethane	1868-53-7	98.9%	78 – 116	11/18/2024 15:30	
Toluene-d8	2037-26-5	101%	76 – 127	11/18/2024 15:30	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	131		mg/L	5	SM2320B-2011	1	11/15/2024 03:46	KMV	B
Alkalinity, Total	131	1	mg/L	5	SM2320B-2011	1	11/15/2024 03:46	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	11/12/2024 15:39	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/12/2024 11:50	KMS	A
Chloride	365		mg/L	5.0	EPA 300.0	5	11/09/2024 17:05	GMM	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	11/09/2024 17:05	GMM	B
Nitrate-N	7.5		mg/L	2.5	EPA 300.0	5	11/09/2024 17:05	GMM	B
pH	8.21	2	pH_Units		S4500HB-11	1	11/15/2024 03:46	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/21/2024 15:15	AKH	G
Specific Conductance	1480		umhos/cm	5	SW846 9050A	1	11/25/2024 15:32	KMV	B
Sulfate	47.0		mg/L	5.0	EPA 300.0	5	11/09/2024 17:05	GMM	B
Total Dissolved Solids	856		mg/L	25	SM2540C-15	1	11/11/2024 17:45	RAG	B
Total Organic Carbon (TOC)	0.84		mg/L	0.50	SW846 9060A	1	11/12/2024 00:09	PAG	E
Turbidity	5.6		NTU	0.30	SM2130B-2011	1	11/09/2024 11:16	NPF	B

Results

Client Sample ID	FIELD BLANK	Collected	11/08/2024 15:10
Lab Sample ID	3386873002	Lab Receipt	11/08/2024 16:10

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	0.18	S1	mg/L	0.11	SW846 6010C	1	11/18/2024 10:22	MSY	J1
Iron, Total	ND	ND,S1	mg/L	0.067	SW846 6010C	1	11/18/2024 10:22	MSY	J1
Magnesium, Total	ND	ND,S1	mg/L	0.11	SW846 6010C	1	11/18/2024 10:22	MSY	J1
Manganese, Total	ND	ND,S1	mg/L	0.0056	SW846 6010C	1	11/18/2024 10:22	MSY	J1
Potassium, Total	ND	ND,S1	mg/L	0.56	SW846 6010C	1	11/18/2024 10:22	MSY	J1
Sodium, Total	ND	ND,S1	mg/L	0.56	SW846 6010C	1	11/18/2024 10:22	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
1,1-Dichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
1,1-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
1,2-Dibromoethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
1,2-Dichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
Benzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
cis-1,2-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
Ethylbenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
Methylene Chloride	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
Tetrachloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
Toluene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
Total Xylenes	ND	ND,S1	ug/L	3.0	SW846 8260B	1	11/18/2024 15:07	BST	H
trans-1,2-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
Trichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H
Vinyl Chloride	ND	ND,S1	ug/L	1.0	SW846 8260B	1	11/18/2024 15:07	BST	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.6%	62 – 133	11/18/2024 15:07	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	11/18/2024 15:07	
Dibromofluoromethane	1868-53-7	100%	78 – 116	11/18/2024 15:07	
Toluene-d8	2037-26-5	99.1%	76 – 127	11/18/2024 15:07	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND,S1	mg/L	5	SM2320B-2011	1	11/15/2024 03:55	KMV	B
Alkalinity, Total	ND	ND,1,S1	mg/L	5	SM2320B-2011	1	11/15/2024 03:55	KMV	B
Ammonia-N, Low Level	ND	ND,S1	mg/L	0.10	SM 4500-NH3G	1	11/12/2024 15:42	AYS	A
Chemical Oxygen Demand (COD)	ND	ND,S1	mg/L	15	EPA 410.4	1	11/12/2024 11:50	KMS	A
Chloride	ND	ND,S1	mg/L	2.0	EPA 300.0	2	11/09/2024 17:18	GMM	B
Fluoride	ND	ND,S1	mg/L	0.20	EPA 300.0	2	11/09/2024 17:18	GMM	B
Nitrate-N	ND	ND,S1	mg/L	1.0	EPA 300.0	2	11/09/2024 17:18	GMM	B
pH	6.18	2,S1	pH_Units		S4500HB-11	1	11/15/2024 03:55	KMV	B
Specific Conductance	ND	ND,S1	umhos/cm	5	SW846 9050A	1	11/25/2024 15:32	KMV	B

Results

Client Sample ID	FIELD BLANK	Collected	11/08/2024 15:10
Lab Sample ID	3386873002	Lab Receipt	11/08/2024 16:10

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Sulfate	ND	ND,S1	mg/L	2.0	EPA 300.0	2	11/09/2024 17:18	GMM	B
Total Dissolved Solids	80	3,S1	mg/L	25	SM2540C-15	1	11/18/2024 16:40	RAG	B
Total Organic Carbon (TOC)	ND	ND,S1	mg/L	0.50	SW846 9060A	1	11/12/2024 00:09	PAG	E
Turbidity	ND	ND,S1	NTU	0.30	SM2130B-2011	1	11/09/2024 11:16	NPF	B

Results

Client Sample ID	TRIP BLANK	Collected	11/08/2024 16:10
Lab Sample ID	3386873003	Lab Receipt	11/08/2024 16:10

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	11/18/2024 14:44	BST	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/18/2024 14:44	BST	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/18/2024 14:44	BST	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.7%	62 – 133	11/18/2024 14:44	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	11/18/2024 14:44	
Dibromofluoromethane	1868-53-7	97.7%	78 – 116	11/18/2024 14:44	
Toluene-d8	2037-26-5	100%	76 – 127	11/18/2024 14:44	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3386873001	FFMP02DW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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	
3386873002	FIELD BLANK	SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
3386873003	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
3386873001	FFMP02DW	N/A	N/A	N/A		Field	1332842
		SW846 3015A	1331910	11/14/2024 22:54	ANN	SW846 6010C	1334401
		N/A	N/A	N/A		SW846 8260B	1334587
		N/A	N/A	N/A		EPA 300.0	1330545
		N/A	N/A	N/A		EPA 410.4	1331472
		N/A	N/A	N/A		S4500HB-11	1332226
		N/A	N/A	N/A		SM 4500-NH3G	1331474
		N/A	N/A	N/A		SM2130B-2011	1330544
		N/A	N/A	N/A		SM2320B-2011	1332226
		N/A	N/A	N/A		SM2540C-15	1331179
		N/A	N/A	N/A		SW846 9050A	1338189
		N/A	N/A	N/A		SW846 9060A	1331249
		SW846 9066	1336553	11/21/2024 10:45	AKH	SW846 9066	1336557
3386873002	FIELD BLANK	SW846 3015A	1331910	11/14/2024 22:54	ANN	SW846 6010C	1334401
		N/A	N/A	N/A		SW846 8260B	1334587
		N/A	N/A	N/A		EPA 300.0	1330545
		N/A	N/A	N/A		EPA 410.4	1331472
		N/A	N/A	N/A		S4500HB-11	1332226
		N/A	N/A	N/A		SM 4500-NH3G	1331474
		N/A	N/A	N/A		SM2130B-2011	1330544
		N/A	N/A	N/A		SM2320B-2011	1332226
		N/A	N/A	N/A		SM2540C-15	1334405
		N/A	N/A	N/A		SW846 9050A	1338189
		N/A	N/A	N/A		SW846 9060A	1331249
3386873003	TRIP BLANK	N/A	N/A	N/A		SW846 8260B	1334587

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

3386873
Logged By: SLS
PM: SJB

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO 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
Purchase Order #:

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [x] dbrown@lcswma.org

	Container Type	AG	AN	CG	P	P			P	P
	Container Size	40ml	125ml	40ml	500ml	250ml			250ml	125ml
	Preservative	HCL	H2SO4	HCL	UNP	UNP			H2SO4	HNO3

Orthophosphate Filtered? Yes No Hexavalent Chromium Filtered? Yes No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	VOC Form 19Q	pH, CL, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, Bicarbonate	FM	Sample Debth for AUX Data	NH3-N, COD	Metals Fe,Mn,Na,Ca,K,Mg
	Enter Number of Containers Per Sample or Field Results Below.														
1	FFMP02DW	11/8/24	1113		G	GW	2	1	2	1	1	x	x	1	2
2	Field Blank	11/8/24	1510		G	GW	2	✱	2	1	1			1	2
3	Trip Blank	11/8/24	1610		G	GW			2						
4															
5															
6															
7															
8															
9															
10															

Circle Sample Collector: ALS Tech / Client
Name: NC Shade ID:

Comments: received anempty Al$_2$SO4 jar MP 11/8/24

Date:	Time		Relinquished By / Company Name		Received By / Company Name
11-8-24	1610	1	NC Shade	2	
		3		4	
		5		6	
		7		8	
		9		10	

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

(Completed by Receiving Lab)

Temp Taken By: Therm ID: WO Temp (°C)
Receipt Info completed by: WV Containers 0-6°C Y N N

Temp By:	WO Temp (°C)	Therm ID
MP	3	571

Receipt Info Completed By: MP
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 MP 11/8/24
Sample Label/COC Agree Y N
Adequate Sample Volumes Y N IA
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

Deviations? NO YES
If YES, list below:

Client contact:
Date/Tech:

Rad Screen (uCi)
New Source? Y N
New Source Contact:

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO
Internal Use: If less than 48 hours - notify lab upon receipt

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW [ ]

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [x] PA [ ] WV [ ] FL [ ] other

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

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 4TH QTR 2024 GWMP-FORM 19Q
Workorder 3388525
Report ID 374133 on 12/13/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Nov 19, 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.

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
3388525001	FFMP02SW	Ground Water	11/19/2024 09:20	11/19/2024 15:20	BGS	Analytical Laboratory Service

Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136, 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.

Detected Results Summary

Client Sample ID	FFMP02SW	Collected	11/19/2024 09:20
Lab Sample ID	3388525001	Lab Receipt	11/19/2024 15:20

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	17.15	Feet		Field	#
Dissolved Oxygen	3.10	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	509.90	Feet		Field	#
Flow Rate	0.99	gal/min		Field	#
Ground Water Elevation	492.75	ft/MSL		Field	#
Oxidation-Reduction Potential	227	mV		Field	#
pH, Field (SM4500B)	5.12	pH_Units		Field	#
Sample Depth	18.00	Feet		Field	#
Specific Conductance, Field	672	umhos/cm	1	Field	#
Temperature	16.46	Deg. C		Field	#
Total Well Depth	22.70	Feet		Field	#
Turbidity, Field	139	NTU	1	Field	#
Volume in Water Column	3.61	Gallons		Field	#
Water Level After Purge	18.03	Feet		Field	#
Well Volumes Purged	1.40	Vol		Field	#
METALS					
Calcium, Total	31.1	mg/L	0.11	SW846 6010C	#
Iron, Total	0.75	mg/L	0.067	SW846 6010C	#
Magnesium, Total	11.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.063	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.8	mg/L	0.56	SW846 6010C	#
Sodium, Total	91.1	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	20	mg/L	5	SM2320B-2011	#
Alkalinity, Total	20	mg/L	5	SM2320B-2011	#
Chloride	160	mg/L	2.0	EPA 300.0	#
Nitrate-N	12.6	mg/L	1.0	EPA 300.0	#
pH	7.11	pH_Units		S4500HB-11	#
Specific Conductance	726	umhos/cm	5	SW846 9050A	#
Sulfate	47.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	406	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.1	mg/L	0.50	SW846 9060A	#
Turbidity	27	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	FFMP02SW	Collected	11/19/2024 09:20
Lab Sample ID	3388525001	Lab Receipt	11/19/2024 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	17.15		Feet		Field	1	11/19/2024 09:20	BGS	C
Dissolved Oxygen	3.10		mg/L	0.01	Field	1	11/19/2024 09:20	BGS	C
Elev Top MW Casing above MSL	509.90		Feet		Field	1	11/19/2024 09:20	BGS	C
Flow Rate	0.99		gal/min		Field	1	11/19/2024 09:20	BGS	C
Ground Water Elevation	492.75		ft/MSL		Field	1	11/19/2024 09:20	BGS	C
Oxidation-Reduction Potential	227		mV		Field	1	11/19/2024 09:20	BGS	C
pH, Field (SM4500B)	5.12		pH_Units		Field	1	11/19/2024 09:20	BGS	C
Sample Depth	18.00		Feet		Field	1	11/19/2024 09:20	BGS	C
Specific Conductance, Field	672		umhos/cm	1	Field	1	11/19/2024 09:20	BGS	C
Temperature	16.46		Deg. C		Field	1	11/19/2024 09:20	BGS	C
Total Well Depth	22.70		Feet		Field	1	11/19/2024 09:20	BGS	C
Turbidity, Field	139		NTU	1	Field	1	11/19/2024 09:20	BGS	C
Volume in Water Column	3.61		Gallons		Field	1	11/19/2024 09:20	BGS	C
Water Level After Purge	18.03		Feet		Field	1	11/19/2024 09:20	BGS	C
Well Volumes Purged	1.40		Vol		Field	1	11/19/2024 09:20	BGS	C

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	31.1		mg/L	0.11	SW846 6010C	1	11/29/2024 09:32	AXW	I1
Iron, Total	0.75		mg/L	0.067	SW846 6010C	1	11/29/2024 09:32	AXW	I1
Magnesium, Total	11.3		mg/L	0.11	SW846 6010C	1	11/29/2024 09:32	AXW	I1
Manganese, Total	0.063		mg/L	0.0056	SW846 6010C	1	11/29/2024 09:32	AXW	I1
Potassium, Total	3.8		mg/L	0.56	SW846 6010C	1	11/29/2024 09:32	AXW	I1
Sodium, Total	91.1		mg/L	0.56	SW846 6010C	1	11/29/2024 09:32	AXW	I1

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	11/27/2024 14:58	TMP	G
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/27/2024 14:58	TMP	G

Results

Client Sample ID	FFMP02SW	Collected	11/19/2024 09:20
Lab Sample ID	3388525001	Lab Receipt	11/19/2024 15:20

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.4%	62 – 133	11/27/2024 14:58	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	11/27/2024 14:58	
Dibromofluoromethane	1868-53-7	98.5%	78 – 116	11/27/2024 14:58	
Toluene-d8	2037-26-5	106%	76 – 127	11/27/2024 14:58	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	20		mg/L	5	SM2320B-2011	1	11/23/2024 01:40	JXK	B
Alkalinity, Total	20	1	mg/L	5	SM2320B-2011	1	11/23/2024 01:40	JXK	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	12/12/2024 21:59	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	11/21/2024 12:00	KMS	A
Chloride	160		mg/L	2.0	EPA 300.0	2	11/20/2024 20:16	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	11/20/2024 20:16	J1W	B
Nitrate-N	12.6		mg/L	1.0	EPA 300.0	2	11/20/2024 20:16	J1W	B
pH	7.11	2	pH_Units		S4500HB-11	1	11/23/2024 01:40	JXK	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	11/27/2024 16:35	AKH	F
Specific Conductance	726		umhos/cm	5	SW846 9050A	1	12/02/2024 16:16	KMV	B
Sulfate	47.8		mg/L	2.0	EPA 300.0	2	11/20/2024 20:16	J1W	B
Total Dissolved Solids	406		mg/L	25	SM2540C-15	1	11/21/2024 14:10	RAG	B
Total Organic Carbon (TOC)	1.1		mg/L	0.50	SW846 9060A	1	11/21/2024 19:16	PAG	D
Turbidity	27		NTU	0.30	SM2130B-2011	1	11/20/2024 14:52	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3388525001	FFMP02SW	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	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
3388525001	FFMP02SW	N/A	N/A	N/A		Field	1344507
		SW846 3015A	1336744	11/22/2024 02:28	ANN	SW846 6010C	1346993
		N/A	N/A	N/A		SW846 8260B	1345922
		N/A	N/A	N/A		EPA 300.0	1335790
		N/A	N/A	N/A		EPA 410.4	1336515
		N/A	N/A	N/A		S4500HB-11	1336257
		N/A	N/A	N/A		SM 4500-NH3G	1354648
		N/A	N/A	N/A		SM2130B-2011	1335803
		N/A	N/A	N/A		SM2320B-2011	1336257
		N/A	N/A	N/A		SM2540C-15	1336522
		N/A	N/A	N/A		SW846 9050A	1349013
		N/A	N/A	N/A		SW846 9060A	1336584
		SW846 9066	1343397	11/26/2024 11:37	AKH	SW846 9066	1343404

301 Fulling Mill Rd, Suite A
Middletown, PA 17057
P. 717-944-5541

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 3388525
Logged By: CXW
PM: SJB
ALS Quote #:
of

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO 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
Purchase Order #:

TAT [x] Normal-Standard TAT is 10-12 business days.
[ ] Rush-Subject to ALS approval and surcharges.
Date Required: Approved?
Email? [x] dbrown@lcswma.org

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	500ml	250ml			250ml	125ml	
	Preservative	HCL	H2SO4	HCL	UNP	UNP			H2SO4	HNO3	
	Orthophosphate Filtered?			Yes	No	Hexavalent Chromium Filtered?				Yes	No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	VOC Form 19Q	pH, Cl, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, Bicarbonate	FM	Sample Debth for AUX Data	NH3-N, COD	Metals Fe,Mn,Na,Ca,K,Mg	
				Enter Number of Containers Per Sample or Field Results Below.												
1	FFMP02SW	11/19/24	0940		G	GW	2	1	2	1	1	x	x	1	2	
2																
3																
4																
5																
6																
7																
8																
9																
10																

Temp Taken By: LW Therm ID: 571 WO Temp (°C) 1
Receipt Info completed by: LW
WV Containers 0-6°C Y N NA

Cooler Custody Seals Intact	Y	N	NA
Sample Custody Seal Intact	Y	N	NA
Received on Ice	Y	N	NA
Coolers & Samples Intact	Y	N	
Correct Containers Provided	Y	N	
Sample Label/COC Agree	Y	N	
Adequate Sample Volumes	Y	N	
VOA only: Trip Blank	Y	N	NA

Deviations? NO YES
If YES, list below:
NJ ≤ 4 days? Y N
Courier/Tracking #
Client contact:
Date/Tech:

Sample(s) for Radiation testing? Y N Rad Screen (uCi)_____
Reportable SDWA Sample(s)? Y N New Source? Y N
SDWA State of Origin?_____ New Source Contact:
PWSID #__
PWS Contact:_____ PWS Phone #:_____

SDWA Sample Type Key: D=Distribution E=Entry Point R=Raw P=Plant C=Check S=Special A=Annual Startup

Sample/COC Remarks

Contains Short Hold Testing YES NO

Internal Use: If less than 48 hours - notify lab upon receipt

Circle Sample Collector: ALS Tech / Client
Name: [illegible] ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
11-19-24	1520	1	[illegible] ALS	2	[illegible] ALS
		3		4	
		5		6	
		7		8	
		9		10	

Data Deliverables: [ ] Standard Lvl 1 [ ] Standard Lvl 2 [ ] Standard Lvl 3 [ ] Standard Lvl 4 [ ] CLP-like [ ] DOD [ ] NJ RED [ ] NJ Full [ ] HSCA [ ] Landfill [ ] NJ GW [ ] _____

EDDs: [ ] Excel Summary [ ] Equis [ ] Custom

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

State Samples Collected In: [ ] NY [ ] NJ [x] PA [ ] WV [ ] FL ____ other

* G=Grab; C=Composite **Matrix - A=Air; D=Drinking Water; GW=Groundwater; O=Oil; LW=Liquid Waste; S=Solid/Soil/Sludge; SW=Surface Water; WP=Wipe; WW=Wastewater

ALS SHIPPING ADDRESS: 301 Fulling Mill Road, Suite A, Middletown, PA 17057

Rev 07.06.2023