



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 63.45 ft Measured from: Land Surface TOC

Casing Stickup: 1.90 ft Elevation of Water Level: 512.95 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 125.50 gal

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

Well Purged: Yes No Well Volumes Purged: 1.0

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/1/2023 Sample Collection Time: 11:15

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3300655001 Final Lab Analysis Completion Date: 5/10/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP015W

Sample Date 5/1/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	23	SM20-2320B
CALCIUM, TOTAL	34.7	SW846 6010B
CALCIUM, DISSOLVED	34.5	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	44	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	30.9	SW846 6010B
MAGNESIUM, DISSOLVED	30.7	SW846 6010B
MANGANESE, TOTAL (ug/l)	19	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	19	SW846 6010B
NITRATE-NITROGEN	43.3 E	EPA 300
pH-FIELD (SU)	5.53	FIELD
pH-LAB (SU)	6.59	SM20-4500B
POTASSIUM, TOTAL	2.5	SW846 6010B
POTASSIUM, DISSOLVED	2.5	SW846 6010B
SODIUM, TOTAL	23.2	SW846 6010B
SODIUM, DISSOLVED	22.2	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	463	FIELD
SPEC. COND., LAB (umhos/cm)	618	EPA 120.1
SULFATE	22	EPA 300
ALKALINITY	23	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	418	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.4	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM20- 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 5/1/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP015W

Sample Date 5/1/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	64	SW846 6010B
BARIUM, DISSOLVED	57	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	27	SW846 6010B
ZINC, DISSOLVED	27	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP015W

Sample Date 5/1/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP015W

Sample Date 5/1/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.8	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 51.05 ft Measured from: Land Surface TOC

Casing Stickup: 1.20 ft Elevation of Water Level: 539.85 ft./MSL

Sampling Depth: 130 ft Volume of Water Column: 141.21 gal

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

Well Purged: Yes No Well Volumes Purged: 0.8

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/1/2023 Sample Collection Time: 12:51

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3300655002 Final Lab Analysis Completion Date: 5/10/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP03AW

Sample Date 5/1/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	13	SM20-2320B
CALCIUM, TOTAL	20.5	SW846 6010B
CALCIUM, DISSOLVED	20.6	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	40.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	15.9	SW846 6010B
MAGNESIUM, DISSOLVED	15.8	SW846 6010B
MANGANESE, TOTAL (ug/l)	390	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	390	SW846 6010B
NITRATE-NITROGEN	22 E	EPA 300
pH-FIELD (SU)	5.09	FIELD
pH-LAB (SU)	6.17	SM20-4500B
POTASSIUM, TOTAL	1.5	SW846 6010B
POTASSIUM, DISSOLVED	1.5	SW846 6010B
SODIUM, TOTAL	14.9	SW846 6010B
SODIUM, DISSOLVED	14.5	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	272	FIELD
SPEC. COND., LAB (umhos/cm)	372	EPA 120.1
SULFATE	3.1	EPA 300
ALKALINITY	13	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	254	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM20- 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 5/1/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP03AW

Sample Date 5/1/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	58	SW846 6010B
BARIUM, DISSOLVED	56	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	7.8	SW846 6010B
COPPER, DISSOLVED	7.7	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	22	SW846 6010B
ZINC, DISSOLVED	22	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP03AW

Sample Date 5/1/2023

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP03AW

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FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	12	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.

I.D. No	101389
Monitoring Point No.	FFMP03AW
Sample Date	5/1/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

List at least ten volatile organic compounds not otherwise identified in this section. Their identification should be based upon those compounds showing the greatest apparent concentration from the peaks of a mass spectrum of each sample. These ten compounds shall be identified but the concentration of each is not required.

<u>Constituent</u>	<u>CAS Number</u>



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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 62.5 ft Measured from: Land Surface TOC

Casing Stickup: 1.70 ft Elevation of Water Level: 474.90 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 128.51 gal

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

Well Purged: Yes No Well Volumes Purged: 1.0

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/1/2023 Sample Collection Time: 14:12

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 No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3300655003 Final Lab Analysis Completion Date: 5/10/2023

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP005W

Sample Date 5/1/2023

FORM 19
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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	SM20-4500D
BICARBONATE ALKALINITY	54	SM20-2320B
CALCIUM, TOTAL	75.8	SW846 6010B
CALCIUM, DISSOLVED	75.7	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	186	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	19.5	SW846 6010B
MAGNESIUM, DISSOLVED	19.6	SW846 6010B
MANGANESE, TOTAL (ug/l)	200	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	210	SW846 6010B
NITRATE-NITROGEN	1.5	EPA 300
pH-FIELD (SU)	5.56	FIELD
pH-LAB (SU)	6.65	SM20-4500B
POTASSIUM, TOTAL	3.3	SW846 6010B
POTASSIUM, DISSOLVED	3.4	SW846 6010B
SODIUM, TOTAL	53.5	SW846 6010B
SODIUM, DISSOLVED	54.6	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	677	FIELD
SPEC. COND., LAB (umhos/cm)	895	EPA 120.1
SULFATE	79.5	EPA 300
ALKALINITY	54	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	618	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.4	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM20- 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 5/1/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP005W

Sample Date 5/1/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	52	SW846 6010B
BARIUM, DISSOLVED	51	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP005W

Sample Date 5/1/2023

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP005W

Sample Date 5/1/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	6.3	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 73.63 ft Measured from: Land Surface TOC

Casing Stickup: 3.30 ft Elevation of Water Level: 473.77 ft./MSL

Sampling Depth: 105 ft Volume of Water Column: 59.29 gal

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

Well Purged: Yes No Well Volumes Purged: 1.4

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/1/2023 Sample Collection Time: 15:29

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 No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3300655004 Final Lab Analysis Completion Date: 5/10/2023

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

Comments: _____

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	60	SM20-2320B
CALCIUM, TOTAL	69.2	SW846 6010B
CALCIUM, DISSOLVED	70.6	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	162	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	17.5	SW846 6010B
MAGNESIUM, DISSOLVED	17.7	SW846 6010B
MANGANESE, TOTAL (ug/l)	880	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	900	SW846 6010B
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	5.57	FIELD
pH-LAB (SU)	6.56	SM20-4500B
POTASSIUM, TOTAL	8.5	SW846 6010B
POTASSIUM, DISSOLVED	8.6	SW846 6010B
SODIUM, TOTAL	58	SW846 6010B
SODIUM, DISSOLVED	57.4	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	658	FIELD
SPEC. COND., LAB (umhos/cm)	871	EPA 120.1
SULFATE	101	EPA 300
ALKALINITY	60	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	544	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	1.9	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.55	SM20- 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 5/1/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP26RW

Sample Date 5/1/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	86	SW846 6010B
BARIUM, DISSOLVED	84	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	9	SW846 6010B
ZINC, DISSOLVED	8.8	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP26RW

Sample Date 5/1/2023

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP26RW

Sample Date 5/1/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	23	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 36.23 ft Measured from: Land Surface TOC

Casing Stickup: 2.00 ft Elevation of Water Level: 444.47 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 167.82 gal

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

Well Purged: Yes No Well Volumes Purged: 0.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/2/2023 Sample Collection Time: 11:30

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3300852001 Final Lab Analysis Completion Date: 5/12/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP017W

Sample Date 5/2/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.481	SM20-4500D
BICARBONATE ALKALINITY	116	SM20-2320B
CALCIUM, TOTAL	93.2	SW846 6010B
CALCIUM, DISSOLVED	88.3	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	15	EPA 410.4
CHLORIDE	288	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	39.5	SW846 6010B
MAGNESIUM, DISSOLVED	36.7	SW846 6010B
MANGANESE, TOTAL (ug/l)	1300	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	1200	SW846 6010B
NITRATE-NITROGEN	4.2	EPA 300
pH-FIELD (SU)	6.01	FIELD
pH-LAB (SU)	7.29	SM20-4500B
POTASSIUM, TOTAL	7.9	SW846 6010B
POTASSIUM, DISSOLVED	7.9	SW846 6010B
SODIUM, TOTAL	91.6	SW846 6010B
SODIUM, DISSOLVED	88.4	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	953	FIELD
SPEC. COND., LAB (umhos/cm)	1320	EPA 120.1
SULFATE	81.4	EPA 300
ALKALINITY	116	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	784	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	3	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.45	SM20- 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 5/2/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP017W

Sample Date 5/2/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	110	SW846 6010B
BARIUM, DISSOLVED	110	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	8.6	SW846 6010B
ZINC, DISSOLVED	8.1	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP017W

Sample Date 5/2/2023

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP017W

Sample Date 5/2/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	12	SW846 6010B
NICKEL	6.7	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County

Municipality: Manor Township

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

Depth to Water Level: 37.73 ft Measured from: Land Surface TOC

Casing Stickup: 2.00 ft Elevation of Water Level: 439.57 ft./MSL

Sampling Depth: 55 ft Volume of Water Column: 30.50 gal

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

Well Purged: Yes No Well Volumes Purged: 4.3

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/2/2023 Sample Collection Time: 12:41

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3300852002 Final Lab Analysis Completion Date: 5/12/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP029W

Sample Date 5/2/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	9	SM20-2320B
CALCIUM, TOTAL	15.7	SW846 6010B
CALCIUM, DISSOLVED	15.6	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	80.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	11	SW846 6010B
MAGNESIUM, DISSOLVED	11	SW846 6010B
MANGANESE, TOTAL (ug/l)	34	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	37	SW846 6010B
NITRATE-NITROGEN	3.7	EPA 300
pH-FIELD (SU)	5.22	FIELD
pH-LAB (SU)	6.49	SM20-4500B
POTASSIUM, TOTAL	2.3	SW846 6010B
POTASSIUM, DISSOLVED	2.3	SW846 6010B
SODIUM, TOTAL	25.3	SW846 6010B
SODIUM, DISSOLVED	25	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	244	FIELD
SPEC. COND., LAB (umhos/cm)	349	EPA 120.1
SULFATE	6.9	EPA 300
ALKALINITY	9	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	224	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3	SM20- 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 101389

Monitoring Point No. FFMP029W

Sample Date 5/2/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP029W

Sample Date 5/2/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	83	SW846 6010B
BARIUM, DISSOLVED	84	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	6.1	SW846 6010B
ZINC, DISSOLVED	6.3	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP029W

Sample Date 5/2/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No	101389
Monitoring Point No.	FFMP029W
Sample Date	5/2/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County

Municipality: _____

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

Depth to Water Level: 9.61 ft Measured from: Land Surface TOC

Casing Stickup: _____ ft Elevation of Water Level: 463.27 ft./MSL

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

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

Well Purged: Yes No Well Volumes Purged: 0.5

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 5/2/2023 Sample Collection Time: 14:03

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3300852003 Final Lab Analysis Completion Date: 5/12/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP034W

Sample Date 5/2/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	42	SM20-2320B
CALCIUM, TOTAL	57.6	SW846 6010B
CALCIUM, DISSOLVED	56	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	162	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1400	SW846 6010B
IRON, DISSOLVED (ug/l)	1100	SW846 6010B
MAGNESIUM, TOTAL	21.2	SW846 6010B
MAGNESIUM, DISSOLVED	20	SW846 6010B
MANGANESE, TOTAL (ug/l)	150	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	180	SW846 6010B
NITRATE-NITROGEN	10	EPA 300
pH-FIELD (SU)	5.8	FIELD
pH-LAB (SU)	7.05	SM20-4500B
POTASSIUM, TOTAL	3.5	SW846 6010B
POTASSIUM, DISSOLVED	3.3	SW846 6010B
SODIUM, TOTAL	42.7	SW846 6010B
SODIUM, DISSOLVED	40.1	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	558	FIELD
SPEC. COND., LAB (umhos/cm)	762	EPA 120.1
SULFATE	28.9	EPA 300
ALKALINITY	42	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	488	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	2.6	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	17	SM20- 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 5/2/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP034W

Sample Date 5/2/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	56	SW846 6010B
BARIUM, DISSOLVED	57	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP034W

Sample Date 5/2/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP034W

Sample Date 5/2/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP033W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: MANOR TOWNSHIP

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

Depth to Water Level: 21.05 ft Measured from: Land Surface TOC

Casing Stickup: 0.49 ft Elevation of Water Level: 495.47 ft./MSL

Sampling Depth: 79 ft Volume of Water Column: 110.08 gal

Total Well Depth: 96 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.1

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/2/2023 Sample Collection Time: 15:23

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3300852004 Final Lab Analysis Completion Date: 5/12/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP033W

Sample Date 5/2/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.426	SM20-4500D
BICARBONATE ALKALINITY	44	SM20-2320B
CALCIUM, TOTAL	37.9	SW846 6010B
CALCIUM, DISSOLVED	37.2	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	86.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	8600	SW846 6010B
IRON, DISSOLVED (ug/l)	6000	SW846 6010B
MAGNESIUM, TOTAL	13.3	SW846 6010B
MAGNESIUM, DISSOLVED	12.6	SW846 6010B
MANGANESE, TOTAL (ug/l)	600	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	560	SW846 6010B
NITRATE-NITROGEN	9.1	EPA 300
pH-FIELD (SU)	5.9	FIELD
pH-LAB (SU)	6.99	SM20-4500B
POTASSIUM, TOTAL	1.9	SW846 6010B
POTASSIUM, DISSOLVED	1.9	SW846 6010B
SODIUM, TOTAL	18.4	SW846 6010B
SODIUM, DISSOLVED	17.6	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	345	FIELD
SPEC. COND., LAB (umhos/cm)	483	EPA 120.1
SULFATE	6.8	EPA 300
ALKALINITY	44	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	316	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	25	SM20- 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 5/2/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP033W

Sample Date 5/2/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	69	SW846 6010B
BARIUM, DISSOLVED	70	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP033W

Sample Date 5/2/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP033W

Sample Date 5/2/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 35.45 ft Measured from: Land Surface TOC

Casing Stickup: 2.20 ft Elevation of Water Level: 526.85 ft./MSL

Sampling Depth: 85 ft Volume of Water Column: 80.11 gal

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

Well Purged: Yes No Well Volumes Purged: 1.5

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/3/2023 Sample Collection Time: 11:10

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 No If yes, please explain in comments field.

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301191001 Final Lab Analysis Completion Date: 5/15/2023

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

Comments:

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	0.171	SM20-4500D
BICARBONATE ALKALINITY	30	SM20-2320B
CALCIUM, TOTAL	39.3	SW846 6010B
CALCIUM, DISSOLVED	39.4	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	19	EPA 410.4
CHLORIDE	252	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	100	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	17.2	SW846 6010B
MAGNESIUM, DISSOLVED	17.3	SW846 6010B
MANGANESE, TOTAL (ug/l)	2500	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	2500	SW846 6010B
NITRATE-NITROGEN	5.5	EPA 300
pH-FIELD (SU)	5.31	FIELD
pH-LAB (SU)	7.17	SM20-4500B
POTASSIUM, TOTAL	5.9	SW846 6010B
POTASSIUM, DISSOLVED	5.9	SW846 6010B
SODIUM, TOTAL	100	SW846 6010B
SODIUM, DISSOLVED	99.6	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	652	FIELD
SPEC. COND., LAB (umhos/cm)	985	EPA 120.1
SULFATE	33.2	EPA 300
ALKALINITY	30	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	564	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.68	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	5	SM20- 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 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP30RW

Sample Date 5/3/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	91	SW846 6010B
BARIUM, DISSOLVED	91	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	3.4	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.72	SW846 7470A
MERCURY, DISSOLVED	0.75	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	14	SW846 6010B
ZINC, DISSOLVED	14	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP30RW

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP30RW

Sample Date 5/3/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	21	SW846 6010B
NICKEL	28	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 35.47 ft Measured from: Land Surface TOC

Casing Stickup: 2.52 ft Elevation of Water Level: 525.25 ft./MSL

Sampling Depth: 146 ft Volume of Water Column: 390.73 gal

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

Well Purged: Yes No Well Volumes Purged: 0.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/3/2023 Sample Collection Time: 12:24

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301191002 Final Lab Analysis Completion Date: 5/15/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP04AW

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.138	SM20-4500D
BICARBONATE ALKALINITY	180	SM20-2320B
CALCIUM, TOTAL	148	SW846 6010B
CALCIUM, DISSOLVED	136	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	26	EPA 410.4
CHLORIDE	320	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	26	SW846 6010B
MAGNESIUM, DISSOLVED	24.7	SW846 6010B
MANGANESE, TOTAL (ug/l)	340	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	320	SW846 6010B
NITRATE-NITROGEN	2.5 ND	EPA 300
pH-FIELD (SU)	6.94	FIELD
pH-LAB (SU)	8.21	SM20-4500B
POTASSIUM, TOTAL	2.4	SW846 6010B
POTASSIUM, DISSOLVED	2.3	SW846 6010B
SODIUM, TOTAL	84.2	SW846 6010B
SODIUM, DISSOLVED	80.6	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	1050	FIELD
SPEC. COND., LAB (umhos/cm)	1450	EPA 120.1
SULFATE	51.9	EPA 300
ALKALINITY	180	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	904	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.68	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.5	SM20- 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 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP04AW

Sample Date 5/3/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	190	SW846 6010B
BARIUM, DISSOLVED	180	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP04AW

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLORO BENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLORO BENZENE	1 ND	SW846 8260B
1,3-DICHLORO BENZENE	1 ND	SW846 8260B
1,4-DICHLORO BENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No	101389
Monitoring Point No.	FFMP04AW
Sample Date	5/3/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	16	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP036W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: MANOR TOWNSHIP

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

Depth to Water Level: 46.98 ft Measured from: Land Surface TOC

Casing Stickup: 1.91 ft Elevation of Water Level: 431.25 ft./MSL

Sampling Depth: 135 ft Volume of Water Column: 136.61 gal

Total Well Depth: 140 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/3/2023 Sample Collection Time: 13:48

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301191003 Final Lab Analysis Completion Date: 5/15/2023

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP036W

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	98	SM20-2320B
CALCIUM, TOTAL	51.4	SW846 6010B
CALCIUM, DISSOLVED	50.8	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	32	EPA 410.4
CHLORIDE	35.2	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1000	SW846 6010B
IRON, DISSOLVED (ug/l)	840	SW846 6010B
MAGNESIUM, TOTAL	5.2	SW846 6010B
MAGNESIUM, DISSOLVED	5.1	SW846 6010B
MANGANESE, TOTAL (ug/l)	110	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	110	SW846 6010B
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	8.01	FIELD
pH-LAB (SU)	8.3	SM20-4500B
POTASSIUM, TOTAL	0.91	SW846 6010B
POTASSIUM, DISSOLVED	0.9	SW846 6010B
SODIUM, TOTAL	15	SW846 6010B
SODIUM, DISSOLVED	14.7	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	275	FIELD
SPEC. COND., LAB (umhos/cm)	395	EPA 120.1
SULFATE	36.3	EPA 300
ALKALINITY	100	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	224	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	11	SM20- 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 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP036W

Sample Date 5/3/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	150	SW846 6010B
BARIUM, DISSOLVED	150	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.4	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP036W

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP036W

Sample Date 5/3/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP035W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: MANOR TOWNSHIP

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

Depth to Water Level: 41.79 ft Measured from: Land Surface TOC

Casing Stickup: 1.45 ft Elevation of Water Level: 435.77 ft./MSL

Sampling Depth: 65 ft Volume of Water Column: 41.43 gal

Total Well Depth: 70 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.5

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/3/2023 Sample Collection Time: 14:43

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301191004 Final Lab Analysis Completion Date: 5/15/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP035W

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	115	SM20-2320B
CALCIUM, TOTAL	80.9	SW846 6010B
CALCIUM, DISSOLVED	81.5	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	35	EPA 410.4
CHLORIDE	125	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	73	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	14.3	SW846 6010B
MAGNESIUM, DISSOLVED	14.1	SW846 6010B
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	5.6 ND	SW846 6010B
NITRATE-NITROGEN	4.5	EPA 300
pH-FIELD (SU)	6.73	FIELD
pH-LAB (SU)	8.08	SM20-4500B
POTASSIUM, TOTAL	2.5	SW846 6010B
POTASSIUM, DISSOLVED	2.4	SW846 6010B
SODIUM, TOTAL	34.8	SW846 6010B
SODIUM, DISSOLVED	33.8	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	533	FIELD
SPEC. COND., LAB (umhos/cm)	752	EPA 120.1
SULFATE	44.6	EPA 300
ALKALINITY	115	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	504	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.67	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1	SM20- 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 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP035W

Sample Date 5/3/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	81	SW846 6010B
BARIUM, DISSOLVED	81	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	5.2	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	18	SW846 6010B
ZINC, DISSOLVED	19	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP035W

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLORO BENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLORO BENZENE	1 ND	SW846 8260B
1,3-DICHLORO BENZENE	1 ND	SW846 8260B
1,4-DICHLORO BENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP035W

Sample Date 5/3/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	24	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.

I.D. No	101389
Monitoring Point No.	FFMP035W
Sample Date	5/3/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

List at least ten volatile organic compounds not otherwise identified in this section. Their identification should be based upon those compounds showing the greatest apparent concentration from the peaks of a mass spectrum of each sample. These ten compounds shall be identified but the concentration of each is not required.

<u>Constituent</u>	<u>CAS Number</u>



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 25.7 ft Measured from: Land Surface TOC

Casing Stickup: 2.46 ft Elevation of Water Level: 446.5 ft./MSL

Sampling Depth: 40 ft Volume of Water Column: 16.79 gal

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

Well Purged: Yes No Well Volumes Purged: 4.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/3/2023 Sample Collection Time: 15:31

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301191005 Final Lab Analysis Completion Date: 5/15/2023

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP018W

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	22	SM20-2320B
CALCIUM, TOTAL	30.2	SW846 6010B
CALCIUM, DISSOLVED	29.5	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	29	EPA 410.4
CHLORIDE	115	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	17	SW846 6010B
MAGNESIUM, DISSOLVED	16.9	SW846 6010B
MANGANESE, TOTAL (ug/l)	150	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	130	SW846 6010B
NITRATE-NITROGEN	4	EPA 300
pH-FIELD (SU)	5.34	FIELD
pH-LAB (SU)	7.19	SM20-4500B
POTASSIUM, TOTAL	3.7	SW846 6010B
POTASSIUM, DISSOLVED	3.7	SW846 6010B
SODIUM, TOTAL	34.7	SW846 6010B
SODIUM, DISSOLVED	33.6	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	388	FIELD
SPEC. COND., LAB (umhos/cm)	523	EPA 120.1
SULFATE	37.7	EPA 300
ALKALINITY	22	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	326	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.67	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM20- 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 101389

Monitoring Point No. FFMP018W

Sample Date 5/3/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP018W

Sample Date 5/3/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	75	SW846 6010B
BARIUM, DISSOLVED	72	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	12	SW846 6010B
ZINC, DISSOLVED	12	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP018W

Sample Date 5/3/2023

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP018W

Sample Date 5/3/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	7.5	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.

I.D. No	101389
Monitoring Point No.	FFMP018W
Sample Date	5/3/2023

FORM 19 ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

List at least ten volatile organic compounds not otherwise identified in this section. Their identification should be based upon those compounds showing the greatest apparent concentration from the peaks of a mass spectrum of each sample. These ten compounds shall be identified but the concentration of each is not required.

<u>Constituent</u>	<u>CAS Number</u>



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
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DEP USE ONLY

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FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 26.66 ft Measured from: Land Surface TOC

Casing Stickup: 1.79 ft Elevation of Water Level: 445.29 ft./MSL

Sampling Depth: 49 ft Volume of Water Column: 69.27 gal

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

Well Purged: Yes No Well Volumes Purged: 2.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/3/2023 Sample Collection Time: 16:22

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301191006 Final Lab Analysis Completion Date: 5/15/2023

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP019W

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	62	SM20-2320B
CALCIUM, TOTAL	59.8	SW846 6010B
CALCIUM, DISSOLVED	60.2	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	29	EPA 410.4
CHLORIDE	93.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	6.2	SW846 6010B
MAGNESIUM, DISSOLVED	6	SW846 6010B
MANGANESE, TOTAL (ug/l)	6	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	5.6 ND	SW846 6010B
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	6.61	FIELD
pH-LAB (SU)	7.94	SM20-4500B
POTASSIUM, TOTAL	0.92	SW846 6010B
POTASSIUM, DISSOLVED	0.9	SW846 6010B
SODIUM, TOTAL	11	SW846 6010B
SODIUM, DISSOLVED	10.9	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	337	FIELD
SPEC. COND., LAB (umhos/cm)	482	EPA 120.1
SULFATE	16.3	EPA 300
ALKALINITY	62	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	344	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	5	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM20- 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 101389

Monitoring Point No. FFMP019W

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP019W

Sample Date 5/3/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	84	SW846 6010B
BARIUM, DISSOLVED	84	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP019W

Sample Date 5/3/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP019W

Sample Date 5/3/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised 06/15/2023
DEP USE ONLY
Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

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

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP02DW Well Spring Stream Other
 Upgradient/Upstream 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: 21.17 ft Measured from: Land Surface TOC

Casing Stickup: _____ ft Elevation of Water Level: 488.43 ft./MSL

Sampling Depth: 120 ft Volume of Water Column: _____ gal

Total Well Depth: 152 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.5

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 5/4/2023 Sample Collection Time: 11:05

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301507001 Final Lab Analysis CompletionDate: 5/17/2023

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

Comments: _____

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	113	SM20-2320B
CALCIUM, TOTAL	135	SW846 6010B
CALCIUM, DISSOLVED	125	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	39	EPA 410.4
CHLORIDE	467	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1100	SW846 6010B
IRON, DISSOLVED (ug/l)	130	SW846 6010B
MAGNESIUM, TOTAL	23.7	SW846 6010B
MAGNESIUM, DISSOLVED	21.2	SW846 6010B
MANGANESE, TOTAL (ug/l)	590	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	540	SW846 6010B
NITRATE-NITROGEN	5.4	EPA 300
pH-FIELD (SU)	7.16	FIELD
pH-LAB (SU)	7.87	SM20-4500B
POTASSIUM, TOTAL	1.9	SW846 6010B
POTASSIUM, DISSOLVED	1.8	SW846 6010B
SODIUM, TOTAL	158	SW846 6010B
SODIUM, DISSOLVED	145	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	1338	FIELD
SPEC. COND., LAB (umhos/cm)	1790	EPA 120.1
SULFATE	41	EPA 300
ALKALINITY	113	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	1180	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.89	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	12	SM20- 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 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP02DW

Sample Date 5/4/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	190	SW846 6010B
BARIUM, DISSOLVED	180	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	9.1	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP02DW

Sample Date 5/4/2023

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP02DW

Sample Date 5/4/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

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



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP02SW Well Spring Stream Other
 Upgradient/Upstream 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: 15.05 ft Measured from: Land Surface TOC

Casing Stickup: ft Elevation of Water Level: 494.85 ft./MSL

Sampling Depth: 19 ft Volume of Water Column: gal

Total Well Depth: 25 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 3.6

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/4/2023 Sample Collection Time: 11:44

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301507002 Final Lab Analysis Completion Date: 5/17/2023

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP02SW

Sample Date 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	21	SM20-2320B
CALCIUM, TOTAL	17.4	SW846 6010B
CALCIUM, DISSOLVED	17.3	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	30	EPA 410.4
CHLORIDE	41.4	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	1000	SW846 6010B
IRON, DISSOLVED (ug/l)	90	SW846 6010B
MAGNESIUM, TOTAL	7.2	SW846 6010B
MAGNESIUM, DISSOLVED	7.1	SW846 6010B
MANGANESE, TOTAL (ug/l)	26	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	14	SW846 6010B
NITRATE-NITROGEN	9.5	EPA 300
pH-FIELD (SU)	5.68	FIELD
pH-LAB (SU)	6.8	SM20-4500B
POTASSIUM, TOTAL	4.5	SW846 6010B
POTASSIUM, DISSOLVED	4.4	SW846 6010B
SODIUM, TOTAL	37.8	SW846 6010B
SODIUM, DISSOLVED	37.7	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	285	FIELD
SPEC. COND., LAB (umhos/cm)	374	EPA 120.1
SULFATE	48.9	EPA 300
ALKALINITY	21	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	200	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	2.1	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	120	SM20- 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 5/4/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP02SW

Sample Date 5/4/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	76	SW846 6010B
BARIUM, DISSOLVED	69	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	12	SW846 6010B
CHROMIUM, DISSOLVED	4.4	SW846 6010B
COPPER, TOTAL	8	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.3	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	9.3	SW846 6010B
ZINC, DISSOLVED	6.2	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP02SW

Sample Date 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No	101389
Monitoring Point No.	FFMP02SW
Sample Date	5/4/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	11	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP031W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: MANOR TOWNSHIP

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

Depth to Water Level: 64.41 ft Measured from: Land Surface TOC

Casing Stickup: 2.38 ft Elevation of Water Level: 548.25 ft./MSL

Sampling Depth: 130 ft Volume of Water Column: 111.02 gal

Total Well Depth: 140 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.8

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/4/2023 Sample Collection Time: 12:58

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301507003 Final Lab Analysis Completion Date: 5/17/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP031W

Sample Date 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.128	SM20-4500D
BICARBONATE ALKALINITY	69	SM20-2320B
CALCIUM, TOTAL	43.3	SW846 6010B
CALCIUM, DISSOLVED	41.5	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	19	EPA 410.4
CHLORIDE	22.8	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	3700	SW846 6010B
IRON, DISSOLVED (ug/l)	3600	SW846 6010B
MAGNESIUM, TOTAL	4.3	SW846 6010B
MAGNESIUM, DISSOLVED	4.1	SW846 6010B
MANGANESE, TOTAL (ug/l)	400	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	380	SW846 6010B
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	7.72	FIELD
pH-LAB (SU)	7.94	SM20-4500B
POTASSIUM, TOTAL	1.3	SW846 6010B
POTASSIUM, DISSOLVED	1.3	SW846 6010B
SODIUM, TOTAL	9.2	SW846 6010B
SODIUM, DISSOLVED	8.9	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	244	FIELD
SPEC. COND., LAB (umhos/cm)	324	EPA 120.1
SULFATE	51.8	EPA 300
ALKALINITY	69	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	174	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	20	SM20- 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 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP031W

Sample Date 5/4/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	44	SW846 6010B
BARIUM, DISSOLVED	42	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP031W

Sample Date 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP031W

Sample Date 5/4/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

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

Location (County): Lancaster County Municipality: Manor Township

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

Depth to Water Level: 60.18 ft Measured from: Land Surface TOC

Casing Stickup: 1.60 ft Elevation of Water Level: 553.02 ft./MSL

Sampling Depth: 85 ft Volume of Water Column: 160.70 gal

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

Well Purged: Yes No Well Volumes Purged: 0.6

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/4/2023 Sample Collection Time: 13:34

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301507004 Final Lab Analysis Completion Date: 5/17/2023

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

Comments:

I.D. No 101389

Monitoring Point No. FFMP002W

Sample Date 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	SM20-4500D
BICARBONATE ALKALINITY	5 ND	SM20-2320B
CALCIUM, TOTAL	16.3	SW846 6010B
CALCIUM, DISSOLVED	17	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	29	EPA 410.4
CHLORIDE	16.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010B
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010B
MAGNESIUM, TOTAL	7	SW846 6010B
MAGNESIUM, DISSOLVED	6.9	SW846 6010B
MANGANESE, TOTAL (ug/l)	220	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	230	SW846 6010B
NITRATE-NITROGEN	18.2	EPA 300
pH-FIELD (SU)	4.67	FIELD
pH-LAB (SU)	5.98	SM20-4500B
POTASSIUM, TOTAL	1	SW846 6010B
POTASSIUM, DISSOLVED	1	SW846 6010B
SODIUM, TOTAL	12.6	SW846 6010B
SODIUM, DISSOLVED	12.7	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	188	FIELD
SPEC. COND., LAB (umhos/cm)	253	EPA 120.1
SULFATE	10.5	EPA 300
ALKALINITY	5 ND	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	162	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM20- 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 5/4/2023

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP002W

Sample Date 5/4/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	63	SW846 6010B
BARIUM, DISSOLVED	63	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.5	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	11	SW846 6010B
COPPER, DISSOLVED	11	SW846 6010B
LEAD-FLAMELESS, TOTAL	4.2	SW846 6010B
LEAD, DISSOLVED	3.4	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	18	SW846 6010B
ZINC, DISSOLVED	17	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP002W

Sample Date 5/4/2023

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP002W

Sample Date 5/4/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	13	SW846 6010B
NICKEL	16	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.

I.D. No	101389
Monitoring Point No.	FFMP002W
Sample Date	5/4/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

List at least ten volatile organic compounds not otherwise identified in this section. Their identification should be based upon those compounds showing the greatest apparent concentration from the peaks of a mass spectrum of each sample. These ten compounds shall be identified but the concentration of each is not required.

<u>Constituent</u>	<u>CAS Number</u>



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

Date Prepared/Revised
06/15/2023

DEP USE ONLY

Date Received

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

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Frey Farm Landfill

Facility ID (as issued by DEP): 101389

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: FFMP032W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: MANOR TOWNSHIP

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

Depth to Water Level: 49.42 ft Measured from: Land Surface TOC

Casing Stickup: 2.06 ft Elevation of Water Level: 544.67 ft./MSL

Sampling Depth: 62 ft Volume of Water Column: 37.57 gal

Total Well Depth: 75 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 0.3

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 5/4/2023 Sample Collection Time: 14:07

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3301507005 Final Lab Analysis Completion Date: 5/17/2023

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

Comments: _____

I.D. No 101389

Monitoring Point No. FFMP032W

Sample Date 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.753	SM20-4500D
BICARBONATE ALKALINITY	64	SM20-2320B
CALCIUM, TOTAL	16.4	SW846 6010B
CALCIUM, DISSOLVED	16.3	SW846 6010B
COD (CHEMICAL OXYGEN DEMAND)	16	EPA 410.4
CHLORIDE	22.3	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	6400	SW846 6010B
IRON, DISSOLVED (ug/l)	6100	SW846 6010B
MAGNESIUM, TOTAL	5.7	SW846 6010B
MAGNESIUM, DISSOLVED	5.5	SW846 6010B
MANGANESE, TOTAL (ug/l)	590	SW846 6010B
MANGANESE, DISSOLVED (ug/l)	580	SW846 6010B
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	6.93	FIELD
pH-LAB (SU)	7.72	SM20-4500B
POTASSIUM, TOTAL	1.3	SW846 6010B
POTASSIUM, DISSOLVED	1.3	SW846 6010B
SODIUM, TOTAL	12.3	SW846 6010B
SODIUM, DISSOLVED	12.2	SW846 6010B
SPEC. COND., FIELD (umhos/cm)	161	FIELD
SPEC. COND., LAB (umhos/cm)	203	EPA 120.1
SULFATE	2 ND	EPA 300
ALKALINITY	64	SM20-2320B
TDS (TOT. DISSOLVED SOLIDS)	114	SM20-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	85	SM20- 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 5/4/2023

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

T Please indicate detection limit if analyte is not detected.

I.D. No. 101389

Monitoring Point No. FFMP032W

Sample Date 5/4/2023

FORM 19**QUARTERLY AND ANNUAL WATER QUALITY ANALYSES**

- 1-A. Metals (Enter all data in ug/l) If initial background analyses of four consecutive analyses show essentially identical (within 5%) dissolved and total analyses, dissolved analyses may not be required, subject to written DEP approval.**

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010B
ARSENIC, DISSOLVED	3 ND	SW846 6010B
BARIUM, TOTAL	5.6 ND	SW846 6010B
BARIUM, DISSOLVED	5.6 ND	SW846 6010B
CADMIUM, TOTAL	1.1 ND	SW846 6010B
CADMIUM, DISSOLVED	1.1 ND	SW846 6010B
CHROMIUM, TOTAL	2.2 ND	SW846 6010B
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010B
COPPER, TOTAL	5.6 ND	SW846 6010B
COPPER, DISSOLVED	5.6 ND	SW846 6010B
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010B
LEAD, DISSOLVED	2.2 ND	SW846 6010B
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010B
SELENIUM, DISSOLVED	5.6 ND	SW846 6010B
SILVER, TOTAL	2.2 ND	SW846 6010B
SILVER, DISSOLVED	2.2 ND	SW846 6010B
ZINC, TOTAL	5.6 ND	SW846 6010B
ZINC, DISSOLVED	5.6 ND	SW846 6010B

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

I.D. No 101389

Monitoring Point No. FFMP032W

Sample Date 5/4/2023

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROENZENE	1 ND	SW846 8260B
CHLOROETHANE	1 ND	SW846 8260B
DIBROMOCHLOROMETHANE	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1 ND	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	1 ND	SW846 8260B
DICHLORODIFLUOROMETHANE	1 ND	SW846 8260B
1,2-DICHLOROPROPANE	1 ND	SW846 8260B
CIS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
TRANS 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
2-BUTANONE (MEK)	10 ND	SW846 8260B
4-METHYL-2-PENTANONE	5 ND	SW846 8260B
1,1,1,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2,2-TETRACHLOROETHANE	1 ND	SW846 8260B
1,1,2-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROFLUOROMETHANE	1 ND	SW846 8260B
1,2,3-TRICHLOROPROPANE	2 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

I.D. No 101389

Monitoring Point No. FFMP032W

Sample Date 5/4/2023

FORM 19
ANNUAL WATER QUALITY ANALYSES

SUBTITLE D - Detection Zone Add-On List - When the MCL of any VOC is exceeded in the detection zone Form 50 monitoring, the following analytes must be monitored annually in the groundwater monitoring wells.

ORGANICS AND METALS (Enter all data in ug/l)

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE (CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE	7 ND	SW846 8260B
TRANS 1,4-DICHLORO-2-BUTENE	3 ND	SW846 8260B
2-HEXANONE	5 ND	SW846 8260B
DIBROMOMETHANE	1 ND	SW846 8260B
IODOMETHANE	1 ND	SW846 8260B
STYRENE	1 ND	SW846 8260B
VINYL ACETATE	5 ND	SW846 8260B
ANTIMONY	2.2 ND	SW846 6010B
BERYLLIUM	1.1 ND	SW846 6010B
COBALT	5.6 ND	SW846 6010B
NICKEL	5.6 ND	SW846 6010B
THALLIUM	1.1 ND	SW846 6010B
VANADIUM	2.2 ND	SW846 6010B

T Please indicate detection limit if analyte is not detected.



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

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

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 2ND QTR 2023 FFMP-FORM 19A

Workorder 3301507

Report ID 245233 on 5/18/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on May 04, 2023.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

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

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jordan Gallagher - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

Susan Scherer

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Susan Scherer
Project Coordinator

(ALS Digital Signature)



Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3301507001	FFMP02DW	Ground Water	05/04/2023 11:05	05/04/2023 16:05	BGS	Analytical Laboratory Service
3301507002	FFMP02SW	Ground Water	05/04/2023 11:44	05/04/2023 16:05	BGS	Analytical Laboratory Service
3301507003	FFMP031W	Ground Water	05/04/2023 12:58	05/04/2023 16:05	BGS	Analytical Laboratory Service
3301507004	FFMP002W	Ground Water	05/04/2023 13:34	05/04/2023 16:05	BGS	Analytical Laboratory Service
3301507005	FFMP032W	Ground Water	05/04/2023 14:07	05/04/2023 16:05	BGS	Analytical Laboratory Service
3301507006	FIELD BLANK	Water	05/04/2023 14:30	05/04/2023 16:05	BGS	Analytical Laboratory Service
3301507007	TRIP BLANK	Water	05/04/2023 16:05	05/04/2023 16:05	BGS	Analytical Laboratory Service



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- 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 type LLCCV for method SW846 6020A was outside the control limits for the analyte Ca. The % recovery was reported as 139.5 and the control limits were 70 to 130. Sample concentration was greater than the concentration of the CCV. |
| 4 | The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 22.3 and the control limits were 0 to 20. |
| 5 | The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 24.6 and the control limits were 0 to 20. |
| 6 | The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 26.6 and the control limits were 0 to 20. |
| 7 | The QC sample type MSD for method EPA 300.0 was outside the control limits for the analyte Nitrate-N. The % Recovery was reported as 49.4 and the control limits were 80 to 120. |
| 8 | The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Ca. The % recovery was reported as 132.5 and the control limits were 70 to 130. Sample concentration was ND. |
| 9 | The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 23.1 and the control limits were 0 to 20. |



Detected Results Summary

Client Sample ID	FFMP02DW	Collected	05/04/2023 11:05
Lab Sample ID	3301507001	Lab Receipt	05/04/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	21.17	Feet		Field	#
Elev Top MW Casing above MSL	509.60	Feet		Field	#
Flow Rate	1.50	gal/min		Field	#
Ground Water Elevation	488.43	ft/MSL		Field	#
Oxidation-Reduction Potential	-38	mV		Field	#
pH, Field (SM4500B)	7.16	pH_Units		Field	#
Sample Depth	120.00	Feet		Field	#
Specific Conductance, Field	1338	umhos/cm	1	Field	#
Temperature	14.17	Deg. C		Field	#
Total Well Depth	153.00	Feet		Field	#
Turbidity, Field	14	NTU	1	Field	#
Volume in Water Column	193.79	Gallons		Field	#
Water Level After Purge	49.39	Feet		Field	#
Well Volumes Purged	0.46	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.18	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.19	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	125	mg/L	0.11	SW846 6020A	#
Calcium, Total	135	mg/L	0.11	SW846 6020A	#
Copper, Dissolved	0.0091	mg/L	0.0056	SW846 6020A	#
Iron, Dissolved	0.13	mg/L	0.056	SW846 6020A	#
Iron, Total	1.1	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	21.2	mg/L	0.11	SW846 6020A	#
Magnesium, Total	23.7	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.54	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.59	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.8	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.9	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	145	mg/L	0.11	SW846 6020A	#
Sodium, Total	158	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	113	mg/L	5	SM2320B-2011	#
Alkalinity, Total	113	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	39	mg/L	15	EPA 410.4	#
Chloride	467	mg/L	5.0	EPA 300.0	#
Nitrate-N	5.4	mg/L	2.5	EPA 300.0	#
pH	7.87	pH_Units		S4500HB-11	#
Specific Conductance	1790	umhos/cm	5	SM2510B-2011	#
Sulfate	41.0	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1180	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.89	mg/L	0.50	SM5310B-14	#
Turbidity	12	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP02SW	Collected	05/04/2023 11:44
Lab Sample ID	3301507002	Lab Receipt	05/04/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	15.05	Feet		Field	#
Dissolved Oxygen	7.12	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	509.90	Feet		Field	#
Flow Rate	1.00	gal/min		Field	#
Ground Water Elevation	494.85	ft/MSL		Field	#
Oxidation-Reduction Potential	170	mV		Field	#
pH, Field (SM4500B)	5.68	pH_Units		Field	#
Sample Depth	19.00	Feet		Field	#
Specific Conductance, Field	285	umhos/cm	1	Field	#
Temperature	14.49	Deg. C		Field	#
Total Well Depth	22.70	Feet		Field	#
Turbidity, Field	60	NTU	1	Field	#
Volume in Water Column	4.97	Gallons		Field	#
Water Level After Purge	18.57	Feet		Field	#
Well Volumes Purged	3.63	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.069	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.076	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	17.3	mg/L	0.11	SW846 6020A	#
Calcium, Total	17.4	mg/L	0.11	SW846 6020A	#
Chromium, Dissolved	0.0044	mg/L	0.0022	SW846 6020A	#
Chromium, Total	0.012	mg/L	0.0022	SW846 6020A	#
Copper, Total	0.0080	mg/L	0.0056	SW846 6020A	#
Iron, Dissolved	0.090	mg/L	0.056	SW846 6020A	#
Iron, Total	1.0	mg/L	0.056	SW846 6020A	#
Lead, Total	0.0023	mg/L	0.0022	SW846 6020A	#
Magnesium, Dissolved	7.1	mg/L	0.11	SW846 6020A	#
Magnesium, Total	7.2	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.014	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.026	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.011	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	4.4	mg/L	0.11	SW846 6020A	#
Potassium, Total	4.5	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	37.7	mg/L	0.11	SW846 6020A	#
Sodium, Total	37.8	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0062	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0093	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	21	mg/L	5	SM2320B-2011	#
Alkalinity, Total	21	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	30	mg/L	15	EPA 410.4	#
Chloride	41.4	mg/L	2.0	EPA 300.0	#
Nitrate-N	9.5	mg/L	1.0	EPA 300.0	#



Detected Results Summary

Sample - FFMP02SW (cont.)

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY (cont.)					
pH	6.80	pH_Units		S4500HB-11	#
Specific Conductance	374	umhos/cm	5	SM2510B-2011	#
Sulfate	48.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	200	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	2.1	mg/L	0.50	SM5310B-14	#
Turbidity	120	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP031W	Collected	05/04/2023 12:58
Lab Sample ID	3301507003	Lab Receipt	05/04/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	64.41	Feet		Field	#
Dissolved Oxygen	1.91	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	612.66	Feet		Field	#
Flow Rate	1.60	gal/min		Field	#
Ground Water Elevation	548.25	ft/MSL		Field	#
Oxidation-Reduction Potential	-171	mV		Field	#
pH, Field (SM4500B)	7.72	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	244	umhos/cm	1	Field	#
Temperature	15.18	Deg. C		Field	#
Total Well Depth	142.70	Feet		Field	#
Volume in Water Column	115.09	Gallons		Field	#
Water Level After Purge	103.80	Feet		Field	#
Well Volumes Purged	0.84	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.042	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.044	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	41.5	mg/L	0.11	SW846 6020A	#
Calcium, Total	43.3	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	3.6	mg/L	0.056	SW846 6020A	#
Iron, Total	3.7	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	4.1	mg/L	0.11	SW846 6020A	#
Magnesium, Total	4.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.38	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.40	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.3	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	8.9	mg/L	0.11	SW846 6020A	#
Sodium, Total	9.2	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	69	mg/L	5	SM2320B-2011	#
Alkalinity, Total	69	mg/L	5	SM2320B-2011	#
Ammonia-N	0.128	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	19	mg/L	15	EPA 410.4	#
Chloride	22.8	mg/L	2.0	EPA 300.0	#
pH	7.94	pH_Units		S4500HB-11	#
Specific Conductance	324	umhos/cm	5	SM2510B-2011	#
Sulfate	51.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	174	mg/L	25	SM2540C-15	#
Turbidity	20	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP002W	Collected	05/04/2023 13:34
Lab Sample ID	3301507004	Lab Receipt	05/04/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	60.18	Feet		Field	#
Dissolved Oxygen	6.54	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	613.20	Feet		Field	#
Flow Rate	1.40	gal/min		Field	#
Ground Water Elevation	553.02	ft/MSL		Field	#
Oxidation-Reduction Potential	358	mV		Field	#
pH, Field (SM4500B)	4.67	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	188	umhos/cm	1	Field	#
Temperature	14.71	Deg. C		Field	#
Total Well Depth	90.02	Feet		Field	#
Volume in Water Column	43.86	Gallons		Field	#
Water Level After Purge	75.97	Feet		Field	#
Well Volumes Purged	0.64	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.063	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.063	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	17.0	mg/L	0.11	SW846 6020A	#
Calcium, Total	16.3	mg/L	0.11	SW846 6020A	#
Chromium, Total	0.0025	mg/L	0.0022	SW846 6020A	#
Cobalt, Total	0.013	mg/L	0.0056	SW846 6020A	#
Copper, Dissolved	0.011	mg/L	0.0056	SW846 6020A	#
Copper, Total	0.011	mg/L	0.0056	SW846 6020A	#
Lead, Dissolved	0.0034	mg/L	0.0022	SW846 6020A	#
Lead, Total	0.0042	mg/L	0.0022	SW846 6020A	#
Magnesium, Dissolved	6.9	mg/L	0.11	SW846 6020A	#
Magnesium, Total	7.0	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.23	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.22	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.016	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.0	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.0	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	12.7	mg/L	0.11	SW846 6020A	#
Sodium, Total	12.6	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.017	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.018	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Chemical Oxygen Demand (COD)	29	mg/L	15	EPA 410.4	#
Chloride	16.6	mg/L	2.0	EPA 300.0	#
Nitrate-N	18.2	mg/L	1.0	EPA 300.0	#
pH	5.98	pH_Units		S4500HB-11	#
Specific Conductance	253	umhos/cm	5	SM2510B-2011	#
Sulfate	10.5	mg/L	2.0	EPA 300.0	#



Detected Results Summary

Sample - FFMP002W (cont.)

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
WET CHEMISTRY (cont.)					
Total Dissolved Solids	162	mg/L	25	SM2540C-15	#



Detected Results Summary

Client Sample ID	FFMP032W	Collected	05/04/2023 14:07
Lab Sample ID	3301507005	Lab Receipt	05/04/2023 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	49.42	Feet		Field	#
Dissolved Oxygen	0.23	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	594.09	Feet		Field	#
Flow Rate	0.75	gal/min		Field	#
Ground Water Elevation	544.67	ft/MSL		Field	#
Oxidation-Reduction Potential	-109	mV		Field	#
pH, Field (SM4500B)	6.93	pH_Units		Field	#
Sample Depth	62.00	Feet		Field	#
Specific Conductance, Field	161	umhos/cm	1	Field	#
Temperature	15.12	Deg. C		Field	#
Total Well Depth	77.60	Feet		Field	#
Turbidity, Field	7	NTU	1	Field	#
Volume in Water Column	41.42	Gallons		Field	#
Water Level After Purge	53.59	Feet		Field	#
Well Volumes Purged	0.32	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Calcium, Dissolved	16.3	mg/L	0.11	SW846 6020A	#
Calcium, Total	16.4	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	6.1	mg/L	0.056	SW846 6020A	#
Iron, Total	6.4	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	5.5	mg/L	0.11	SW846 6020A	#
Magnesium, Total	5.7	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.58	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.59	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.3	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	12.2	mg/L	0.11	SW846 6020A	#
Sodium, Total	12.3	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	64	mg/L	5	SM2320B-2011	#
Alkalinity, Total	64	mg/L	5	SM2320B-2011	#
Ammonia-N	0.753	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	16	mg/L	15	EPA 410.4	#
Chloride	22.3	mg/L	2.0	EPA 300.0	#
pH	7.72	pH_Units		S4500HB-11	#
Specific Conductance	203	umhos/cm	5	SM2510B-2011	#
Total Dissolved Solids	114	mg/L	25	SM2540C-15	#
Turbidity	85	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FIELD BLANK	Collected	05/04/2023 14:30
Lab Sample ID	3301507006	Lab Receipt	05/04/2023 16:05

Compound	Result	Units	RDL	Method	Flag
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
VOLATILE ORGANICS					
Chloroform	11.5	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Chemical Oxygen Demand (COD)	33	mg/L	15	EPA 410.4	#
pH	5.72	pH_Units		S4500HB-11	#
Turbidity	0.35	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	TRIP BLANK	Collected	05/04/2023 16:05
Lab Sample ID	3301507007	Lab Receipt	05/04/2023 16:05

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#



Results

Client Sample ID	FFMP02DW	Collected	05/04/2023 11:05
Lab Sample ID	3301507001	Lab Receipt	05/04/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	21.17		Feet		Field	1	05/04/2023 11:05	BGS	H
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	05/04/2023 11:05	BGS	H
Elev Top MW Casing above MSL	509.60		Feet		Field	1	05/04/2023 11:05	BGS	H
Flow Rate	1.50		gal/min		Field	1	05/04/2023 11:05	BGS	H
Ground Water Elevation	488.43		ft/MSL		Field	1	05/04/2023 11:05	BGS	H
Oxidation-Reduction Potential	-38		mV		Field	1	05/04/2023 11:05	BGS	H
pH, Field (SM4500B)	7.16		pH_Units		Field	1	05/04/2023 11:05	BGS	H
Sample Depth	120.00		Feet		Field	1	05/04/2023 11:05	BGS	H
Specific Conductance, Field	1338		umhos/cm	1	Field	1	05/04/2023 11:05	BGS	H
Temperature	14.17		Deg. C		Field	1	05/04/2023 11:05	BGS	H
Total Well Depth	153.00		Feet		Field	1	05/04/2023 11:05	BGS	H
Turbidity, Field	14		NTU	1	Field	1	05/04/2023 11:05	BGS	H
Volume in Water Column	193.79		Gallons		Field	1	05/04/2023 11:05	BGS	H
Water Level After Purge	49.39		Feet		Field	1	05/04/2023 11:05	BGS	H
Well Volumes Purged	0.46		Vol		Field	1	05/04/2023 11:05	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 00:40	PKD	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Barium, Dissolved	0.18		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Barium, Total	0.19		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Calcium, Dissolved	125		mg/L	0.11	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Calcium, Total	135	3	mg/L	0.11	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Copper, Dissolved	0.0091		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Iron, Dissolved	0.13		mg/L	0.056	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Iron, Total	1.1		mg/L	0.056	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Magnesium, Dissolved	21.2		mg/L	0.11	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Magnesium, Total	23.7		mg/L	0.11	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Manganese, Dissolved	0.54		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:52	RMD	D1



Results

Client Sample ID	FFMP02DW	Collected	05/04/2023 11:05
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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.59		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 09:26	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 13:20	WDA	F
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Potassium, Dissolved	1.8		mg/L	0.11	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Potassium, Total	1.9		mg/L	0.11	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Selenium, Dissolved	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Selenium, Total	ND	ND,4	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Sodium, Dissolved	145		mg/L	0.11	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Sodium, Total	158		mg/L	0.11	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:53	RMD	F1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:52	RMD	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:53	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L



Results

Client Sample ID	FFMP02DW	Collected	05/04/2023 11:05
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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 00:40	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:40	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.6%	62 - 133	05/11/2023 00:40	
4-Bromofluorobenzene	460-00-4	106%	79 - 114	05/11/2023 00:40	
Dibromofluoromethane	1868-53-7	99.1%	78 - 116	05/11/2023 00:40	
Toluene-d8	2037-26-5	101%	76 - 127	05/11/2023 00:40	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	113		mg/L	5	SM2320B-2011	1	05/10/2023 12:57	NML	A
Alkalinity, Total	113	1	mg/L	5	SM2320B-2011	1	05/10/2023 12:57	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/09/2023 00:10	NML	C
Chemical Oxygen Demand (COD)	39		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	467		mg/L	5.0	EPA 300.0	5	05/05/2023 14:15	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/11/2023 17:49	J1W	A
Nitrate-N	5.4		mg/L	2.5	EPA 300.0	5	05/05/2023 14:15	J1W	A
pH	7.87	2	pH_Units		S4500HB-11	1	05/10/2023 12:57	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/17/2023 11:40	AKH	K
Specific Conductance	1790		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	41.0		mg/L	5.0	EPA 300.0	5	05/05/2023 14:15	J1W	A



Results

Client Sample ID	FFMP02DW	Collected	05/04/2023 11:05
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WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Total Dissolved Solids	1180		mg/L	25	SM2540C-15	1	05/11/2023 13:46	AKH	A
Total Organic Carbon (TOC)	0.89		mg/L	0.50	SM5310B-14	1	05/09/2023 04:40	PAG	I
Turbidity	12		NTU	0.30	SM2130B-2011	1	05/05/2023 00:10	NRB	A



Results

Client Sample ID	FFMP02SW	Collected	05/04/2023 11:44
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FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	15.05		Feet		Field	1	05/04/2023 11:44	BGS	H
Dissolved Oxygen	7.12		mg/L	0.01	Field	1	05/04/2023 11:44	BGS	H
Elev Top MW Casing above MSL	509.90		Feet		Field	1	05/04/2023 11:44	BGS	H
Flow Rate	1.00		gal/min		Field	1	05/04/2023 11:44	BGS	H
Ground Water Elevation	494.85		ft/MSL		Field	1	05/04/2023 11:44	BGS	H
Oxidation-Reduction Potential	170		mV		Field	1	05/04/2023 11:44	BGS	H
pH, Field (SM4500B)	5.68		pH_Units		Field	1	05/04/2023 11:44	BGS	H
Sample Depth	19.00		Feet		Field	1	05/04/2023 11:44	BGS	H
Specific Conductance, Field	285		umhos/cm	1	Field	1	05/04/2023 11:44	BGS	H
Temperature	14.49		Deg. C		Field	1	05/04/2023 11:44	BGS	H
Total Well Depth	22.70		Feet		Field	1	05/04/2023 11:44	BGS	H
Turbidity, Field	60		NTU	1	Field	1	05/04/2023 11:44	BGS	H
Volume in Water Column	4.97		Gallons		Field	1	05/04/2023 11:44	BGS	H
Water Level After Purge	18.57		Feet		Field	1	05/04/2023 11:44	BGS	H
Well Volumes Purged	3.63		Vol		Field	1	05/04/2023 11:44	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 01:02	PDK	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Barium, Dissolved	0.069		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Barium, Total	0.076		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Calcium, Dissolved	17.3		mg/L	0.11	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Calcium, Total	17.4	3	mg/L	0.11	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Chromium, Dissolved	0.0044		mg/L	0.0022	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Chromium, Total	0.012		mg/L	0.0022	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Copper, Total	0.0080		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Iron, Dissolved	0.090		mg/L	0.056	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Iron, Total	1.0		mg/L	0.056	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Lead, Total	0.0023		mg/L	0.0022	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Magnesium, Dissolved	7.1		mg/L	0.11	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Magnesium, Total	7.2		mg/L	0.11	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Manganese, Dissolved	0.014		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:54	RMD	D1



Results

Client Sample ID	FFMP02SW	Collected	05/04/2023 11:44
Lab Sample ID	3301507002	Lab Receipt	05/04/2023 16:05

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.026		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 09:27	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 13:21	WDA	F
Nickel, Total	0.011		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Potassium, Dissolved	4.4		mg/L	0.11	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Potassium, Total	4.5		mg/L	0.11	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Selenium, Dissolved	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Selenium, Total	ND	ND,4	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Sodium, Dissolved	37.7		mg/L	0.11	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Sodium, Total	37.8		mg/L	0.11	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:55	RMD	F1
Zinc, Dissolved	0.0062		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:54	RMD	D1
Zinc, Total	0.0093		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:55	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L



Results

Client Sample ID	FFMP02SW	Collected	05/04/2023 11:44
Lab Sample ID	3301507002	Lab Receipt	05/04/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:02	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:02	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.5%	62 - 133	05/11/2023 01:02	
4-Bromofluorobenzene	460-00-4	105%	79 - 114	05/11/2023 01:02	
Dibromofluoromethane	1868-53-7	102%	78 - 116	05/11/2023 01:02	
Toluene-d8	2037-26-5	102%	76 - 127	05/11/2023 01:02	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	21		mg/L	5	SM2320B-2011	1	05/10/2023 13:13	NML	A
Alkalinity, Total	21	1	mg/L	5	SM2320B-2011	1	05/10/2023 13:13	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/09/2023 00:52	NML	C
Chemical Oxygen Demand (COD)	30		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	41.4		mg/L	2.0	EPA 300.0	2	05/05/2023 14:27	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/11/2023 17:59	J1W	A
Nitrate-N	9.5		mg/L	1.0	EPA 300.0	2	05/05/2023 14:27	J1W	A
pH	6.80	2	pH_Units		S4500HB-11	1	05/10/2023 13:13	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/17/2023 11:43	AKH	K
Specific Conductance	374		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	48.9		mg/L	2.0	EPA 300.0	2	05/05/2023 14:27	J1W	A



Results

Client Sample ID	FFMP02SW	Collected	05/04/2023 11:44
Lab Sample ID	3301507002	Lab Receipt	05/04/2023 16:05

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	200		mg/L	25	SM2540C-15	1	05/11/2023 14:30	AKH	A
Total Organic Carbon (TOC)	2.1		mg/L	0.50	SM5310B-14	1	05/09/2023 04:40	PAG	I
Turbidity	120		NTU	0.30	SM2130B-2011	1	05/05/2023 00:10	NRB	A



Results

Client Sample ID	FFMP031W	Collected	05/04/2023 12:58
Lab Sample ID	3301507003	Lab Receipt	05/04/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	64.41		Feet		Field	1	05/04/2023 12:58	BGS	H
Dissolved Oxygen	1.91		mg/L	0.01	Field	1	05/04/2023 12:58	BGS	H
Elev Top MW Casing above MSL	612.66		Feet		Field	1	05/04/2023 12:58	BGS	H
Flow Rate	1.60		gal/min		Field	1	05/04/2023 12:58	BGS	H
Ground Water Elevation	548.25		ft/MSL		Field	1	05/04/2023 12:58	BGS	H
Oxidation-Reduction Potential	-171		mV		Field	1	05/04/2023 12:58	BGS	H
pH, Field (SM4500B)	7.72		pH_Units		Field	1	05/04/2023 12:58	BGS	H
Sample Depth	130.00		Feet		Field	1	05/04/2023 12:58	BGS	H
Specific Conductance, Field	244		umhos/cm	1	Field	1	05/04/2023 12:58	BGS	H
Temperature	15.18		Deg. C		Field	1	05/04/2023 12:58	BGS	H
Total Well Depth	142.70		Feet		Field	1	05/04/2023 12:58	BGS	H
Turbidity, Field	ND	ND	NTU	1	Field	1	05/04/2023 12:58	BGS	H
Volume in Water Column	115.09		Gallons		Field	1	05/04/2023 12:58	BGS	H
Water Level After Purge	103.80		Feet		Field	1	05/04/2023 12:58	BGS	H
Well Volumes Purged	0.84		Vol		Field	1	05/04/2023 12:58	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 01:25	PDK	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Barium, Dissolved	0.042		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Barium, Total	0.044		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Calcium, Dissolved	41.5		mg/L	0.11	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Calcium, Total	43.3		mg/L	0.11	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Iron, Dissolved	3.6		mg/L	0.056	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Iron, Total	3.7		mg/L	0.056	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Magnesium, Dissolved	4.1		mg/L	0.11	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Magnesium, Total	4.3		mg/L	0.11	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Manganese, Dissolved	0.38		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:57	RMD	D1



Results

Client Sample ID	FFMP031W	Collected	05/04/2023 12:58
Lab Sample ID	3301507003	Lab Receipt	05/04/2023 16:05

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.40		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 09:30	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 13:22	WDA	F
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Potassium, Dissolved	1.3		mg/L	0.11	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Potassium, Total	1.3		mg/L	0.11	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Selenium, Dissolved	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Selenium, Total	ND	ND,6	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Sodium, Dissolved	8.9		mg/L	0.11	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Sodium, Total	9.2		mg/L	0.11	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:08	RMD	F1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:57	RMD	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:08	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PKD	L



Results

Client Sample ID	FFMP031W	Collected	05/04/2023 12:58
Lab Sample ID	3301507003	Lab Receipt	05/04/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:25	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:25	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.5%	62 - 133	05/11/2023 01:25	
4-Bromofluorobenzene	460-00-4	110%	79 - 114	05/11/2023 01:25	
Dibromofluoromethane	1868-53-7	99.9%	78 - 116	05/11/2023 01:25	
Toluene-d8	2037-26-5	101%	76 - 127	05/11/2023 01:25	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	69		mg/L	5	SM2320B-2011	1	05/10/2023 13:24	NML	A
Alkalinity, Total	69	1	mg/L	5	SM2320B-2011	1	05/10/2023 13:24	NML	A
Ammonia-N	0.128		mg/L	0.100	ASTM D6919-17	10	05/09/2023 00:24	NML	C
Chemical Oxygen Demand (COD)	19		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	22.8		mg/L	2.0	EPA 300.0	2	05/05/2023 14:38	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/11/2023 18:09	J1W	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	05/05/2023 14:38	J1W	A
pH	7.94	2	pH_Units		S4500HB-11	1	05/10/2023 13:24	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/17/2023 11:50	AKH	K
Specific Conductance	324		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	51.8		mg/L	2.0	EPA 300.0	2	05/05/2023 14:38	J1W	A



Results

Client Sample ID	FFMP031W	Collected	05/04/2023 12:58
Lab Sample ID	3301507003	Lab Receipt	05/04/2023 16:05

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	174		mg/L	25	SM2540C-15	1	05/11/2023 14:30	AKH	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/09/2023 04:40	PAG	I
Turbidity	20		NTU	0.30	SM2130B-2011	1	05/05/2023 00:10	NRB	A



Results

Client Sample ID	FFMP002W	Collected	05/04/2023 13:34
Lab Sample ID	3301507004	Lab Receipt	05/04/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	60.18		Feet		Field	1	05/04/2023 13:34	BGS	H
Dissolved Oxygen	6.54		mg/L	0.01	Field	1	05/04/2023 13:34	BGS	H
Elev Top MW Casing above MSL	613.20		Feet		Field	1	05/04/2023 13:34	BGS	H
Flow Rate	1.40		gal/min		Field	1	05/04/2023 13:34	BGS	H
Ground Water Elevation	553.02		ft/MSL		Field	1	05/04/2023 13:34	BGS	H
Oxidation-Reduction Potential	358		mV		Field	1	05/04/2023 13:34	BGS	H
pH, Field (SM4500B)	4.67		pH_Units		Field	1	05/04/2023 13:34	BGS	H
Sample Depth	85.00		Feet		Field	1	05/04/2023 13:34	BGS	H
Specific Conductance, Field	188		umhos/cm	1	Field	1	05/04/2023 13:34	BGS	H
Temperature	14.71		Deg. C		Field	1	05/04/2023 13:34	BGS	H
Total Well Depth	90.02		Feet		Field	1	05/04/2023 13:34	BGS	H
Turbidity, Field	ND	ND	NTU	1	Field	1	05/04/2023 13:34	BGS	H
Volume in Water Column	43.86		Gallons		Field	1	05/04/2023 13:34	BGS	H
Water Level After Purge	75.97		Feet		Field	1	05/04/2023 13:34	BGS	H
Well Volumes Purged	0.64		Vol		Field	1	05/04/2023 13:34	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 01:47	PDK	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Barium, Dissolved	0.063		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Barium, Total	0.063		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Calcium, Dissolved	17.0		mg/L	0.11	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Calcium, Total	16.3		mg/L	0.11	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Chromium, Total	0.0025		mg/L	0.0022	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Cobalt, Total	0.013		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Copper, Dissolved	0.011		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Copper, Total	0.011		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Lead, Dissolved	0.0034		mg/L	0.0022	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Lead, Total	0.0042		mg/L	0.0022	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Magnesium, Dissolved	6.9		mg/L	0.11	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Magnesium, Total	7.0		mg/L	0.11	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Manganese, Dissolved	0.23		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:59	RMD	D1



Results

Client Sample ID	FFMP002W	Collected	05/04/2023 13:34
Lab Sample ID	3301507004	Lab Receipt	05/04/2023 16:05

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.22		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 09:31	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 13:23	WDA	F
Nickel, Total	0.016		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Potassium, Dissolved	1.0		mg/L	0.11	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Potassium, Total	1.0		mg/L	0.11	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Selenium, Dissolved	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Selenium, Total	ND	ND,6	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Sodium, Dissolved	12.7		mg/L	0.11	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Sodium, Total	12.6		mg/L	0.11	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:10	RMD	F1
Zinc, Dissolved	0.017		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:59	RMD	D1
Zinc, Total	0.018		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:10	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PKD	L



Results

Client Sample ID	FFMP002W	Collected	05/04/2023 13:34
Lab Sample ID	3301507004	Lab Receipt	05/04/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:47	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:47	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.7%	62 - 133	05/11/2023 01:47	
4-Bromofluorobenzene	460-00-4	108%	79 - 114	05/11/2023 01:47	
Dibromofluoromethane	1868-53-7	98.2%	78 - 116	05/11/2023 01:47	
Toluene-d8	2037-26-5	99.6%	76 - 127	05/11/2023 01:47	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	05/10/2023 13:36	NML	A
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	05/10/2023 13:36	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/09/2023 00:38	NML	C
Chemical Oxygen Demand (COD)	29		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	16.6		mg/L	2.0	EPA 300.0	2	05/05/2023 14:50	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/11/2023 18:20	J1W	A
Nitrate-N	18.2	7	mg/L	1.0	EPA 300.0	2	05/05/2023 14:50	J1W	A
pH	5.98	2	pH_Units		S4500HB-11	1	05/10/2023 13:36	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/17/2023 11:53	AKH	K
Specific Conductance	253		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	10.5		mg/L	2.0	EPA 300.0	2	05/05/2023 14:50	J1W	A



Results

Client Sample ID	FFMP002W	Collected	05/04/2023 13:34
Lab Sample ID	3301507004	Lab Receipt	05/04/2023 16:05

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	162		mg/L	25	SM2540C-15	1	05/11/2023 14:30	AKH	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/09/2023 04:40	PAG	I
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	05/05/2023 00:10	NRB	A



Results

Client Sample ID	FFMP032W	Collected	05/04/2023 14:07
Lab Sample ID	3301507005	Lab Receipt	05/04/2023 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	49.42		Feet		Field	1	05/04/2023 14:07	BGS	H
Dissolved Oxygen	0.23		mg/L	0.01	Field	1	05/04/2023 14:07	BGS	H
Elev Top MW Casing above MSL	594.09		Feet		Field	1	05/04/2023 14:07	BGS	H
Flow Rate	0.75		gal/min		Field	1	05/04/2023 14:07	BGS	H
Ground Water Elevation	544.67		ft/MSL		Field	1	05/04/2023 14:07	BGS	H
Oxidation-Reduction Potential	-109		mV		Field	1	05/04/2023 14:07	BGS	H
pH, Field (SM4500B)	6.93		pH_Units		Field	1	05/04/2023 14:07	BGS	H
Sample Depth	62.00		Feet		Field	1	05/04/2023 14:07	BGS	H
Specific Conductance, Field	161		umhos/cm	1	Field	1	05/04/2023 14:07	BGS	H
Temperature	15.12		Deg. C		Field	1	05/04/2023 14:07	BGS	H
Total Well Depth	77.60		Feet		Field	1	05/04/2023 14:07	BGS	H
Turbidity, Field	7		NTU	1	Field	1	05/04/2023 14:07	BGS	H
Volume in Water Column	41.42		Gallons		Field	1	05/04/2023 14:07	BGS	H
Water Level After Purge	53.59		Feet		Field	1	05/04/2023 14:07	BGS	H
Well Volumes Purged	0.32		Vol		Field	1	05/04/2023 14:07	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 02:10	PDK	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Barium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Barium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Calcium, Dissolved	16.3		mg/L	0.11	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Calcium, Total	16.4		mg/L	0.11	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Iron, Dissolved	6.1		mg/L	0.056	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Iron, Total	6.4		mg/L	0.056	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Magnesium, Dissolved	5.5		mg/L	0.11	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Magnesium, Total	5.7		mg/L	0.11	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Manganese, Dissolved	0.58		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:01	RMD	D1



Results

Client Sample ID	FFMP032W	Collected	05/04/2023 14:07
Lab Sample ID	3301507005	Lab Receipt	05/04/2023 16:05

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.59		mg/L	0.0056	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 09:33	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 13:24	WDA	F
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Potassium, Dissolved	1.3		mg/L	0.11	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Potassium, Total	1.3		mg/L	0.11	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Selenium, Dissolved	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Selenium, Total	ND	ND,6	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Sodium, Dissolved	12.2		mg/L	0.11	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Sodium, Total	12.3		mg/L	0.11	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:12	RMD	F1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:01	RMD	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:12	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L



Results

Client Sample ID	FFMP032W	Collected	05/04/2023 14:07
Lab Sample ID	3301507005	Lab Receipt	05/04/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 02:10	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:10	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.1%	62 - 133	05/11/2023 02:10	
4-Bromofluorobenzene	460-00-4	109%	79 - 114	05/11/2023 02:10	
Dibromofluoromethane	1868-53-7	100%	78 - 116	05/11/2023 02:10	
Toluene-d8	2037-26-5	102%	76 - 127	05/11/2023 02:10	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	64		mg/L	5	SM2320B-2011	1	05/10/2023 13:47	NML	A
Alkalinity, Total	64	1	mg/L	5	SM2320B-2011	1	05/10/2023 13:47	NML	A
Ammonia-N	0.753		mg/L	0.100	ASTM D6919-17	10	05/09/2023 01:19	NML	C
Chemical Oxygen Demand (COD)	16		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	22.3		mg/L	2.0	EPA 300.0	2	05/05/2023 15:47	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/11/2023 18:30	J1W	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	05/05/2023 15:47	J1W	A
pH	7.72	2	pH_Units		S4500HB-11	1	05/10/2023 13:47	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/17/2023 11:57	AKH	K
Specific Conductance	203		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	05/05/2023 15:47	J1W	A



Results

Client Sample ID	FFMP032W	Collected	05/04/2023 14:07
Lab Sample ID	3301507005	Lab Receipt	05/04/2023 16:05

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Ctr
Total Dissolved Solids	114		mg/L	25	SM2540C-15	1	05/11/2023 14:30	AKH	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/09/2023 04:40	PAG	I
Turbidity	85		NTU	0.30	SM2130B-2011	1	05/05/2023 00:10	NRB	A



Results

Client Sample ID	FIELD BLANK	Collected	05/04/2023 14:30
Lab Sample ID	3301507006	Lab Receipt	05/04/2023 16:05

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr	
No TIC's Detected						Lib Search VOC	1	05/11/2023 00:17	PKD	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Barium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Barium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Calcium, Dissolved	ND	ND,8	mg/L	0.11	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Calcium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Magnesium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Manganese, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 09:34	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/10/2023 13:25	WDA	F
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Potassium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Potassium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Selenium, Dissolved	ND	ND,9	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Selenium, Total	ND	ND,6	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Sodium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Sodium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 22:14	RMD	F1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:20	RMD	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 22:14	RMD	F1



Results

Client Sample ID	FIELD BLANK	Collected	05/04/2023 14:30
Lab Sample ID	3301507006	Lab Receipt	05/04/2023 16:05

METALS (cont.)

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

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Chloroform	11.5		ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 00:17	PDK	L



Results

Client Sample ID	FIELD BLANK	Collected	05/04/2023 14:30
Lab Sample ID	3301507006	Lab Receipt	05/04/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 00:17	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 00:17	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.2%	62 - 133	05/11/2023 00:17	
4-Bromofluorobenzene	460-00-4	109%	79 - 114	05/11/2023 00:17	
Dibromofluoromethane	1868-53-7	101%	78 - 116	05/11/2023 00:17	
Toluene-d8	2037-26-5	103%	76 - 127	05/11/2023 00:17	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	05/10/2023 13:56	NML	A
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	05/10/2023 13:56	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	1	05/09/2023 01:06	NML	C
Chemical Oxygen Demand (COD)	33		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	05/05/2023 15:58	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/11/2023 18:41	J1W	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	05/05/2023 15:58	J1W	A
pH	5.72	2	pH_Units		S4500HB-11	1	05/10/2023 13:56	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/17/2023 12:17	AKH	K
Specific Conductance	ND	ND	umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	05/05/2023 15:58	J1W	A
Total Dissolved Solids	ND	ND	mg/L	25	SM2540C-15	1	05/11/2023 14:30	AKH	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/09/2023 04:40	PAG	I
Turbidity	0.35		NTU	0.30	SM2130B-2011	1	05/05/2023 00:10	NRB	A



Results

Client Sample ID	TRIP BLANK	Collected	05/04/2023 16:05
Lab Sample ID	3301507007	Lab Receipt	05/04/2023 16:05

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected					Lib Search VOC	1	05/10/2023 23:31	PDK	A

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A



Results

Client Sample ID	TRIP BLANK	Collected	05/04/2023 16:05
Lab Sample ID	3301507007	Lab Receipt	05/04/2023 16:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 23:31	PDK	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 23:31	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95 %	62 - 133	05/10/2023 23:31	
4-Bromofluorobenzene	460-00-4	113 %	79 - 114	05/10/2023 23:31	
Dibromofluoromethane	1868-53-7	100 %	78 - 116	05/10/2023 23:31	
Toluene-d8	2037-26-5	100 %	76 - 127	05/10/2023 23:31	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3301507001	FFMP02DW	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3301507002	FFMP02SW	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3301507003	FFMP031W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	



Project 2ND QTR 2023 FFMP-FORM 19A

Workorder 3301507

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method		
3301507004	FFMP002W	Field	N/A			
		SW846 6020A	SW846 3015A			
		SW846 6020A	SW846 3015A			
		SW846 7470A	SW846 7470A			
		SW846 7470A	SW846 7470A			
		Lib Search VOC	N/A			
		SW846 8260B	N/A			
		ASTM D6919-17	N/A			
		EPA 300.0	N/A			
		EPA 300.0	N/A			
		EPA 410.4	N/A			
		S4500HB-11	N/A			
		SM2130B-2011	N/A			
		SM2320B-2011	N/A			
		SM2510B-2011	N/A			
		SM2540C-15	N/A			
		SM5310B-14	N/A			
		SW846 9066	SW846 9066			
		3301507005	FFMP032W	Field	N/A	
SW846 6020A	SW846 3015A					
SW846 6020A	SW846 3015A					
SW846 7470A	SW846 7470A					
SW846 7470A	SW846 7470A					
Lib Search VOC	N/A					
SW846 8260B	N/A					
ASTM D6919-17	N/A					
EPA 300.0	N/A					
EPA 300.0	N/A					
EPA 410.4	N/A					
S4500HB-11	N/A					
SM2130B-2011	N/A					
SM2320B-2011	N/A					
SM2510B-2011	N/A					
SM2540C-15	N/A					
SM5310B-14	N/A					
SW846 9066	SW846 9066					
3301507006	FIELD BLANK			SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A			
		SW846 7470A	SW846 7470A			
		SW846 7470A	SW846 7470A			
		Lib Search VOC	N/A			
		SW846 8260B	N/A			
		ASTM D6919-17	N/A			
		EPA 300.0	N/A			
		EPA 300.0	N/A			
		EPA 410.4	N/A			
		S4500HB-11	N/A			
		SM2130B-2011	N/A			
		SM2320B-2011	N/A			
		SM2510B-2011	N/A			
		SM2540C-15	N/A			
		SM5310B-14	N/A			
		SW846 9066	SW846 9066			
		3301507007	TRIP BLANK	Lib Search VOC	N/A	
				SW846 8260B	N/A	

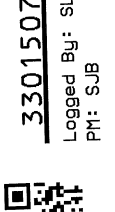


QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3301507001	FFMP02DW	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	991554	05/10/2023 08:07	WDA	SW846 7470A	992860
		SW846 7470A	990155	05/09/2023 07:55	WDA	SW846 7470A	990595
		N/A	N/A	N/A		Lib Search VOC	1000652
		N/A	N/A	N/A		SW846 8260B	993521
		N/A	N/A	N/A		ASTM D6919-17	989673
		N/A	N/A	N/A		EPA 300.0	987435
		N/A	N/A	N/A		EPA 300.0	994060
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	991652
		N/A	N/A	N/A		SM2130B-2011	987413
		N/A	N/A	N/A		SM2320B-2011	991652
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	993363
		N/A	N/A	N/A		SM5310B-14	989828
	SW846 9066	1002552	05/17/2023 07:37	AKH	SW846 9066	1003052	
3301507002	FFMP02SW	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 7470A	991554	05/10/2023 08:07	WDA	SW846 7470A	992860
		SW846 7470A	990155	05/09/2023 07:55	WDA	SW846 7470A	990595
		N/A	N/A	N/A		Lib Search VOC	1000652
		N/A	N/A	N/A		SW846 8260B	993521
		N/A	N/A	N/A		ASTM D6919-17	989673
		N/A	N/A	N/A		EPA 300.0	994060
		N/A	N/A	N/A		EPA 300.0	987435
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	991652
		N/A	N/A	N/A		SM2130B-2011	987413
		N/A	N/A	N/A		SM2320B-2011	991652
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	993365
		N/A	N/A	N/A		SM5310B-14	989828
	SW846 9066	1002552	05/17/2023 07:37	AKH	SW846 9066	1003052	
3301507003	FFMP031W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	991554	05/10/2023 08:07	WDA	SW846 7470A	992860
		SW846 7470A	990155	05/09/2023 07:55	WDA	SW846 7470A	990595
		N/A	N/A	N/A		Lib Search VOC	1000652
		N/A	N/A	N/A		SW846 8260B	993521
		N/A	N/A	N/A		ASTM D6919-17	989673
		N/A	N/A	N/A		EPA 300.0	994060
		N/A	N/A	N/A		EPA 300.0	987435
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	991652
		N/A	N/A	N/A		SM2130B-2011	987413
		N/A	N/A	N/A		SM2320B-2011	991652
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	993365
		N/A	N/A	N/A		SM5310B-14	989828
	SW846 9066	1002552	05/17/2023 07:37	AKH	SW846 9066	1003052	



Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3301507004	FFMP002W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	991554	05/10/2023 08:07	WDA	SW846 7470A	992860
		SW846 7470A	990155	05/09/2023 07:55	WDA	SW846 7470A	990595
		N/A	N/A	N/A		Lib Search VOC	1000652
		N/A	N/A	N/A		SW846 8260B	993521
		N/A	N/A	N/A		ASTM D6919-17	989673
		N/A	N/A	N/A		EPA 300.0	994060
		N/A	N/A	N/A		EPA 300.0	987435
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	991652
		N/A	N/A	N/A		SM2130B-2011	987413
		N/A	N/A	N/A		SM2320B-2011	991652
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	993365
		N/A	N/A	N/A		SM5310B-14	989828
	SW846 9066	1002552	05/17/2023 07:37	AKH	SW846 9066	1003052	
3301507005	FFMP032W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	991554	05/10/2023 08:07	WDA	SW846 7470A	992860
		SW846 7470A	990155	05/09/2023 07:55	WDA	SW846 7470A	990595
		N/A	N/A	N/A		Lib Search VOC	1000652
		N/A	N/A	N/A		SW846 8260B	993521
		N/A	N/A	N/A		ASTM D6919-17	989673
		N/A	N/A	N/A		EPA 300.0	994060
		N/A	N/A	N/A		EPA 300.0	987435
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	991652
		N/A	N/A	N/A		SM2130B-2011	987413
		N/A	N/A	N/A		SM2320B-2011	991652
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	993365
		N/A	N/A	N/A		SM5310B-14	989828
	SW846 9066	1002552	05/17/2023 07:37	AKH	SW846 9066	1003052	
3301507006	FIELD BLANK	SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	991554	05/10/2023 08:07	WDA	SW846 7470A	992860
		SW846 7470A	990155	05/09/2023 07:55	WDA	SW846 7470A	990595
		N/A	N/A	N/A		Lib Search VOC	1000652
		N/A	N/A	N/A		SW846 8260B	993521
		N/A	N/A	N/A		ASTM D6919-17	989673
		N/A	N/A	N/A		EPA 300.0	994060
		N/A	N/A	N/A		EPA 300.0	987435
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	991652
		N/A	N/A	N/A		SM2130B-2011	987413
		N/A	N/A	N/A		SM2320B-2011	991652
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	993365
		N/A	N/A	N/A		SM5310B-14	989828
			SW846 9066	1002552	05/17/2023 07:37	AKH	SW846 9066
3301507007	TRIP BLANK	N/A	N/A	N/A		Lib Search VOC	1000652
		N/A	N/A	N/A		SW846 8260B	993521



Generated by ALS

**CHAIN OF CUSTODY/
 REQUEST FOR ANALYSIS**

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

ALS Environmental
 1000 Filling Mill Road • Middletown, PA 17057 • Fax: 717.944.5541 • Fax: 717.944.1430

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

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

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1. FFMP02DW	05/04/23	1105
2. FFMP02SW	05/04/23	1144
3. FFMP031W	05/04/23	1258
4. FFMP002W	05/04/23	1334
5. FFMP032W	05/04/23	1407
6. Field Blank	05/04/23	1430
7. Trip Blank	05/04/23	1605
8		
9		
10		

*G or C	*Matrix	TOC	O-OH	8260 - FORM 19A & Subtitle D	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Dissolved Metals Form 19A (Field Filtered)	Total Metals Form 19A + Subtitle D	pH, Cl, SpC, F, SO4, TDS, NO3, Turb.	Alkalinity, HCO3
G	GW	2	1	2	X	X	1	2	2	1	1
G	GW	2	1	2	X	X	1	2	2	1	1
G	GW	2	1	2	X	X	1	2	2	1	1
G	GW	2	1	2	X	X	1	2	2	1	1
G	DI	2	1	2			1	2	2	1	1
G	DI			2							

Enter Number of Containers Per Sample or Field Results Below.

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

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:

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

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1. [Signature]	5-4-23	1105	[Signature]	5-4-23	1605
3					
5					
7					
9					



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

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

Analytical Results Report For **Lancaster County Solid Waste Authority**
Project 2ND QTR 2023 FFMP-FORM 19A
Workorder 3300655
Report ID 245135 on 5/18/2023

Certificate of Analysis

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

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

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

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jordan Gallagher - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

Susan Scherer

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

Susan Scherer
Project Coordinator

(ALS Digital Signature)



Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3300655001	FFMP015W	Ground Water	05/01/2023 11:15	05/01/2023 16:35	BGS	Analytical Laboratory Service
3300655002	FFMP03AW	Ground Water	05/01/2023 12:51	05/01/2023 16:35	BGS	Analytical Laboratory Service
3300655003	FFMP005W	Ground Water	05/01/2023 14:12	05/01/2023 16:35	BGS	Analytical Laboratory Service
3300655004	FFMP26RW	Ground Water	05/01/2023 15:29	05/01/2023 16:35	BGS	Analytical Laboratory Service



Reference

Notes

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

Standard Acronyms/Flags

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



Project Notations

Sample Notations

Lab ID **Sample ID**

Result Notations

Notation Ref.

E	Result reported exceeds instrument calibration
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The sample was originally run within hold time, but required further analysis that exceeded hold time.
3	This sample was reran out of hold within the instrument's calibration range, for the analyte Nitrate-N, and confirms the initial in-hold reported result.
4	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
5	The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Sodium, Total. The % Recovery was reported as 47.9 and the control limits were 70 to 130. Sample concentration was above the concentration of the CCV.
6	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Chloride. The % Recovery was reported as 65.4 and the control limits were 80 to 120.
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 67.5 and the control limits were 80 to 120.



Detected Results Summary

Client Sample ID	FFMP015W	Collected	05/01/2023 11:15
Lab Sample ID	3300655001	Lab Receipt	05/01/2023 16:35

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	63.45	Feet		Field	#
Dissolved Oxygen	9.70	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	576.40	Feet		Field	#
Flow Rate	2.18	gal/min		Field	#
Ground Water Elevation	512.95	ft/MSL		Field	#
Oxidation-Reduction Potential	274	mV		Field	#
pH, Field (SM4500B)	5.53	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	463	umhos/cm	1	Field	#
Temperature	14.65	Deg. C		Field	#
Total Well Depth	149.90	Feet		Field	#
Volume in Water Column	127.08	Gallons		Field	#
Water Level After Purge	106.51	Feet		Field	#
Well Volumes Purged	1.03	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.057	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.064	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	34.5	mg/L	0.11	SW846 6020A	#
Calcium, Total	34.7	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	30.7	mg/L	0.11	SW846 6020A	#
Magnesium, Total	30.9	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.019	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.019	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0058	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.5	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.5	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	22.2	mg/L	0.11	SW846 6020A	#
Sodium, Total	23.2	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.027	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.027	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	23	mg/L	5	SM2320B-2011	#
Alkalinity, Total	23	mg/L	5	SM2320B-2011	#
Chloride	44.0	mg/L	2.0	EPA 300.0	#
Nitrate-N	43.3	mg/L	1.0	EPA 300.0	#
pH	6.59	pH_Units		S4500HB-11	#
Specific Conductance	618	umhos/cm	5	SM2510B-2011	#
Sulfate	22.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	418	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.4	mg/L	0.50	SM5310B-14	#



Detected Results Summary

Client Sample ID	FFMP03AW	Collected	05/01/2023 12:51
Lab Sample ID	3300655002	Lab Receipt	05/01/2023 16:35

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	51.05	Feet		Field	#
Dissolved Oxygen	1.26	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	590.90	Feet		Field	#
Flow Rate	1.86	gal/min		Field	#
Ground Water Elevation	539.85	ft/MSL		Field	#
Oxidation-Reduction Potential	324	mV		Field	#
pH, Field (SM4500B)	5.09	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	272	umhos/cm	1	Field	#
Temperature	14.12	Deg. C		Field	#
Total Well Depth	148.40	Feet		Field	#
Volume in Water Column	143.10	Gallons		Field	#
Water Level After Purge	84.42	Feet		Field	#
Well Volumes Purged	0.78	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.056	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.058	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	20.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	20.5	mg/L	0.11	SW846 6020A	#
Copper, Dissolved	0.0077	mg/L	0.0056	SW846 6020A	#
Copper, Total	0.0078	mg/L	0.0056	SW846 6020A	#
Magnesium, Dissolved	15.8	mg/L	0.11	SW846 6020A	#
Magnesium, Total	15.9	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.39	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.39	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.012	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.5	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.5	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	14.5	mg/L	0.11	SW846 6020A	#
Sodium, Total	14.9	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.022	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.022	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	13	mg/L	5	SM2320B-2011	#
Alkalinity, Total	13	mg/L	5	SM2320B-2011	#
Chloride	40.6	mg/L	2.0	EPA 300.0	#
Nitrate-N	22.0	mg/L	1.0	EPA 300.0	#
pH	6.17	pH_Units		S4500HB-11	#
Specific Conductance	372	umhos/cm	5	SM2510B-2011	#
Sulfate	3.1	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	254	mg/L	25	SM2540C-15	#



Detected Results Summary

Client Sample ID FFMP005W Collected 05/01/2023 14:12
 Lab Sample ID 3300655003 Lab Receipt 05/01/2023 16:35

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	62.50	Feet		Field	#
Elev Top MW Casing above MSL	537.40	Feet		Field	#
Flow Rate	2.11	gal/min		Field	#
Ground Water Elevation	474.90	ft/MSL		Field	#
Oxidation-Reduction Potential	557	mV		Field	#
pH, Field (SM4500B)	5.56	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	677	umhos/cm	1	Field	#
Temperature	13.58	Deg. C		Field	#
Total Well Depth	149.70	Feet		Field	#
Volume in Water Column	128.18	Gallons		Field	#
Water Level After Purge	88.97	Feet		Field	#
Well Volumes Purged	0.99	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.051	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.052	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	75.7	mg/L	0.11	SW846 6020A	#
Calcium, Total	75.8	mg/L	0.11	SW846 6020A	#
Cobalt, Total	0.0063	mg/L	0.0056	SW846 6020A	#
Magnesium, Dissolved	19.6	mg/L	0.11	SW846 6020A	#
Magnesium, Total	19.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.21	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.20	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	3.4	mg/L	0.11	SW846 6020A	#
Potassium, Total	3.3	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	54.6	mg/L	0.11	SW846 6020A	#
Sodium, Total	53.5	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	54	mg/L	5	SM2320B-2011	#
Alkalinity, Total	54	mg/L	5	SM2320B-2011	#
Chloride	186	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.5	mg/L	1.0	EPA 300.0	#
pH	6.65	pH_Units		S4500HB-11	#
Specific Conductance	895	umhos/cm	5	SM2510B-2011	#
Sulfate	79.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	618	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.4	mg/L	0.50	SM5310B-14	#



Detected Results Summary

Client Sample ID	FFMP26RW	Collected	05/01/2023 15:29
Lab Sample ID	3300655004	Lab Receipt	05/01/2023 16:35

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	73.63	Feet		Field	#
Dissolved Oxygen	0.03	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	547.40	Feet		Field	#
Flow Rate	2.04	gal/min		Field	#
Ground Water Elevation	473.77	ft/MSL		Field	#
Oxidation-Reduction Potential	353	mV		Field	#
pH, Field (SM4500B)	5.57	pH_Units		Field	#
Sample Depth	105.00	Feet		Field	#
Specific Conductance, Field	658	umhos/cm	1	Field	#
Temperature	14.39	Deg. C		Field	#
Total Well Depth	118.30	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
Volume in Water Column	65.66	Gallons		Field	#
Water Level After Purge	88.61	Feet		Field	#
Well Volumes Purged	1.40	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.084	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.086	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	70.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	69.2	mg/L	0.11	SW846 6020A	#
Cobalt, Total	0.023	mg/L	0.0056	SW846 6020A	#
Magnesium, Dissolved	17.7	mg/L	0.11	SW846 6020A	#
Magnesium, Total	17.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.90	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.88	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	8.6	mg/L	0.11	SW846 6020A	#
Potassium, Total	8.5	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	57.4	mg/L	0.11	SW846 6020A	#
Sodium, Total	58.0	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0088	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0090	mg/L	0.0056	SW846 6020A	#
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	#
pH	6.56	pH_Units		S4500HB-11	#
Specific Conductance	871	umhos/cm	5	SM2510B-2011	#
Sulfate	101	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	544	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.9	mg/L	0.50	SM5310B-14	#
Turbidity	0.55	NTU	0.30	SM2130B-2011	#



Results

Client Sample ID	FFMP015W	Collected	05/01/2023 11:15
Lab Sample ID	3300655001	Lab Receipt	05/01/2023 16:35

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	63.45		Feet		Field	1	05/01/2023 11:15	BGS	F
Dissolved Oxygen	9.70		mg/L	0.01	Field	1	05/01/2023 11:15	BGS	F
Elev Top MW Casing above MSL	576.40		Feet		Field	1	05/01/2023 11:15	BGS	F
Flow Rate	2.18		gal/min		Field	1	05/01/2023 11:15	BGS	F
Ground Water Elevation	512.95		ft/MSL		Field	1	05/01/2023 11:15	BGS	F
Oxidation-Reduction Potential	274		mV		Field	1	05/01/2023 11:15	BGS	F
pH, Field (SM4500B)	5.53		pH_Units		Field	1	05/01/2023 11:15	BGS	F
Sample Depth	135.00		Feet		Field	1	05/01/2023 11:15	BGS	F
Specific Conductance, Field	463		umhos/cm	1	Field	1	05/01/2023 11:15	BGS	F
Temperature	14.65		Deg. C		Field	1	05/01/2023 11:15	BGS	F
Total Well Depth	149.90		Feet		Field	1	05/01/2023 11:15	BGS	F
Turbidity, Field	ND	ND	NTU	1	Field	1	05/01/2023 11:15	BGS	F
Volume in Water Column	127.08		Gallons		Field	1	05/01/2023 11:15	BGS	F
Water Level After Purge	106.51		Feet		Field	1	05/01/2023 11:15	BGS	F
Well Volumes Purged	1.03		Vol		Field	1	05/01/2023 11:15	BGS	F

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/10/2023 02:10	PKD	J

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:21	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/10/2023 12:42	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/10/2023 11:21	MO	E1
Barium, Dissolved	0.057		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:42	MO	D1
Barium, Total	0.064		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:21	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:21	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:42	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:21	MO	E1
Calcium, Dissolved	34.5		mg/L	0.11	SW846 6020A	1	05/10/2023 12:42	MO	D1
Calcium, Total	34.7		mg/L	0.11	SW846 6020A	1	05/10/2023 11:21	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:42	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:21	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:21	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:42	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:21	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 12:42	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 11:21	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:42	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:21	MO	E1
Magnesium, Dissolved	30.7		mg/L	0.11	SW846 6020A	1	05/10/2023 12:42	MO	D1
Magnesium, Total	30.9		mg/L	0.11	SW846 6020A	1	05/10/2023 11:21	MO	E1
Manganese, Dissolved	0.019		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:42	MO	D1



Results

Client Sample ID	FFMP015W	Collected	05/01/2023 11:15
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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.019		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:21	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/02/2023 11:36	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/02/2023 12:50	WDA	E
Nickel, Total	0.0058		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:21	MO	E1
Potassium, Dissolved	2.5		mg/L	0.11	SW846 6020A	1	05/10/2023 12:42	MO	D1
Potassium, Total	2.5		mg/L	0.11	SW846 6020A	1	05/10/2023 11:21	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:42	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:21	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:42	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:21	MO	E1
Sodium, Dissolved	22.2	5	mg/L	0.11	SW846 6020A	1	05/10/2023 17:14	MO	D1
Sodium, Total	23.2		mg/L	0.11	SW846 6020A	1	05/10/2023 11:21	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:21	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:21	MO	E1
Zinc, Dissolved	0.027		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:42	MO	D1
Zinc, Total	0.027		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:21	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J



Results

Client Sample ID	FFMP015W	Collected	05/01/2023 11:15
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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:10	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:10	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.6%	62 - 133	05/10/2023 02:10	
4-Bromofluorobenzene	460-00-4	108%	79 - 114	05/10/2023 02:10	
Dibromofluoromethane	1868-53-7	99.6%	78 - 116	05/10/2023 02:10	
Toluene-d8	2037-26-5	101%	76 - 127	05/10/2023 02:10	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	23		mg/L	5	SM2320B-2011	1	05/04/2023 18:57	NML	A
Alkalinity, Total	23	1	mg/L	5	SM2320B-2011	1	05/04/2023 18:57	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/05/2023 14:13	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	05/03/2023 11:50	KMS	C
Chloride	44.0		mg/L	2.0	EPA 300.0	2	05/02/2023 09:06	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/02/2023 09:06	J1W	A
Nitrate-N	43.3	E,2,3	mg/L	1.0	EPA 300.0	2	05/02/2023 09:06	J1W	A
pH	6.59	4	pH_Units		S4500HB-11	1	05/04/2023 18:57	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 14:52	AKH	I
Specific Conductance	618		umhos/cm	5	SM2510B-2011	1	05/05/2023 13:25	JXL	A
Sulfate	22.0		mg/L	2.0	EPA 300.0	2	05/02/2023 09:06	J1W	A



Results

Client Sample ID	FFMP015W	Collected	05/01/2023 11:15
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WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	418		mg/L	25	SM2540C-15	1	05/09/2023 12:05	GJB	A
Total Organic Carbon (TOC)	1.4		mg/L	0.50	SM5310B-14	1	05/04/2023 05:21	PAG	G
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	05/01/2023 23:30	NRB	A



Results

Client Sample ID	FFMP03AW	Collected	05/01/2023 12:51
Lab Sample ID	3300655002	Lab Receipt	05/01/2023 16:35

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	51.05		Feet		Field	1	05/01/2023 12:51	BGS	F
Dissolved Oxygen	1.26		mg/L	0.01	Field	1	05/01/2023 12:51	BGS	F
Elev Top MW Casing above MSL	590.90		Feet		Field	1	05/01/2023 12:51	BGS	F
Flow Rate	1.86		gal/min		Field	1	05/01/2023 12:51	BGS	F
Ground Water Elevation	539.85		ft/MSL		Field	1	05/01/2023 12:51	BGS	F
Oxidation-Reduction Potential	324		mV		Field	1	05/01/2023 12:51	BGS	F
pH, Field (SM4500B)	5.09		pH_Units		Field	1	05/01/2023 12:51	BGS	F
Sample Depth	130.00		Feet		Field	1	05/01/2023 12:51	BGS	F
Specific Conductance, Field	272		umhos/cm	1	Field	1	05/01/2023 12:51	BGS	F
Temperature	14.12		Deg. C		Field	1	05/01/2023 12:51	BGS	F
Total Well Depth	148.40		Feet		Field	1	05/01/2023 12:51	BGS	F
Turbidity, Field	ND	ND	NTU	1	Field	1	05/01/2023 12:51	BGS	F
Volume in Water Column	143.10		Gallons		Field	1	05/01/2023 12:51	BGS	F
Water Level After Purge	84.42		Feet		Field	1	05/01/2023 12:51	BGS	F
Well Volumes Purged	0.78		Vol		Field	1	05/01/2023 12:51	BGS	F

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/10/2023 02:23	PDK	J

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:23	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/10/2023 12:44	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/10/2023 11:23	MO	E1
Barium, Dissolved	0.056		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:44	MO	D1
Barium, Total	0.058		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:23	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:23	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:44	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:23	MO	E1
Calcium, Dissolved	20.6		mg/L	0.11	SW846 6020A	1	05/10/2023 12:44	MO	D1
Calcium, Total	20.5		mg/L	0.11	SW846 6020A	1	05/10/2023 11:23	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:44	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:23	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:23	MO	E1
Copper, Dissolved	0.0077		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:44	MO	D1
Copper, Total	0.0078		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:23	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 12:44	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 11:23	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:44	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:23	MO	E1
Magnesium, Dissolved	15.8		mg/L	0.11	SW846 6020A	1	05/10/2023 12:44	MO	D1
Magnesium, Total	15.9		mg/L	0.11	SW846 6020A	1	05/10/2023 11:23	MO	E1
Manganese, Dissolved	0.39		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:44	MO	D1



Results

Client Sample ID	FFMP03AW	Collected	05/01/2023 12:51
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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.39		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:23	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/02/2023 11:37	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/02/2023 12:53	WDA	E
Nickel, Total	0.012		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:23	MO	E1
Potassium, Dissolved	1.5		mg/L	0.11	SW846 6020A	1	05/10/2023 12:44	MO	D1
Potassium, Total	1.5		mg/L	0.11	SW846 6020A	1	05/10/2023 11:23	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:44	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:23	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:44	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:23	MO	E1
Sodium, Dissolved	14.5	5	mg/L	0.11	SW846 6020A	1	05/10/2023 17:16	MO	D1
Sodium, Total	14.9		mg/L	0.11	SW846 6020A	1	05/10/2023 11:23	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:23	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:23	MO	E1
Zinc, Dissolved	0.022		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:44	MO	D1
Zinc, Total	0.022		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:23	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J



Results

Client Sample ID	FFMP03AW	Collected	05/01/2023 12:51
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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:33	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:33	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.8%	62 - 133	05/10/2023 02:33	
4-Bromofluorobenzene	460-00-4	106%	79 - 114	05/10/2023 02:33	
Dibromofluoromethane	1868-53-7	99.7%	78 - 116	05/10/2023 02:33	
Toluene-d8	2037-26-5	103%	76 - 127	05/10/2023 02:33	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	13		mg/L	5	SM2320B-2011	1	05/04/2023 19:10	NML	A
Alkalinity, Total	13	1	mg/L	5	SM2320B-2011	1	05/04/2023 19:10	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/05/2023 13:45	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	05/03/2023 11:50	KMS	C
Chloride	40.6		mg/L	2.0	EPA 300.0	2	05/02/2023 09:16	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/02/2023 09:16	J1W	A
Nitrate-N	22.0	E,2,3	mg/L	1.0	EPA 300.0	2	05/02/2023 09:16	J1W	A
pH	6.17	4	pH_Units		S4500HB-11	1	05/04/2023 19:10	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 14:55	AKH	I
Specific Conductance	372		umhos/cm	5	SM2510B-2011	1	05/05/2023 13:25	JXL	A
Sulfate	3.1		mg/L	2.0	EPA 300.0	2	05/02/2023 09:16	J1W	A



Results

Client Sample ID	FFMP03AW	Collected	05/01/2023 12:51
Lab Sample ID	3300655002	Lab Receipt	05/01/2023 16:35

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	254		mg/L	25	SM2540C-15	1	05/09/2023 12:05	GJB	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/04/2023 05:21	PAG	G
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	05/01/2023 23:30	NRB	A



Results

Client Sample ID	FFMP005W	Collected	05/01/2023 14:12
Lab Sample ID	3300655003	Lab Receipt	05/01/2023 16:35

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	62.50		Feet		Field	1	05/01/2023 14:12	BGS	F
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	05/01/2023 14:12	BGS	F
Elev Top MW Casing above MSL	537.40		Feet		Field	1	05/01/2023 14:12	BGS	F
Flow Rate	2.11		gal/min		Field	1	05/01/2023 14:12	BGS	F
Ground Water Elevation	474.90		ft/MSL		Field	1	05/01/2023 14:12	BGS	F
Oxidation-Reduction Potential	557		mV		Field	1	05/01/2023 14:12	BGS	F
pH, Field (SM4500B)	5.56		pH_Units		Field	1	05/01/2023 14:12	BGS	F
Sample Depth	135.00		Feet		Field	1	05/01/2023 14:12	BGS	F
Specific Conductance, Field	677		umhos/cm	1	Field	1	05/01/2023 14:12	BGS	F
Temperature	13.58		Deg. C		Field	1	05/01/2023 14:12	BGS	F
Total Well Depth	149.70		Feet		Field	1	05/01/2023 14:12	BGS	F
Turbidity, Field	ND	ND	NTU	1	Field	1	05/01/2023 14:12	BGS	F
Volume in Water Column	128.18		Gallons		Field	1	05/01/2023 14:12	BGS	F
Water Level After Purge	88.97		Feet		Field	1	05/01/2023 14:12	BGS	F
Well Volumes Purged	0.99		Vol		Field	1	05/01/2023 14:12	BGS	F

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/10/2023 02:56	PDK	J

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:25	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/10/2023 12:46	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/10/2023 11:25	MO	E1
Barium, Dissolved	0.051		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:46	MO	D1
Barium, Total	0.052		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:25	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:25	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:46	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:25	MO	E1
Calcium, Dissolved	75.7		mg/L	0.11	SW846 6020A	1	05/10/2023 12:46	MO	D1
Calcium, Total	75.8		mg/L	0.11	SW846 6020A	1	05/10/2023 11:25	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:46	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:25	MO	E1
Cobalt, Total	0.0063		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:25	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:46	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:25	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 12:46	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 11:25	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:46	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:25	MO	E1
Magnesium, Dissolved	19.6		mg/L	0.11	SW846 6020A	1	05/10/2023 12:46	MO	D1
Magnesium, Total	19.5		mg/L	0.11	SW846 6020A	1	05/10/2023 11:25	MO	E1
Manganese, Dissolved	0.21		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:46	MO	D1



Results

Client Sample ID	FFMP005W	Collected	05/01/2023 14:12
Lab Sample ID	3300655003	Lab Receipt	05/01/2023 16:35

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.20		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:25	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/02/2023 11:41	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/02/2023 12:54	WDA	E
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:25	MO	E1
Potassium, Dissolved	3.4		mg/L	0.11	SW846 6020A	1	05/10/2023 12:46	MO	D1
Potassium, Total	3.3		mg/L	0.11	SW846 6020A	1	05/10/2023 11:25	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:46	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:25	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:46	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:25	MO	E1
Sodium, Dissolved	54.6		mg/L	0.11	SW846 6020A	1	05/10/2023 17:39	MO	D1
Sodium, Total	53.5		mg/L	0.11	SW846 6020A	1	05/10/2023 11:25	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:25	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:25	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:46	MO	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:25	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J



Results

Client Sample ID	FFMP005W	Collected	05/01/2023 14:12
Lab Sample ID	3300655003	Lab Receipt	05/01/2023 16:35

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 02:56	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 02:56	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.7%	62 - 133	05/10/2023 02:56	
4-Bromofluorobenzene	460-00-4	110%	79 - 114	05/10/2023 02:56	
Dibromofluoromethane	1868-53-7	101%	78 - 116	05/10/2023 02:56	
Toluene-d8	2037-26-5	101%	76 - 127	05/10/2023 02:56	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	54		mg/L	5	SM2320B-2011	1	05/04/2023 19:23	NML	A
Alkalinity, Total	54	1	mg/L	5	SM2320B-2011	1	05/04/2023 19:23	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/04/2023 19:53	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	05/03/2023 11:50	KMS	C
Chloride	186	6,7	mg/L	2.0	EPA 300.0	2	05/02/2023 09:26	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/02/2023 09:26	J1W	A
Nitrate-N	1.5		mg/L	1.0	EPA 300.0	2	05/02/2023 09:26	J1W	A
pH	6.65	4	pH_Units		S4500HB-11	1	05/04/2023 19:23	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 14:59	AKH	I
Specific Conductance	895		umhos/cm	5	SM2510B-2011	1	05/05/2023 13:25	JXL	A
Sulfate	79.5		mg/L	2.0	EPA 300.0	2	05/02/2023 09:26	J1W	A



Results

Client Sample ID	FFMP005W	Collected	05/01/2023 14:12
Lab Sample ID	3300655003	Lab Receipt	05/01/2023 16:35

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	618		mg/L	25	SM2540C-15	1	05/09/2023 12:05	GJB	A
Total Organic Carbon (TOC)	1.4		mg/L	0.50	SM5310B-14	1	05/04/2023 05:21	PAG	G
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	05/01/2023 23:30	NRB	A



Results

Client Sample ID	FFMP26RW	Collected	05/01/2023 15:29
Lab Sample ID	3300655004	Lab Receipt	05/01/2023 16:35

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	73.63		Feet		Field	1	05/01/2023 15:29	BGS	F
Dissolved Oxygen	0.03		mg/L	0.01	Field	1	05/01/2023 15:29	BGS	F
Elev Top MW Casing above MSL	547.40		Feet		Field	1	05/01/2023 15:29	BGS	F
Flow Rate	2.04		gal/min		Field	1	05/01/2023 15:29	BGS	F
Ground Water Elevation	473.77		ft/MSL		Field	1	05/01/2023 15:29	BGS	F
Oxidation-Reduction Potential	353		mV		Field	1	05/01/2023 15:29	BGS	F
pH, Field (SM4500B)	5.57		pH_Units		Field	1	05/01/2023 15:29	BGS	F
Sample Depth	105.00		Feet		Field	1	05/01/2023 15:29	BGS	F
Specific Conductance, Field	658		umhos/cm	1	Field	1	05/01/2023 15:29	BGS	F
Temperature	14.39		Deg. C		Field	1	05/01/2023 15:29	BGS	F
Total Well Depth	118.30		Feet		Field	1	05/01/2023 15:29	BGS	F
Turbidity, Field	1		NTU	1	Field	1	05/01/2023 15:29	BGS	F
Volume in Water Column	65.66		Gallons		Field	1	05/01/2023 15:29	BGS	F
Water Level After Purge	88.61		Feet		Field	1	05/01/2023 15:29	BGS	F
Well Volumes Purged	1.40		Vol		Field	1	05/01/2023 15:29	BGS	F

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/10/2023 03:18	PDK	J

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:27	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/10/2023 12:48	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/10/2023 11:27	MO	E1
Barium, Dissolved	0.084		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:48	MO	D1
Barium, Total	0.086		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:27	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:27	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:48	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:27	MO	E1
Calcium, Dissolved	70.6		mg/L	0.11	SW846 6020A	1	05/10/2023 12:48	MO	D1
Calcium, Total	69.2		mg/L	0.11	SW846 6020A	1	05/10/2023 11:27	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:48	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:27	MO	E1
Cobalt, Total	0.023		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:27	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:48	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:27	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 12:48	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 11:27	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:48	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:27	MO	E1
Magnesium, Dissolved	17.7		mg/L	0.11	SW846 6020A	1	05/10/2023 12:48	MO	D1
Magnesium, Total	17.5		mg/L	0.11	SW846 6020A	1	05/10/2023 11:27	MO	E1
Manganese, Dissolved	0.90		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:48	MO	D1



Results

Client Sample ID	FFMP26RW	Collected	05/01/2023 15:29
Lab Sample ID	3300655004	Lab Receipt	05/01/2023 16:35

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.88		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:27	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/02/2023 11:42	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/02/2023 12:58	WDA	E
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:27	MO	E1
Potassium, Dissolved	8.6		mg/L	0.11	SW846 6020A	1	05/10/2023 12:48	MO	D1
Potassium, Total	8.5		mg/L	0.11	SW846 6020A	1	05/10/2023 11:27	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:48	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:27	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:48	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:27	MO	E1
Sodium, Dissolved	57.4		mg/L	0.11	SW846 6020A	1	05/10/2023 17:41	MO	D1
Sodium, Total	58.0		mg/L	0.11	SW846 6020A	1	05/10/2023 11:27	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:27	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:27	MO	E1
Zinc, Dissolved	0.0088		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:48	MO	D1
Zinc, Total	0.0090		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:27	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PKD	J



Results

Client Sample ID	FFMP26RW	Collected	05/01/2023 15:29
Lab Sample ID	3300655004	Lab Receipt	05/01/2023 16:35

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2023 03:18	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2023 03:18	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.7%	62 - 133	05/10/2023 03:18	
4-Bromofluorobenzene	460-00-4	110%	79 - 114	05/10/2023 03:18	
Dibromofluoromethane	1868-53-7	102%	78 - 116	05/10/2023 03:18	
Toluene-d8	2037-26-5	101%	76 - 127	05/10/2023 03:18	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	60		mg/L	5	SM2320B-2011	1	05/04/2023 19:36	NML	A
Alkalinity, Total	60	1	mg/L	5	SM2320B-2011	1	05/04/2023 19:36	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/05/2023 13:59	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	05/03/2023 11:50	KMS	C
Chloride	162		mg/L	2.0	EPA 300.0	2	05/02/2023 10:18	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/02/2023 10:18	J1W	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	05/02/2023 10:18	J1W	A
pH	6.56	4	pH_Units		S4500HB-11	1	05/04/2023 19:36	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 15:02	AKH	I
Specific Conductance	871		umhos/cm	5	SM2510B-2011	1	05/05/2023 13:25	JXL	A
Sulfate	101		mg/L	2.0	EPA 300.0	2	05/02/2023 10:18	J1W	A



Results

Client Sample ID	FFMP26RW	Collected	05/01/2023 15:29
Lab Sample ID	3300655004	Lab Receipt	05/01/2023 16:35

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	544		mg/L	25	SM2540C-15	1	05/09/2023 12:05	GJB	A
Total Organic Carbon (TOC)	1.9		mg/L	0.50	SM5310B-14	1	05/04/2023 05:21	PAG	G
Turbidity	0.55		NTU	0.30	SM2130B-2011	1	05/01/2023 23:30	NRB	A



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3300655001	FFMP015W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3300655002	FFMP03AW	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3300655003	FFMP005W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	



Project 2ND QTR 2023 FFMP-FORM 19A

Workorder 3300655

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3300655004	FFMP26RW	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	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
3300655001	FFMP015W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	992370
		SW846 3015A	984645	05/01/2023 21:35	ANN	SW846 6020A	993510
		SW846 3015A	984645	05/01/2023 21:35	ANN	SW846 6020A	992360
		SW846 7470A	984673	05/02/2023 08:15	WDA	SW846 7470A	984754
		SW846 7470A	984671	05/02/2023 08:15	WDA	SW846 7470A	984752
		N/A	N/A	N/A		Lib Search VOC	999052
		N/A	N/A	N/A		SW846 8260B	990781
		N/A	N/A	N/A		ASTM D6919-17	987654
		N/A	N/A	N/A		EPA 300.0	984678
		N/A	N/A	N/A		EPA 410.4	985857
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	984659
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	987319
		N/A	N/A	N/A		SM2540C-15	987255
		N/A	N/A	N/A		SM5310B-14	986445
	SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066	989660	
3300655002	FFMP03AW	N/A	N/A	N/A		Field	1003965
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	992370
		SW846 3015A	984645	05/01/2023 21:35	ANN	SW846 6020A	993510
		SW846 3015A	984645	05/01/2023 21:35	ANN	SW846 6020A	992360
		SW846 7470A	984673	05/02/2023 08:15	WDA	SW846 7470A	984754
		SW846 7470A	984671	05/02/2023 08:15	WDA	SW846 7470A	984752
		N/A	N/A	N/A		Lib Search VOC	999052
		N/A	N/A	N/A		SW846 8260B	990781
		N/A	N/A	N/A		ASTM D6919-17	987654
		N/A	N/A	N/A		EPA 300.0	984678
		N/A	N/A	N/A		EPA 410.4	985857
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	984659
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	987319
		N/A	N/A	N/A		SM2540C-15	987255
		N/A	N/A	N/A		SM5310B-14	986445
	SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066	989660	
3300655003	FFMP005W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	992370
		SW846 3015A	984645	05/01/2023 21:35	ANN	SW846 6020A	993510
		SW846 3015A	984645	05/01/2023 21:35	ANN	SW846 6020A	992360
		SW846 7470A	984673	05/02/2023 08:15	WDA	SW846 7470A	984754
		SW846 7470A	984671	05/02/2023 08:15	WDA	SW846 7470A	984752
		N/A	N/A	N/A		Lib Search VOC	999052
		N/A	N/A	N/A		SW846 8260B	990781
		N/A	N/A	N/A		ASTM D6919-17	986961
		N/A	N/A	N/A		EPA 300.0	984678
		N/A	N/A	N/A		EPA 410.4	985857
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	984659
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	987319
		N/A	N/A	N/A		SM2540C-15	987255
		N/A	N/A	N/A		SM5310B-14	986445
	SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066	989660	



Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3300655004	FFMP26RW	N/A	N/A	N/A		Field	1003965
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	992370
		SW846 3015A	984645	05/01/2023 21:35	ANN	SW846 6020A	993510
		SW846 3015A	984645	05/01/2023 21:35	ANN	SW846 6020A	992360
		SW846 7470A	984673	05/02/2023 08:15	WDA	SW846 7470A	984754
		SW846 7470A	984671	05/02/2023 08:15	WDA	SW846 7470A	984752
		N/A	N/A	N/A		Lib Search VOC	999052
		N/A	N/A	N/A		SW846 8260B	990781
		N/A	N/A	N/A		ASTM D6919-17	987654
		N/A	N/A	N/A		EPA 300.0	984678
		N/A	N/A	N/A		EPA 410.4	985857
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	984659
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	987319
		N/A	N/A	N/A		SM2540C-15	987255
		N/A	N/A	N/A		SM5310B-14	986445
		SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066	989660



301 Filling Mill Road • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430
 Lancaster County Solid Waste MA

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

Contact: Dan Brown
 Phone#: (717) 735-0193

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

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

Date Required: _____ Approved By: _____
 Email? Y N
 Fax? Y No.: (717) 397-9973

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1. FFMP015W	05/01/23	1115
2. FFMP03AW	05/01/23	1251
3. FFMP005W	05/01/23	1412
4. FFMP26RW	05/01/23	1529
5		
6		
7		
8		
9		
10		

Project Comments:
 Relinquished By/ Company Name
 Date Time
 5-1-23 1630 2
 4
 6
 8
 10

Received By/ Company Name
 Date Time
 5-1-23 1635
 4
 6
 8
 10

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

Container Type	AG	AW	CG	PL	PL	PL
Container Size	40 ml	125 ml	40 ml	250 ml	125 ml	125 ml
Preservative	HCl	H2SO4	HCl	H2SO4	HNO3	HNO3

ANALYSES/METHOD REQUESTED

Field Measurements	8260 - FORM 19A & Subtitle D	Sample Depth for AUX Data	NH3-N, COD	Disolved: Fe, Mn, Na, Ba, Cr, Cu, Pb, Mg, K, Zn, As, Cd, Se, Ag, Hg, Ca	Metals: Fe, Mn, Na, Ba, Cr, Cu, Pb, Mg, K, Zn, As, Cd, Se, Ag, Hg, Ca	pH, Cl, SPC, F, SO4, TDS, NO3, Turb.	Alkalinity, HCO3
TOC	1	1	1	1	1	1	1
O-H	1	1	1	1	1	1	1
G or C	2	2	2	2	2	2	2
*Matrix	2	2	2	2	2	2	2

LOGGED BY (signature):
 REVIEWED BY (signature):

Reportable to PADEP? Yes No
 PWSID #
 EDSS: Format Type

3300655
 Logged By: SLS
 PM: SUB

Cooler Temp: 2 Therm ID: 570
 No. of Coolers: Y N Initial

Custody Seals Present? Y N Initial

(if present) Seals Intact? Y N Initial

Temp By: SA 2 Therm ID: 570

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 NA
 Correct Containers Provided: Y N NA
 Sample Label/COC Agree: Y N NA
 Adequate Sample Volumes: Y N NA
 CR6 Samples Filtered: Y N NA
 OP Samples Filtered: Y N NA
 VOA Headspace Present: Y N NA
 Voa Trip Blank: Y N NA
 NUS 4 Days? Y N NA
 Rad Screen (uCi): Y N NA
 Courier/Tracking #: Y N NA
 SDWA Compliance: Y N NA
 PWSID: Y N NA
 WW Containers 0-6°C: Y N NA

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

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



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

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618

State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 2ND QTR 2023 FFMP-FORM 19A

Workorder 3301191

Report ID 245132 on 5/18/2023

Certificate of Analysis

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

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

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

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

- Ashley Gichuki - Lancaster County Solid Waste Authority
- Daniel Brown - Lancaster County Solid Waste Authority
- Jordan Gallagher - Lancaster County Solid Waste Authority
- Jeff Musser - Lancaster County Solid Waste Authority

Susan Scherer

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

Susan Scherer
Project Coordinator

(ALS Digital Signature)



Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3301191001	FFMP30RW	Ground Water	05/03/2023 11:10	05/03/2023 17:40	BGS	Analytical Laboratory Service
3301191002	FFMP04AW	Ground Water	05/03/2023 12:24	05/03/2023 17:40	BGS	Analytical Laboratory Service
3301191003	FFMP036W	Ground Water	05/03/2023 13:48	05/03/2023 17:40	BGS	Analytical Laboratory Service
3301191004	FFMP035W	Ground Water	05/03/2023 14:43	05/03/2023 17:40	BGS	Analytical Laboratory Service
3301191005	FFMP018W	Ground Water	05/03/2023 15:31	05/03/2023 17:40	BGS	Analytical Laboratory Service
3301191006	FFMP019W	Ground Water	05/03/2023 16:22	05/03/2023 17:40	BGS	Analytical Laboratory Service



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- 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 SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as .2 and the control limits were 90 to 110. |
| 4 | The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Ca. The % recovery was reported as 139.5 and the control limits were 70 to 130. Sample concentration was greater than the concentration of the CCV. |
| 5 | The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 22.3 and the control limits were 0 to 20. |
| 6 | The QC type LLCCV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 24.6 and the control limits were 0 to 20. |



Detected Results Summary

Client Sample ID	FFMP30RW	Collected	05/03/2023 11:10
Lab Sample ID	3301191001	Lab Receipt	05/03/2023 17:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	35.45	Feet		Field	#
Dissolved Oxygen	1.17	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	562.30	Feet		Field	#
Flow Rate	2.08	gal/min		Field	#
Ground Water Elevation	526.85	ft/MSL		Field	#
Oxidation-Reduction Potential	262	mV		Field	#
pH, Field (SM4500B)	5.31	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	652	umhos/cm	1	Field	#
Temperature	13.68	Deg. C		Field	#
Total Well Depth	94.20	Feet		Field	#
Volume in Water Column	86.36	Gallons		Field	#
Water Level After Purge	57.92	Feet		Field	#
Well Volumes Purged	1.45	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.091	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.091	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	39.4	mg/L	0.11	SW846 6020A	#
Calcium, Total	39.3	mg/L	0.11	SW846 6020A	#
Chromium, Total	0.0034	mg/L	0.0022	SW846 6020A	#
Cobalt, Total	0.021	mg/L	0.0056	SW846 6020A	#
Iron, Total	0.10	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	17.3	mg/L	0.11	SW846 6020A	#
Magnesium, Total	17.2	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	2.5	mg/L	0.0056	SW846 6020A	#
Manganese, Total	2.5	mg/L	0.0056	SW846 6020A	#
Mercury, Dissolved	0.00075	mg/L	0.00050	SW846 7470A	#
Mercury, Total	0.00072	mg/L	0.00050	SW846 7470A	#
Nickel, Total	0.028	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	5.9	mg/L	0.11	SW846 6020A	#
Potassium, Total	5.9	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	99.6	mg/L	0.11	SW846 6020A	#
Sodium, Total	100	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.014	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.014	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	30	mg/L	5	SM2320B-2011	#
Alkalinity, Total	30	mg/L	5	SM2320B-2011	#
Ammonia-N	0.171	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	19	mg/L	15	EPA 410.4	#
Chloride	252	mg/L	5.0	EPA 300.0	#
Nitrate-N	5.5	mg/L	1.0	EPA 300.0	#
pH	7.17	pH_Units		S4500HB-11	#



Detected Results Summary

Sample - FFMP30RW (cont.)

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
WET CHEMISTRY (cont.)					
Specific Conductance	985	umhos/cm	5	SM2510B-2011	#
Sulfate	33.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	564	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.68	mg/L	0.50	SM5310B-14	#
Turbidity	5.0	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP04AW	Collected	05/03/2023 12:24
Lab Sample ID	3301191002	Lab Receipt	05/03/2023 17:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	35.47	Feet		Field	#
Dissolved Oxygen	0.82	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	560.72	Feet		Field	#
Flow Rate	1.82	gal/min		Field	#
Ground Water Elevation	525.25	ft/MSL		Field	#
Oxidation-Reduction Potential	88	mV		Field	#
pH, Field (SM4500B)	6.94	pH_Units		Field	#
Sample Depth	146.00	Feet		Field	#
Specific Conductance, Field	1050	umhos/cm	1	Field	#
Temperature	13.78	Deg. C		Field	#
Total Well Depth	148.50	Feet		Field	#
Volume in Water Column	166.15	Gallons		Field	#
Water Level After Purge	79.63	Feet		Field	#
Well Volumes Purged	0.66	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.18	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.19	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	136	mg/L	0.11	SW846 6020A	#
Calcium, Total	148	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	24.7	mg/L	0.11	SW846 6020A	#
Magnesium, Total	26.0	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.32	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.34	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.016	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	80.6	mg/L	0.11	SW846 6020A	#
Sodium, Total	84.2	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	180	mg/L	5	SM2320B-2011	#
Alkalinity, Total	180	mg/L	5	SM2320B-2011	#
Ammonia-N	0.138	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	26	mg/L	15	EPA 410.4	#
Chloride	320	mg/L	5.0	EPA 300.0	#
pH	8.21	pH_Units		S4500HB-11	#
Specific Conductance	1450	umhos/cm	5	SM2510B-2011	#
Sulfate	51.9	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	904	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.68	mg/L	0.50	SM5310B-14	#
Turbidity	0.50	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP036W	Collected	05/03/2023 13:48
Lab Sample ID	3301191003	Lab Receipt	05/03/2023 17:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	46.98	Feet		Field	#
Elev Top MW Casing above MSL	478.23	Feet		Field	#
Flow Rate	1.59	gal/min		Field	#
Ground Water Elevation	431.25	ft/MSL		Field	#
Oxidation-Reduction Potential	-229	mV		Field	#
pH, Field (SM4500B)	8.01	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	275	umhos/cm	1	Field	#
Temperature	13.56	Deg. C		Field	#
Total Well Depth	142.60	Feet		Field	#
Volume in Water Column	140.56	Gallons		Field	#
Water Level After Purge	72.55	Feet		Field	#
Well Volumes Purged	0.68	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.15	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.15	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	50.8	mg/L	0.11	SW846 6020A	#
Calcium, Total	51.4	mg/L	0.11	SW846 6020A	#
Chromium, Total	0.0024	mg/L	0.0022	SW846 6020A	#
Iron, Dissolved	0.84	mg/L	0.056	SW846 6020A	#
Iron, Total	1.0	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	5.1	mg/L	0.11	SW846 6020A	#
Magnesium, Total	5.2	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.11	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.11	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	0.90	mg/L	0.11	SW846 6020A	#
Potassium, Total	0.91	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	14.7	mg/L	0.11	SW846 6020A	#
Sodium, Total	15.0	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	98	mg/L	5	SM2320B-2011	#
Alkalinity, Total	100	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	32	mg/L	15	EPA 410.4	#
Chloride	35.2	mg/L	2.0	EPA 300.0	#
pH	8.30	pH_Units		S4500HB-11	#
Specific Conductance	395	umhos/cm	5	SM2510B-2011	#
Sulfate	36.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	224	mg/L	25	SM2540C-15	#
Turbidity	11	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP035W	Collected	05/03/2023 14:43
Lab Sample ID	3301191004	Lab Receipt	05/03/2023 17:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	41.79	Feet		Field	#
Dissolved Oxygen	0.74	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.56	Feet		Field	#
Flow Rate	0.52	gal/min		Field	#
Ground Water Elevation	435.77	ft/MSL		Field	#
Oxidation-Reduction Potential	53	mV		Field	#
pH, Field (SM4500B)	6.73	pH_Units		Field	#
Sample Depth	65.00	Feet		Field	#
Specific Conductance, Field	533	umhos/cm	1	Field	#
Temperature	13.96	Deg. C		Field	#
Total Well Depth	71.80	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
Volume in Water Column	44.11	Gallons		Field	#
Water Level After Purge	44.81	Feet		Field	#
Well Volumes Purged	0.47	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.081	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.081	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	81.5	mg/L	0.11	SW846 6020A	#
Calcium, Total	80.9	mg/L	0.11	SW846 6020A	#
Chromium, Total	0.0052	mg/L	0.0022	SW846 6020A	#
Iron, Total	0.073	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	14.1	mg/L	0.11	SW846 6020A	#
Magnesium, Total	14.3	mg/L	0.11	SW846 6020A	#
Nickel, Total	0.024	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.4	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.5	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	33.8	mg/L	0.11	SW846 6020A	#
Sodium, Total	34.8	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.019	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.018	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	115	mg/L	5	SM2320B-2011	#
Alkalinity, Total	115	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	35	mg/L	15	EPA 410.4	#
Chloride	125	mg/L	2.0	EPA 300.0	#
Nitrate-N	4.5	mg/L	1.0	EPA 300.0	#
pH	8.08	pH_Units		S4500HB-11	#
Specific Conductance	752	umhos/cm	5	SM2510B-2011	#
Sulfate	44.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	504	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.67	mg/L	0.50	SM5310B-14	#
Turbidity	1.0	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Sample - FFMP035W (cont.)

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
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Detected Results Summary

Client Sample ID	FFMP018W	Collected	05/03/2023 15:31
Lab Sample ID	3301191005	Lab Receipt	05/03/2023 17:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	25.70	Feet		Field	#
Dissolved Oxygen	4.27	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	472.20	Feet		Field	#
Flow Rate	3.96	gal/min		Field	#
Ground Water Elevation	446.50	ft/MSL		Field	#
Oxidation-Reduction Potential	258	mV		Field	#
pH, Field (SM4500B)	5.34	pH_Units		Field	#
Sample Depth	40.00	Feet		Field	#
Specific Conductance, Field	388	umhos/cm	1	Field	#
Temperature	15.17	Deg. C		Field	#
Total Well Depth	51.46	Feet		Field	#
Volume in Water Column	16.74	Gallons		Field	#
Water Level After Purge	28.38	Feet		Field	#
Well Volumes Purged	4.72	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.072	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.075	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	29.5	mg/L	0.11	SW846 6020A	#
Calcium, Total	30.2	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	16.9	mg/L	0.11	SW846 6020A	#
Magnesium, Total	17.0	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.13	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.15	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0075	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	3.7	mg/L	0.11	SW846 6020A	#
Potassium, Total	3.7	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	33.6	mg/L	0.11	SW846 6020A	#
Sodium, Total	34.7	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.012	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.012	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	22	mg/L	5	SM2320B-2011	#
Alkalinity, Total	22	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	29	mg/L	15	EPA 410.4	#
Chloride	115	mg/L	2.0	EPA 300.0	#
Nitrate-N	4.0	mg/L	1.0	EPA 300.0	#
pH	7.19	pH_Units		S4500HB-11	#
Specific Conductance	523	umhos/cm	5	SM2510B-2011	#
Sulfate	37.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	326	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.67	mg/L	0.50	SM5310B-14	#



Detected Results Summary

Client Sample ID	FFMP019W	Collected	05/03/2023 16:22
Lab Sample ID	3301191006	Lab Receipt	05/03/2023 17:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	26.66	Feet		Field	#
Dissolved Oxygen	0.02	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	471.95	Feet		Field	#
Flow Rate	4.66	gal/min		Field	#
Ground Water Elevation	445.29	ft/MSL		Field	#
Oxidation-Reduction Potential	150	mV		Field	#
pH, Field (SM4500B)	6.61	pH_Units		Field	#
Sample Depth	49.00	Feet		Field	#
Specific Conductance, Field	337	umhos/cm	1	Field	#
Temperature	13.99	Deg. C		Field	#
Total Well Depth	132.79	Feet		Field	#
Volume in Water Column	68.98	Gallons		Field	#
Water Level After Purge	36.31	Feet		Field	#
Well Volumes Purged	2.70	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.084	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.084	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	60.2	mg/L	0.11	SW846 6020A	#
Calcium, Total	59.8	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	6.0	mg/L	0.11	SW846 6020A	#
Magnesium, Total	6.2	mg/L	0.11	SW846 6020A	#
Manganese, Total	0.0060	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	0.90	mg/L	0.11	SW846 6020A	#
Potassium, Total	0.92	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	10.9	mg/L	0.11	SW846 6020A	#
Sodium, Total	11.0	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	62	mg/L	5	SM2320B-2011	#
Alkalinity, Total	62	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	29	mg/L	15	EPA 410.4	#
Chloride	93.4	mg/L	2.0	EPA 300.0	#
pH	7.94	pH_Units		S4500HB-11	#
Phenolics	0.005	mg/L	0.004	SW846 9066	#
Specific Conductance	482	umhos/cm	5	SM2510B-2011	#
Sulfate	16.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	344	mg/L	25	SM2540C-15	#



Results

Client Sample ID	FFMP30RW	Collected	05/03/2023 11:10
Lab Sample ID	3301191001	Lab Receipt	05/03/2023 17:40

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	35.45		Feet		Field	1	05/03/2023 11:10	BGS	H
Dissolved Oxygen	1.17		mg/L	0.01	Field	1	05/03/2023 11:10	BGS	H
Elev Top MW Casing above MSL	562.30		Feet		Field	1	05/03/2023 11:10	BGS	H
Flow Rate	2.08		gal/min		Field	1	05/03/2023 11:10	BGS	H
Ground Water Elevation	526.85		ft/MSL		Field	1	05/03/2023 11:10	BGS	H
Oxidation-Reduction Potential	262		mV		Field	1	05/03/2023 11:10	BGS	H
pH, Field (SM4500B)	5.31		pH_Units		Field	1	05/03/2023 11:10	BGS	H
Sample Depth	85.00		Feet		Field	1	05/03/2023 11:10	BGS	H
Specific Conductance, Field	652		umhos/cm	1	Field	1	05/03/2023 11:10	BGS	H
Temperature	13.68		Deg. C		Field	1	05/03/2023 11:10	BGS	H
Total Well Depth	94.20		Feet		Field	1	05/03/2023 11:10	BGS	H
Turbidity, Field	ND	ND	NTU	1	Field	1	05/03/2023 11:10	BGS	H
Volume in Water Column	86.36		Gallons		Field	1	05/03/2023 11:10	BGS	H
Water Level After Purge	57.92		Feet		Field	1	05/03/2023 11:10	BGS	H
Well Volumes Purged	1.45		Vol		Field	1	05/03/2023 11:10	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 03:01	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Barium, Dissolved	0.091		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Barium, Total	0.091		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Calcium, Dissolved	39.4		mg/L	0.11	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Calcium, Total	39.3	4	mg/L	0.11	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Chromium, Total	0.0034		mg/L	0.0022	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Cobalt, Total	0.021		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Iron, Total	0.10		mg/L	0.056	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Magnesium, Dissolved	17.3		mg/L	0.11	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Magnesium, Total	17.2		mg/L	0.11	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Manganese, Dissolved	2.5		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:29	RMD	D1



Results

Client Sample ID	FFMP30RW	Collected	05/03/2023 11:10
Lab Sample ID	3301191001	Lab Receipt	05/03/2023 17:40

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	2.5		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Mercury, Dissolved	0.00075		mg/L	0.00050	SW846 7470A	1	05/04/2023 15:57	WDA	D
Mercury, Total	0.00072		mg/L	0.00050	SW846 7470A	1	05/04/2023 16:35	WDA	F
Nickel, Total	0.028		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Potassium, Dissolved	5.9		mg/L	0.11	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Potassium, Total	5.9		mg/L	0.11	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Selenium, Total	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Sodium, Dissolved	99.6		mg/L	0.11	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Sodium, Total	100		mg/L	0.11	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:40	RMD	F1
Zinc, Dissolved	0.014		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:29	RMD	D1
Zinc, Total	0.014		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:40	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L



Results

Client Sample ID	FFMP30RW	Collected	05/03/2023 11:10
Lab Sample ID	3301191001	Lab Receipt	05/03/2023 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:01	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:01	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.3%	62 - 133	05/11/2023 03:01	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	05/11/2023 03:01	
Dibromofluoromethane	1868-53-7	100%	78 - 116	05/11/2023 03:01	
Toluene-d8	2037-26-5	103%	76 - 127	05/11/2023 03:01	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	30		mg/L	5	SM2320B-2011	1	05/05/2023 09:47	NML	A
Alkalinity, Total	30	1	mg/L	5	SM2320B-2011	1	05/05/2023 09:47	NML	A
Ammonia-N	0.171		mg/L	0.100	ASTM D6919-17	10	05/08/2023 13:15	NML	C
Chemical Oxygen Demand (COD)	19		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	252		mg/L	5.0	EPA 300.0	5	05/09/2023 18:28	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/04/2023 13:04	J1W	A
Nitrate-N	5.5		mg/L	1.0	EPA 300.0	2	05/04/2023 13:04	J1W	A
pH	7.17	2	pH_Units		S4500HB-11	1	05/05/2023 09:47	NML	A
Phenolics	ND	ND,3	mg/L	0.004	SW846 9066	1	05/08/2023 17:29	AKH	K
Specific Conductance	985		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	33.2		mg/L	2.0	EPA 300.0	2	05/04/2023 13:04	J1W	A



Results

Client Sample ID	FFMP30RW	Collected	05/03/2023 11:10
Lab Sample ID	3301191001	Lab Receipt	05/03/2023 17:40

WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Total Dissolved Solids	564		mg/L	25	SM2540C-15	1	05/09/2023 13:52	AKH	A
Total Organic Carbon (TOC)	0.68		mg/L	0.50	SM5310B-14	1	05/05/2023 04:42	PAG	I
Turbidity	5.0		NTU	0.30	SM2130B-2011	1	05/04/2023 00:25	NRB	A



Results

Client Sample ID	FFMP04AW	Collected	05/03/2023 12:24
Lab Sample ID	3301191002	Lab Receipt	05/03/2023 17:40

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	35.47		Feet		Field	1	05/03/2023 12:24	BGS	H
Dissolved Oxygen	0.82		mg/L	0.01	Field	1	05/03/2023 12:24	BGS	H
Elev Top MW Casing above MSL	560.72		Feet		Field	1	05/03/2023 12:24	BGS	H
Flow Rate	1.82		gal/min		Field	1	05/03/2023 12:24	BGS	H
Ground Water Elevation	525.25		ft/MSL		Field	1	05/03/2023 12:24	BGS	H
Oxidation-Reduction Potential	88		mV		Field	1	05/03/2023 12:24	BGS	H
pH, Field (SM4500B)	6.94		pH_Units		Field	1	05/03/2023 12:24	BGS	H
Sample Depth	146.00		Feet		Field	1	05/03/2023 12:24	BGS	H
Specific Conductance, Field	1050		umhos/cm	1	Field	1	05/03/2023 12:24	BGS	H
Temperature	13.78		Deg. C		Field	1	05/03/2023 12:24	BGS	H
Total Well Depth	148.50		Feet		Field	1	05/03/2023 12:24	BGS	H
Turbidity, Field	ND	ND	NTU	1	Field	1	05/03/2023 12:24	BGS	H
Volume in Water Column	166.15		Gallons		Field	1	05/03/2023 12:24	BGS	H
Water Level After Purge	79.63		Feet		Field	1	05/03/2023 12:24	BGS	H
Well Volumes Purged	0.66		Vol		Field	1	05/03/2023 12:24	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 03:23	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Barium, Dissolved	0.18		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Barium, Total	0.19		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Calcium, Dissolved	136		mg/L	0.11	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Calcium, Total	148	4	mg/L	0.11	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Magnesium, Dissolved	24.7		mg/L	0.11	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Magnesium, Total	26.0		mg/L	0.11	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Manganese, Dissolved	0.32		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:31	RMD	D1



Results

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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.34		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 15:58	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 16:37	WDA	F
Nickel, Total	0.016		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Potassium, Dissolved	2.3		mg/L	0.11	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Potassium, Total	2.4		mg/L	0.11	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Selenium, Total	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Sodium, Dissolved	80.6		mg/L	0.11	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Sodium, Total	84.2		mg/L	0.11	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:43	RMD	F1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:31	RMD	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:43	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PKD	L



Results

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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:23	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:23	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.1%	62 - 133	05/11/2023 03:23	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	05/11/2023 03:23	
Dibromofluoromethane	1868-53-7	98%	78 - 116	05/11/2023 03:23	
Toluene-d8	2037-26-5	103%	76 - 127	05/11/2023 03:23	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	180		mg/L	5	SM2320B-2011	1	05/05/2023 09:58	NML	A
Alkalinity, Total	180	1	mg/L	5	SM2320B-2011	1	05/05/2023 09:58	NML	A
Ammonia-N	0.138		mg/L	0.100	ASTM D6919-17	10	05/06/2023 10:38	NML	C
Chemical Oxygen Demand (COD)	26		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	320		mg/L	5.0	EPA 300.0	5	05/04/2023 13:15	J1W	A
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	05/04/2023 13:15	J1W	A
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	05/04/2023 13:15	J1W	A
pH	8.21	2	pH_Units		S4500HB-11	1	05/05/2023 09:58	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 17:36	AKH	K
Specific Conductance	1450		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	51.9		mg/L	5.0	EPA 300.0	5	05/04/2023 13:15	J1W	A



Results

Client Sample ID	FFMP04AW	Collected	05/03/2023 12:24
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WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Total Dissolved Solids	904		mg/L	25	SM2540C-15	1	05/09/2023 13:52	AKH	A
Total Organic Carbon (TOC)	0.68		mg/L	0.50	SM5310B-14	1	05/05/2023 04:42	PAG	I
Turbidity	0.50		NTU	0.30	SM2130B-2011	1	05/04/2023 00:25	NRB	A



Results

Client Sample ID	FFMP036W	Collected	05/03/2023 13:48
Lab Sample ID	3301191003	Lab Receipt	05/03/2023 17:40

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	46.98		Feet		Field	1	05/03/2023 13:48	BGS	H
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	05/03/2023 13:48	BGS	H
Elev Top MW Casing above MSL	478.23		Feet		Field	1	05/03/2023 13:48	BGS	H
Flow Rate	1.59		gal/min		Field	1	05/03/2023 13:48	BGS	H
Ground Water Elevation	431.25		ft/MSL		Field	1	05/03/2023 13:48	BGS	H
Oxidation-Reduction Potential	-229		mV		Field	1	05/03/2023 13:48	BGS	H
pH, Field (SM4500B)	8.01		pH_Units		Field	1	05/03/2023 13:48	BGS	H
Sample Depth	135.00		Feet		Field	1	05/03/2023 13:48	BGS	H
Specific Conductance, Field	275		umhos/cm	1	Field	1	05/03/2023 13:48	BGS	H
Temperature	13.56		Deg. C		Field	1	05/03/2023 13:48	BGS	H
Total Well Depth	142.60		Feet		Field	1	05/03/2023 13:48	BGS	H
Turbidity, Field	ND	ND	NTU	1	Field	1	05/03/2023 13:48	BGS	H
Volume in Water Column	140.56		Gallons		Field	1	05/03/2023 13:48	BGS	H
Water Level After Purge	72.55		Feet		Field	1	05/03/2023 13:48	BGS	H
Well Volumes Purged	0.68		Vol		Field	1	05/03/2023 13:48	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 03:46	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Barium, Dissolved	0.15		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Barium, Total	0.15		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Calcium, Dissolved	50.8		mg/L	0.11	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Calcium, Total	51.4	4	mg/L	0.11	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Chromium, Total	0.0024		mg/L	0.0022	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Iron, Dissolved	0.84		mg/L	0.056	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Iron, Total	1.0		mg/L	0.056	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Magnesium, Dissolved	5.1		mg/L	0.11	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Magnesium, Total	5.2		mg/L	0.11	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Manganese, Dissolved	0.11		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:33	RMD	D1



Results

Client Sample ID	FFMP036W	Collected	05/03/2023 13:48
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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.11		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 16:01	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 16:38	WDA	F
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Potassium, Dissolved	0.90		mg/L	0.11	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Potassium, Total	0.91		mg/L	0.11	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Selenium, Total	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Sodium, Dissolved	14.7		mg/L	0.11	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Sodium, Total	15.0		mg/L	0.11	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:45	RMD	F1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:33	RMD	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:45	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PKD	L



Results

Client Sample ID	FFMP036W	Collected	05/03/2023 13:48
Lab Sample ID	3301191003	Lab Receipt	05/03/2023 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 03:46	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 03:46	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.7%	62 - 133	05/11/2023 03:46	
4-Bromofluorobenzene	460-00-4	102%	79 - 114	05/11/2023 03:46	
Dibromofluoromethane	1868-53-7	100%	78 - 116	05/11/2023 03:46	
Toluene-d8	2037-26-5	103%	76 - 127	05/11/2023 03:46	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	98		mg/L	5	SM2320B-2011	1	05/05/2023 10:09	NML	A
Alkalinity, Total	100	1	mg/L	5	SM2320B-2011	1	05/05/2023 10:09	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/06/2023 10:24	NML	C
Chemical Oxygen Demand (COD)	32		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	35.2		mg/L	2.0	EPA 300.0	2	05/04/2023 13:25	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/04/2023 13:25	J1W	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	05/04/2023 13:25	J1W	A
pH	8.30	2	pH_Units		S4500HB-11	1	05/05/2023 10:09	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 17:39	AKH	K
Specific Conductance	395		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	36.3		mg/L	2.0	EPA 300.0	2	05/04/2023 13:25	J1W	A



Results

Client Sample ID	FFMP036W	Collected	05/03/2023 13:48
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WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	224		mg/L	25	SM2540C-15	1	05/09/2023 13:52	AKH	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/05/2023 04:42	PAG	I
Turbidity	11		NTU	0.30	SM2130B-2011	1	05/04/2023 00:25	NRB	A



Results

Client Sample ID	FFMP035W	Collected	05/03/2023 14:43
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FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	41.79		Feet		Field	1	05/03/2023 14:43	BGS	H
Dissolved Oxygen	0.74		mg/L	0.01	Field	1	05/03/2023 14:43	BGS	H
Elev Top MW Casing above MSL	477.56		Feet		Field	1	05/03/2023 14:43	BGS	H
Flow Rate	0.52		gal/min		Field	1	05/03/2023 14:43	BGS	H
Ground Water Elevation	435.77		ft/MSL		Field	1	05/03/2023 14:43	BGS	H
Oxidation-Reduction Potential	53		mV		Field	1	05/03/2023 14:43	BGS	H
pH, Field (SM4500B)	6.73		pH_Units		Field	1	05/03/2023 14:43	BGS	H
Sample Depth	65.00		Feet		Field	1	05/03/2023 14:43	BGS	H
Specific Conductance, Field	533		umhos/cm	1	Field	1	05/03/2023 14:43	BGS	H
Temperature	13.96		Deg. C		Field	1	05/03/2023 14:43	BGS	H
Total Well Depth	71.80		Feet		Field	1	05/03/2023 14:43	BGS	H
Turbidity, Field	1		NTU	1	Field	1	05/03/2023 14:43	BGS	H
Volume in Water Column	44.11		Gallons		Field	1	05/03/2023 14:43	BGS	H
Water Level After Purge	44.81		Feet		Field	1	05/03/2023 14:43	BGS	H
Well Volumes Purged	0.47		Vol		Field	1	05/03/2023 14:43	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 04:09	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Barium, Dissolved	0.081		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Barium, Total	0.081		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Calcium, Dissolved	81.5		mg/L	0.11	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Calcium, Total	80.9	4	mg/L	0.11	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Chromium, Total	0.0052		mg/L	0.0022	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Iron, Total	0.073		mg/L	0.056	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Magnesium, Dissolved	14.1		mg/L	0.11	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Magnesium, Total	14.3		mg/L	0.11	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Manganese, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:46	RMD	D1



Results

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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 16:02	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 16:39	WDA	F
Nickel, Total	0.024		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Potassium, Dissolved	2.4		mg/L	0.11	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Potassium, Total	2.5		mg/L	0.11	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Selenium, Dissolved	ND	ND,6	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Selenium, Total	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Sodium, Dissolved	33.8		mg/L	0.11	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Sodium, Total	34.8		mg/L	0.11	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:47	RMD	F1
Zinc, Dissolved	0.019		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:46	RMD	D1
Zinc, Total	0.018		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:47	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L



Results

Client Sample ID	FFMP035W	Collected	05/03/2023 14:43
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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:09	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:09	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.9%	62 - 133	05/11/2023 04:09	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	05/11/2023 04:09	
Dibromofluoromethane	1868-53-7	101%	78 - 116	05/11/2023 04:09	
Toluene-d8	2037-26-5	103%	76 - 127	05/11/2023 04:09	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	115		mg/L	5	SM2320B-2011	1	05/05/2023 10:20	NML	A
Alkalinity, Total	115	1	mg/L	5	SM2320B-2011	1	05/05/2023 10:20	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/06/2023 10:11	NML	C
Chemical Oxygen Demand (COD)	35		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	125		mg/L	2.0	EPA 300.0	2	05/04/2023 13:36	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/04/2023 13:36	J1W	A
Nitrate-N	4.5		mg/L	1.0	EPA 300.0	2	05/04/2023 13:36	J1W	A
pH	8.08	2	pH_Units		S4500HB-11	1	05/05/2023 10:20	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 18:00	AKH	K
Specific Conductance	752		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	44.6		mg/L	2.0	EPA 300.0	2	05/04/2023 13:36	J1W	A



Results

Client Sample ID	FFMP035W	Collected	05/03/2023 14:43
Lab Sample ID	3301191004	Lab Receipt	05/03/2023 17:40

WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Total Dissolved Solids	504		mg/L	25	SM2540C-15	1	05/09/2023 13:52	AKH	A
Total Organic Carbon (TOC)	0.67		mg/L	0.50	SM5310B-14	1	05/05/2023 04:42	PAG	I
Turbidity	1.0		NTU	0.30	SM2130B-2011	1	05/04/2023 00:25	NRB	A



Results

Client Sample ID	FFMP018W	Collected	05/03/2023 15:31
Lab Sample ID	3301191005	Lab Receipt	05/03/2023 17:40

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	25.70		Feet		Field	1	05/03/2023 15:31	BGS	H
Dissolved Oxygen	4.27		mg/L	0.01	Field	1	05/03/2023 15:31	BGS	H
Elev Top MW Casing above MSL	472.20		Feet		Field	1	05/03/2023 15:31	BGS	H
Flow Rate	3.96		gal/min		Field	1	05/03/2023 15:31	BGS	H
Ground Water Elevation	446.50		ft/MSL		Field	1	05/03/2023 15:31	BGS	H
Oxidation-Reduction Potential	258		mV		Field	1	05/03/2023 15:31	BGS	H
pH, Field (SM4500B)	5.34		pH_Units		Field	1	05/03/2023 15:31	BGS	H
Sample Depth	40.00		Feet		Field	1	05/03/2023 15:31	BGS	H
Specific Conductance, Field	388		umhos/cm	1	Field	1	05/03/2023 15:31	BGS	H
Temperature	15.17		Deg. C		Field	1	05/03/2023 15:31	BGS	H
Total Well Depth	51.46		Feet		Field	1	05/03/2023 15:31	BGS	H
Turbidity, Field	ND	ND	NTU	1	Field	1	05/03/2023 15:31	BGS	H
Volume in Water Column	16.74		Gallons		Field	1	05/03/2023 15:31	BGS	H
Water Level After Purge	28.38		Feet		Field	1	05/03/2023 15:31	BGS	H
Well Volumes Purged	4.72		Vol		Field	1	05/03/2023 15:31	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 04:32	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Barium, Dissolved	0.072		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Barium, Total	0.075		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Calcium, Dissolved	29.5		mg/L	0.11	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Calcium, Total	30.2	4	mg/L	0.11	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Magnesium, Dissolved	16.9		mg/L	0.11	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Magnesium, Total	17.0		mg/L	0.11	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Manganese, Dissolved	0.13		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:48	RMD	D1



Results

Client Sample ID	FFMP018W	Collected	05/03/2023 15:31
Lab Sample ID	3301191005	Lab Receipt	05/03/2023 17:40

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.15		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 16:03	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 16:40	WDA	F
Nickel, Total	0.0075		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Potassium, Dissolved	3.7		mg/L	0.11	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Potassium, Total	3.7		mg/L	0.11	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Selenium, Dissolved	ND	ND,6	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Selenium, Total	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Sodium, Dissolved	33.6		mg/L	0.11	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Sodium, Total	34.7		mg/L	0.11	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:49	RMD	F1
Zinc, Dissolved	0.012		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:48	RMD	D1
Zinc, Total	0.012		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:49	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PKD	L



Results

Client Sample ID	FFMP018W	Collected	05/03/2023 15:31
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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:32	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:32	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94%	62 - 133	05/11/2023 04:32	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	05/11/2023 04:32	
Dibromofluoromethane	1868-53-7	101%	78 - 116	05/11/2023 04:32	
Toluene-d8	2037-26-5	103%	76 - 127	05/11/2023 04:32	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	22		mg/L	5	SM2320B-2011	1	05/05/2023 10:33	NML	A
Alkalinity, Total	22	1	mg/L	5	SM2320B-2011	1	05/05/2023 10:33	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/06/2023 09:57	NML	C
Chemical Oxygen Demand (COD)	29		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	115		mg/L	2.0	EPA 300.0	2	05/04/2023 13:46	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/04/2023 13:46	J1W	A
Nitrate-N	4.0		mg/L	1.0	EPA 300.0	2	05/04/2023 13:46	J1W	A
pH	7.19	2	pH_Units		S4500HB-11	1	05/05/2023 10:33	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 18:02	AKH	K
Specific Conductance	523		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	37.7		mg/L	2.0	EPA 300.0	2	05/04/2023 13:46	J1W	A



Results

Client Sample ID	FFMP018W	Collected	05/03/2023 15:31
Lab Sample ID	3301191005	Lab Receipt	05/03/2023 17:40

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	326		mg/L	25	SM2540C-15	1	05/09/2023 13:52	AKH	A
Total Organic Carbon (TOC)	0.67		mg/L	0.50	SM5310B-14	1	05/05/2023 04:42	PAG	I
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	05/04/2023 00:25	NRB	A



Results

Client Sample ID	FFMP019W	Collected	05/03/2023 16:22
Lab Sample ID	3301191006	Lab Receipt	05/03/2023 17:40

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	26.66		Feet		Field	1	05/03/2023 16:22	BGS	H
Dissolved Oxygen	0.02		mg/L	0.01	Field	1	05/03/2023 16:22	BGS	H
Elev Top MW Casing above MSL	471.95		Feet		Field	1	05/03/2023 16:22	BGS	H
Flow Rate	4.66		gal/min		Field	1	05/03/2023 16:22	BGS	H
Ground Water Elevation	445.29		ft/MSL		Field	1	05/03/2023 16:22	BGS	H
Oxidation-Reduction Potential	150		mV		Field	1	05/03/2023 16:22	BGS	H
pH, Field (SM4500B)	6.61		pH_Units		Field	1	05/03/2023 16:22	BGS	H
Sample Depth	49.00		Feet		Field	1	05/03/2023 16:22	BGS	H
Specific Conductance, Field	337		umhos/cm	1	Field	1	05/03/2023 16:22	BGS	H
Temperature	13.99		Deg. C		Field	1	05/03/2023 16:22	BGS	H
Total Well Depth	132.79		Feet		Field	1	05/03/2023 16:22	BGS	H
Turbidity, Field	ND	ND	NTU	1	Field	1	05/03/2023 16:22	BGS	H
Volume in Water Column	68.98		Gallons		Field	1	05/03/2023 16:22	BGS	H
Water Level After Purge	36.31		Feet		Field	1	05/03/2023 16:22	BGS	H
Well Volumes Purged	2.70		Vol		Field	1	05/03/2023 16:22	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 04:54	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Barium, Dissolved	0.084		mg/L	0.0056	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Barium, Total	0.084		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Calcium, Dissolved	60.2		mg/L	0.11	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Calcium, Total	59.8	4	mg/L	0.11	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Magnesium, Dissolved	6.0		mg/L	0.11	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Magnesium, Total	6.2		mg/L	0.11	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Manganese, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:50	RMD	D1



Results

Client Sample ID	FFMP019W	Collected	05/03/2023 16:22
Lab Sample ID	3301191006	Lab Receipt	05/03/2023 17:40

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.0060		mg/L	0.0056	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 16:04	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 17:05	WDA	F
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Potassium, Dissolved	0.90		mg/L	0.11	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Potassium, Total	0.92		mg/L	0.11	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Selenium, Dissolved	ND	ND,6	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Selenium, Total	ND	ND,5	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Sodium, Dissolved	10.9		mg/L	0.11	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Sodium, Total	11.0		mg/L	0.11	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/15/2023 21:51	RMD	F1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 20:50	RMD	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/15/2023 21:51	RMD	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PKD	L



Results

Client Sample ID	FFMP019W	Collected	05/03/2023 16:22
Lab Sample ID	3301191006	Lab Receipt	05/03/2023 17:40

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 04:54	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 04:54	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93%	62 - 133	05/11/2023 04:54	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	05/11/2023 04:54	
Dibromofluoromethane	1868-53-7	99.7%	78 - 116	05/11/2023 04:54	
Toluene-d8	2037-26-5	104%	76 - 127	05/11/2023 04:54	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	62		mg/L	5	SM2320B-2011	1	05/05/2023 10:44	NML	A
Alkalinity, Total	62	1	mg/L	5	SM2320B-2011	1	05/05/2023 10:44	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/06/2023 09:43	NML	C
Chemical Oxygen Demand (COD)	29		mg/L	15	EPA 410.4	1	05/08/2023 14:53	KMS	C
Chloride	93.4		mg/L	2.0	EPA 300.0	2	05/04/2023 13:57	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/04/2023 13:57	J1W	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	05/04/2023 13:57	J1W	A
pH	7.94	2	pH_Units		S4500HB-11	1	05/05/2023 10:44	NML	A
Phenolics	0.005		mg/L	0.004	SW846 9066	1	05/08/2023 18:05	AKH	K
Specific Conductance	482		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	16.3		mg/L	2.0	EPA 300.0	2	05/04/2023 13:57	J1W	A



Results

Client Sample ID	FFMP019W	Collected	05/03/2023 16:22
Lab Sample ID	3301191006	Lab Receipt	05/03/2023 17:40

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	344		mg/L	25	SM2540C-15	1	05/09/2023 13:52	AKH	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/05/2023 04:42	PAG	I
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	05/04/2023 00:25	NRB	A



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3301191001	FFMP30RW	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3301191002	FFMP04AW	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
		3301191003	FFMP036W	Field
SW846 6020A	SW846 3015A			
SW846 6020A	SW846 3015A			
SW846 7470A	SW846 7470A			
SW846 7470A	SW846 7470A			
Lib Search VOC	N/A			
SW846 8260B	N/A			
ASTM D6919-17	N/A			
EPA 300.0	N/A			
EPA 410.4	N/A			
S4500HB-11	N/A			
SM2130B-2011	N/A			
SM2320B-2011	N/A			
SM2510B-2011	N/A			
SM2540C-15	N/A			
SM5310B-14	N/A			
SW846 9066	SW846 9066			



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Workorder 3301191

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3301191004	FFMP035W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3301191005	FFMP018W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3301191006	FFMP019W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	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
3301191001	FFMP30RW	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	986766	05/04/2023 11:10	WDA	SW846 7470A	987301
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	989665
		N/A	N/A	N/A		EPA 300.0	990161
		N/A	N/A	N/A		EPA 300.0	986852
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	986754
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	989723
		N/A	N/A	N/A		SM5310B-14	987324
	SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066	989660	
3301191002	FFMP04AW	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	986766	05/04/2023 11:10	WDA	SW846 7470A	987301
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987752
		N/A	N/A	N/A		EPA 300.0	986852
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	986754
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	989723
		N/A	N/A	N/A		SM5310B-14	987324
			SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066
3301191003	FFMP036W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	986766	05/04/2023 11:10	WDA	SW846 7470A	987301
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987752
		N/A	N/A	N/A		EPA 300.0	986852
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	986754
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	989723
		N/A	N/A	N/A		SM5310B-14	987324
			SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066



Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3301191004	FFMP035W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	986766	05/04/2023 11:10	WDA	SW846 7470A	987301
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987752
		N/A	N/A	N/A		EPA 300.0	986852
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	986754
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	989723
N/A	N/A	N/A		SM5310B-14	987324		
	SW846 9066		987591	05/08/2023 07:09	AKH	SW846 9066	989660
3301191005	FFMP018W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 7470A	986766	05/04/2023 11:10	WDA	SW846 7470A	987301
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987752
		N/A	N/A	N/A		EPA 300.0	986852
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	986754
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	989723
N/A	N/A	N/A		SM5310B-14	987324		
	SW846 9066		987591	05/08/2023 07:09	AKH	SW846 9066	989660
3301191006	FFMP019W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	989261	05/08/2023 00:20	ANN	SW846 6020A	1000189
		SW846 3015A	989258	05/08/2023 22:18	ANN	SW846 6020A	1000188
		SW846 7470A	986767	05/04/2023 11:10	WDA	SW846 7470A	987302
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987752
		N/A	N/A	N/A		EPA 300.0	986852
		N/A	N/A	N/A		EPA 410.4	989672
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	986754
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	989723
N/A	N/A	N/A		SM5310B-14	987324		
	SW846 9066		987591	05/08/2023 07:09	AKH	SW846 9066	989660



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

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

3301191

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PM: SJB



COC #:
ALS Quc

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

Client Name: Lancaster County Solid Waste MA

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

Contact: Dan Brown

Phone#: (717) 735-0193

Project Name#: Frey Farm Annual

Bill To: Lancaster County Solid Waste MA

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

Date Required: _____ Approved By: _____

Email? -Y -N

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

Receiving information (completed by Receiving Lab)
Cooler Temp: 22 Therm ID: TH-524
No. of Coolers: Y N Initial

Custody Seals Present?

Temp By: ME | 20 Therm ID: 524

Receipt Info Completed By: Y N N A
Cooler Custody Seal Intact Y N N A
Sample Custody Seal Intact Y N N A
Received on Ice Y N N A
Cooler & Samples Intact Y N N A
Correct Containers Provided Y N N A
Sample Label/COC Agree Y N N A
Adequate Sample Volumes Y N N A
CB6 Samples Filtered Y N N A
OP Samples Filtered Y N N A
VOA Headspace Present Y N N A
Voa Trip Blank Y N N A
NIS 4 Days? Y N N A
Rad Screen (uCi) Y N N A
Courier/Tracking#: Y N N A
SDWA Compliance Y N N A
PWSID Y N N A
WV Containers 0-6°C Y N N A

ANALYSIS/METHOD REQUESTED

Container Type	AG	AW	CG	PL	PL	PL	PL	PL
Container Size	40 ml	125 ml	40 ml	250 ml	125 ml	125 ml	125 ml	500 ml
Preservative	HCl	H2SO4	HCl	H2SO4	HNO3	HNO3	HNO3	None
	TOC	O-H	8260 - FORM 19A & Subtitle D	Sample Depth for AUX Data	Dissolved Metals Form 19A (Field Filtered)	Total Metals Form 19A + Subtitle D	pH, Cl, Spc, F, SO4, TDS, NO3, Turb.	Alkalinity, HCO3

Enter Number of Containers Per Sample or Field Results Below.

* G or C	* Matrix	TOC	O-H	8260 - FORM 19A & Subtitle D	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Dissolved Metals Form 19A (Field Filtered)	Total Metals Form 19A + Subtitle D	pH, Cl, Spc, F, SO4, TDS, NO3, Turb.	Alkalinity, HCO3
1	GW	2	1	2	X	X	1	2	2	1	1
2	GW	2	1	2	X	X	1	2	2	1	1
3	GW	2	1	2	X	X	1	2	2	1	1
4	GW	2	1	2	X	X	1	2	2	1	1
5	GW	2	1	2	X	X	1	2	2	1	1
6	GW	2	1	2	X	X	1	2	2	1	1
7											
8											
9											
10											

LOGGED BY (signature):

REVIEWED BY (signature):

Relinquished By/ Company Name	Date	Time	Received By / Company Name	Date	Time
1. <i>[Signature]</i>	5-3-23	1740	<i>[Signature]</i>	5/3/23	1740
3					
5					
7					
9					

Project Comments:

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

Standard	Special Processing	State Samples Collected In
<input type="checkbox"/>	USACE <input type="checkbox"/>	NY <input type="checkbox"/>
<input type="checkbox"/>	Navy <input type="checkbox"/>	NJ <input type="checkbox"/>
<input type="checkbox"/>	USACE <input type="checkbox"/>	PA <input checked="" type="checkbox"/>
<input type="checkbox"/>	USACE <input type="checkbox"/>	NC <input type="checkbox"/>

Reportable to PADEP? Yes No
Sample Disposal: Lab Special
PWSID # _____
EDDS: Format Type: _____

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



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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618

State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 2ND QTR 2023 FFMP-FORM 19A

Workorder 3300852

Report ID 245134 on 5/18/2023

Certificate of Analysis

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

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

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

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

- Ashley Gichuki - Lancaster County Solid Waste Authority
- Daniel Brown - Lancaster County Solid Waste Authority
- Jordan Gallagher - Lancaster County Solid Waste Authority
- Jeff Musser - Lancaster County Solid Waste Authority

Susan Scherer

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

Susan Scherer
Project Coordinator

(ALS Digital Signature)



Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3300852001	FFMP017W	Ground Water	05/02/2023 11:30	05/02/2023 16:54	BGS	Analytical Laboratory Service
3300852002	FFMP029W	Ground Water	05/02/2023 12:41	05/02/2023 16:54	BGS	Analytical Laboratory Service
3300852003	FFMP034W	Ground Water	05/02/2023 14:03	05/02/2023 16:54	BGS	Analytical Laboratory Service
3300852004	FFMP033W	Ground Water	05/02/2023 15:23	05/02/2023 16:54	BGS	Analytical Laboratory Service



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- 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		
3300852003	FFMP034W	S1	The 40ml vials submitted for the GCMS volatiles 8260 analysis contained headspace. The method requires that samples be collected without headspace in order to prevent the loss of volatile organics.

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO ₃ /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 type LLCCV for method SW846 6020A was outside the control limits for the analyte Sodium, Total. The % Recovery was reported as 47.9 and the control limits were 70 to 130. Sample concentration was above the concentration of the CCV.



Detected Results Summary

Client Sample ID	FFMP017W	Collected	05/02/2023 11:30
Lab Sample ID	3300852001	Lab Receipt	05/02/2023 16:54

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	36.23	Feet		Field	#
Dissolved Oxygen	0.23	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	480.70	Feet		Field	#
Flow Rate	1.98	gal/min		Field	#
Ground Water Elevation	444.47	ft/MSL		Field	#
Oxidation-Reduction Potential	187	mV		Field	#
pH, Field (SM4500B)	6.01	pH_Units		Field	#
Sample Depth	135.00	Feet		Field	#
Specific Conductance, Field	953	umhos/cm	1	Field	#
Temperature	12.91	Deg. C		Field	#
Total Well Depth	150.50	Feet		Field	#
Turbidity, Field	6	NTU	1	Field	#
Volume in Water Column	167.98	Gallons		Field	#
Water Level After Purge	45.45	Feet		Field	#
Well Volumes Purged	0.71	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.11	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.11	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	88.3	mg/L	0.11	SW846 6020A	#
Calcium, Total	93.2	mg/L	0.11	SW846 6020A	#
Cobalt, Total	0.012	mg/L	0.0056	SW846 6020A	#
Magnesium, Dissolved	36.7	mg/L	0.11	SW846 6020A	#
Magnesium, Total	39.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	1.2	mg/L	0.0056	SW846 6020A	#
Manganese, Total	1.3	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0067	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	7.9	mg/L	0.11	SW846 6020A	#
Potassium, Total	7.9	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	88.4	mg/L	0.11	SW846 6020A	#
Sodium, Total	91.6	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0081	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0086	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	116	mg/L	5	SM2320B-2011	#
Alkalinity, Total	116	mg/L	5	SM2320B-2011	#
Ammonia-N	0.481	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	15	mg/L	15	EPA 410.4	#
Chloride	288	mg/L	5.0	EPA 300.0	#
Nitrate-N	4.2	mg/L	2.5	EPA 300.0	#
pH	7.29	pH_Units		S4500HB-11	#
Specific Conductance	1320	umhos/cm	5	SM2510B-2011	#
Sulfate	81.4	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	784	mg/L	25	SM2540C-15	#



Detected Results Summary

Sample - FFMP017W (cont.)

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
WET CHEMISTRY (cont.)					
Total Organic Carbon (TOC)	3.0	mg/L	0.50	SM5310B-14	#
Turbidity	0.45	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP029W	Collected	05/02/2023 12:41
Lab Sample ID	3300852002	Lab Receipt	05/02/2023 16:54

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	37.73	Feet		Field	#
Dissolved Oxygen	5.48	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	477.30	Feet		Field	#
Flow Rate	2.40	gal/min		Field	#
Ground Water Elevation	439.57	ft/MSL		Field	#
Oxidation-Reduction Potential	291	mV		Field	#
pH, Field (SM4500B)	5.22	pH_Units		Field	#
Sample Depth	55.00	Feet		Field	#
Specific Conductance, Field	244	umhos/cm	1	Field	#
Temperature	14.68	Deg. C		Field	#
Total Well Depth	60.50	Feet		Field	#
Turbidity, Field	8	NTU	1	Field	#
Volume in Water Column	33.47	Gallons		Field	#
Water Level After Purge	43.98	Feet		Field	#
Well Volumes Purged	4.31	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.084	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.083	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	15.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	15.7	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	11.0	mg/L	0.11	SW846 6020A	#
Magnesium, Total	11.0	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.037	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.034	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.3	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	25.0	mg/L	0.11	SW846 6020A	#
Sodium, Total	25.3	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0063	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0061	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	9	mg/L	5	SM2320B-2011	#
Alkalinity, Total	9	mg/L	5	SM2320B-2011	#
Chloride	80.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	3.7	mg/L	1.0	EPA 300.0	#
pH	6.49	pH_Units		S4500HB-11	#
Specific Conductance	349	umhos/cm	5	SM2510B-2011	#
Sulfate	6.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	224	mg/L	25	SM2540C-15	#
Turbidity	0.30	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP034W	Collected	05/02/2023 14:03
Lab Sample ID	3300852003	Lab Receipt	05/02/2023 16:54

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	9.61	Feet		Field	#
Dissolved Oxygen	1.69	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	472.88	Feet		Field	#
Flow Rate	1.37	gal/min		Field	#
Ground Water Elevation	463.27	ft/MSL		Field	#
Oxidation-Reduction Potential	121	mV		Field	#
pH, Field (SM4500B)	5.80	pH_Units		Field	#
Sample Depth	25.85	Feet		Field	#
Specific Conductance, Field	558	umhos/cm	1	Field	#
Temperature	13.66	Deg. C		Field	#
Total Well Depth	121.00	Feet		Field	#
Turbidity, Field	68	NTU	1	Field	#
Volume in Water Column	163.74	Gallons		Field	#
Water Level After Purge	16.61	Feet		Field	#
Well Volumes Purged	0.50	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.057	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.056	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	56.0	mg/L	0.11	SW846 6020A	#
Calcium, Total	57.6	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	1.1	mg/L	0.056	SW846 6020A	#
Iron, Total	1.4	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	20.0	mg/L	0.11	SW846 6020A	#
Magnesium, Total	21.2	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.18	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.15	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	3.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	3.5	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	40.1	mg/L	0.11	SW846 6020A	#
Sodium, Total	42.7	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	42	mg/L	5	SM2320B-2011	#
Alkalinity, Total	42	mg/L	5	SM2320B-2011	#
Chloride	162	mg/L	2.0	EPA 300.0	#
Nitrate-N	10	mg/L	1.0	EPA 300.0	#
pH	7.05	pH_Units		S4500HB-11	#
Specific Conductance	762	umhos/cm	5	SM2510B-2011	#
Sulfate	28.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	488	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	2.6	mg/L	0.50	SM5310B-14	#
Turbidity	17	NTU	0.30	SM2130B-2011	#



Detected Results Summary

Client Sample ID	FFMP033W	Collected	05/02/2023 15:23
Lab Sample ID	3300852004	Lab Receipt	05/02/2023 16:54

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	21.05	Feet		Field	#
Dissolved Oxygen	0.97	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	516.52	Feet		Field	#
Flow Rate	2.09	gal/min		Field	#
Ground Water Elevation	495.47	ft/MSL		Field	#
Oxidation-Reduction Potential	54	mV		Field	#
pH, Field (SM4500B)	5.90	pH_Units		Field	#
Sample Depth	79.00	Feet		Field	#
Specific Conductance, Field	345	umhos/cm	1	Field	#
Temperature	15.29	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Turbidity, Field	209	NTU	1	Field	#
Volume in Water Column	116.06	Gallons		Field	#
Water Level After Purge	37.66	Feet		Field	#
Well Volumes Purged	1.08	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.070	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.069	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	37.2	mg/L	0.11	SW846 6020A	#
Calcium, Total	37.9	mg/L	0.11	SW846 6020A	#
Iron, Dissolved	6.0	mg/L	0.056	SW846 6020A	#
Iron, Total	8.6	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	12.6	mg/L	0.11	SW846 6020A	#
Magnesium, Total	13.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.56	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.60	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.9	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.9	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	17.6	mg/L	0.11	SW846 6020A	#
Sodium, Total	18.4	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	44	mg/L	5	SM2320B-2011	#
Alkalinity, Total	44	mg/L	5	SM2320B-2011	#
Ammonia-N	0.426	mg/L	0.100	ASTM D6919-17	#
Chloride	86.5	mg/L	2.0	EPA 300.0	#
Nitrate-N	9.1	mg/L	1.0	EPA 300.0	#
pH	6.99	pH_Units		S4500HB-11	#
Specific Conductance	483	umhos/cm	5	SM2510B-2011	#
Sulfate	6.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	316	mg/L	25	SM2540C-15	#
Turbidity	25	NTU	0.30	SM2130B-2011	#



Results

Client Sample ID	FFMP017W	Collected	05/02/2023 11:30
Lab Sample ID	3300852001	Lab Receipt	05/02/2023 16:54

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	36.23		Feet		Field	1	05/02/2023 11:10	BGS	H
Dissolved Oxygen	0.23		mg/L	0.01	Field	1	05/02/2023 11:10	BGS	H
Elev Top MW Casing above MSL	480.70		Feet		Field	1	05/02/2023 11:10	BGS	H
Flow Rate	1.98		gal/min		Field	1	05/02/2023 11:10	BGS	H
Ground Water Elevation	444.47		ft/MSL		Field	1	05/02/2023 11:10	BGS	H
Oxidation-Reduction Potential	187		mV		Field	1	05/02/2023 11:10	BGS	H
pH, Field (SM4500B)	6.01		pH_Units		Field	1	05/02/2023 11:10	BGS	H
Sample Depth	135.00		Feet		Field	1	05/02/2023 11:10	BGS	H
Specific Conductance, Field	953		umhos/cm	1	Field	1	05/02/2023 11:10	BGS	H
Temperature	12.91		Deg. C		Field	1	05/02/2023 11:10	BGS	H
Total Well Depth	150.50		Feet		Field	1	05/02/2023 11:10	BGS	H
Turbidity, Field	6		NTU	1	Field	1	05/02/2023 11:10	BGS	H
Volume in Water Column	167.98		Gallons		Field	1	05/02/2023 11:10	BGS	H
Water Level After Purge	45.45		Feet		Field	1	05/02/2023 11:10	BGS	H
Well Volumes Purged	0.71		Vol		Field	1	05/02/2023 11:10	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 01:30	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:57	MO	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/12/2023 13:26	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/10/2023 11:57	MO	F1
Barium, Dissolved	0.11		mg/L	0.0056	SW846 6020A	1	05/12/2023 13:26	MO	D1
Barium, Total	0.11		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:57	MO	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:57	MO	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/12/2023 13:26	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:57	MO	F1
Calcium, Dissolved	88.3		mg/L	0.11	SW846 6020A	1	05/12/2023 13:26	MO	D1
Calcium, Total	93.2		mg/L	0.11	SW846 6020A	1	05/10/2023 11:57	MO	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:26	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:57	MO	F1
Cobalt, Total	0.012		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:57	MO	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:26	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:57	MO	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/12/2023 13:26	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 11:57	MO	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:26	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:57	MO	F1
Magnesium, Dissolved	36.7		mg/L	0.11	SW846 6020A	1	05/12/2023 13:26	MO	D1
Magnesium, Total	39.5		mg/L	0.11	SW846 6020A	1	05/10/2023 11:57	MO	F1
Manganese, Dissolved	1.2		mg/L	0.0056	SW846 6020A	1	05/12/2023 13:26	MO	D1



Results

Client Sample ID	FFMP017W	Collected	05/02/2023 11:30
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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	1.3		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:57	MO	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 15:50	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/03/2023 12:44	WDA	F
Nickel, Total	0.0067		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:57	MO	F1
Potassium, Dissolved	7.9		mg/L	0.11	SW846 6020A	1	05/12/2023 13:26	MO	D1
Potassium, Total	7.9		mg/L	0.11	SW846 6020A	1	05/10/2023 11:57	MO	F1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:26	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:57	MO	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:26	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:57	MO	F1
Sodium, Dissolved	88.4		mg/L	0.11	SW846 6020A	1	05/12/2023 13:26	MO	D1
Sodium, Total	91.6	3	mg/L	0.11	SW846 6020A	1	05/10/2023 17:05	MO	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:57	MO	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:57	MO	F1
Zinc, Dissolved	0.0081		mg/L	0.0056	SW846 6020A	1	05/12/2023 13:26	MO	D1
Zinc, Total	0.0086		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:57	MO	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L



Results

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VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:30	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:30	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	91.8%	62 - 133	05/11/2023 01:30	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	05/11/2023 01:30	
Dibromofluoromethane	1868-53-7	99.2%	78 - 116	05/11/2023 01:30	
Toluene-d8	2037-26-5	102%	76 - 127	05/11/2023 01:30	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	116		mg/L	5	SM2320B-2011	1	05/04/2023 23:15	NML	A
Alkalinity, Total	116	1	mg/L	5	SM2320B-2011	1	05/04/2023 23:15	NML	A
Ammonia-N	0.481		mg/L	0.100	ASTM D6919-17	10	05/05/2023 19:47	NML	C
Chemical Oxygen Demand (COD)	15		mg/L	15	EPA 410.4	1	05/04/2023 12:05	KMS	C
Chloride	288		mg/L	5.0	EPA 300.0	5	05/03/2023 10:59	J1W	A
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	05/03/2023 10:59	J1W	A
Nitrate-N	4.2		mg/L	2.5	EPA 300.0	5	05/03/2023 10:59	J1W	A
pH	7.29	2	pH_Units		S4500HB-11	1	05/04/2023 23:15	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 15:59	AKH	K
Specific Conductance	1320		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	81.4		mg/L	5.0	EPA 300.0	5	05/03/2023 10:59	J1W	A



Results

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WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Ctr
Total Dissolved Solids	784		mg/L	25	SM2540C-15	1	05/08/2023 18:59	GJB	A
Total Organic Carbon (TOC)	3.0		mg/L	0.50	SM5310B-14	1	05/04/2023 05:21	PAG	I
Turbidity	0.45		NTU	0.30	SM2130B-2011	1	05/02/2023 23:15	NRB	A



Results

Client Sample ID	FFMP029W	Collected	05/02/2023 12:41
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FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	37.73		Feet		Field	1	05/02/2023 13:01	BGS	H
Dissolved Oxygen	5.48		mg/L	0.01	Field	1	05/02/2023 13:01	BGS	H
Elev Top MW Casing above MSL	477.30		Feet		Field	1	05/02/2023 13:01	BGS	H
Flow Rate	2.40		gal/min		Field	1	05/02/2023 13:01	BGS	H
Ground Water Elevation	439.57		ft/MSL		Field	1	05/02/2023 13:01	BGS	H
Oxidation-Reduction Potential	291		mV		Field	1	05/02/2023 13:01	BGS	H
pH, Field (SM4500B)	5.22		pH_Units		Field	1	05/02/2023 13:01	BGS	H
Sample Depth	55.00		Feet		Field	1	05/02/2023 13:01	BGS	H
Specific Conductance, Field	244		umhos/cm	1	Field	1	05/02/2023 13:01	BGS	H
Temperature	14.68		Deg. C		Field	1	05/02/2023 13:01	BGS	H
Total Well Depth	60.50		Feet		Field	1	05/02/2023 13:01	BGS	H
Turbidity, Field	8		NTU	1	Field	1	05/02/2023 13:01	BGS	H
Volume in Water Column	33.47		Gallons		Field	1	05/02/2023 13:01	BGS	H
Water Level After Purge	43.98		Feet		Field	1	05/02/2023 13:01	BGS	H
Well Volumes Purged	4.31		Vol		Field	1	05/02/2023 13:01	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 01:53	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:59	MO	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/12/2023 13:28	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/10/2023 11:59	MO	F1
Barium, Dissolved	0.084		mg/L	0.0056	SW846 6020A	1	05/12/2023 13:28	MO	D1
Barium, Total	0.083		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:59	MO	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:59	MO	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/12/2023 13:28	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:59	MO	F1
Calcium, Dissolved	15.6		mg/L	0.11	SW846 6020A	1	05/12/2023 13:28	MO	D1
Calcium, Total	15.7		mg/L	0.11	SW846 6020A	1	05/10/2023 11:59	MO	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:28	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:59	MO	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:59	MO	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:28	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:59	MO	F1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/12/2023 13:28	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/10/2023 11:59	MO	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:28	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:59	MO	F1
Magnesium, Dissolved	11.0		mg/L	0.11	SW846 6020A	1	05/12/2023 13:28	MO	D1
Magnesium, Total	11.0		mg/L	0.11	SW846 6020A	1	05/10/2023 11:59	MO	F1
Manganese, Dissolved	0.037		mg/L	0.0056	SW846 6020A	1	05/12/2023 13:28	MO	D1



Results

Client Sample ID	FFMP029W	Collected	05/02/2023 12:41
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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.034		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:59	MO	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 15:51	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/03/2023 12:45	WDA	F
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:59	MO	F1
Potassium, Dissolved	2.3		mg/L	0.11	SW846 6020A	1	05/12/2023 13:28	MO	D1
Potassium, Total	2.3		mg/L	0.11	SW846 6020A	1	05/10/2023 11:59	MO	F1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:28	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 11:59	MO	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:28	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:59	MO	F1
Sodium, Dissolved	25.0		mg/L	0.11	SW846 6020A	1	05/12/2023 13:28	MO	D1
Sodium, Total	25.3	3	mg/L	0.11	SW846 6020A	1	05/10/2023 17:08	MO	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 11:59	MO	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 11:59	MO	F1
Zinc, Dissolved	0.0063		mg/L	0.0056	SW846 6020A	1	05/12/2023 13:28	MO	D1
Zinc, Total	0.0061		mg/L	0.0056	SW846 6020A	1	05/10/2023 11:59	MO	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L



Results

Client Sample ID	FFMP029W	Collected	05/02/2023 12:41
Lab Sample ID	3300852002	Lab Receipt	05/02/2023 16:54

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 01:53	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 01:53	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93%	62 - 133	05/11/2023 01:53	
4-Bromofluorobenzene	460-00-4	103%	79 - 114	05/11/2023 01:53	
Dibromofluoromethane	1868-53-7	100%	78 - 116	05/11/2023 01:53	
Toluene-d8	2037-26-5	104%	76 - 127	05/11/2023 01:53	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	9		mg/L	5	SM2320B-2011	1	05/04/2023 23:27	NML	A
Alkalinity, Total	9	1	mg/L	5	SM2320B-2011	1	05/04/2023 23:27	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	05/05/2023 20:01	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	05/04/2023 12:05	KMS	C
Chloride	80.9		mg/L	2.0	EPA 300.0	2	05/03/2023 11:09	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/03/2023 11:09	J1W	A
Nitrate-N	3.7		mg/L	1.0	EPA 300.0	2	05/03/2023 11:09	J1W	A
pH	6.49	2	pH_Units		S4500HB-11	1	05/04/2023 23:27	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 16:20	AKH	K
Specific Conductance	349		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	6.9		mg/L	2.0	EPA 300.0	2	05/03/2023 11:09	J1W	A



Results

Client Sample ID	FFMP029W	Collected	05/02/2023 12:41
Lab Sample ID	3300852002	Lab Receipt	05/02/2023 16:54

WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Total Dissolved Solids	224		mg/L	25	SM2540C-15	1	05/08/2023 18:59	GJB	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/04/2023 05:21	PAG	I
Turbidity	0.30		NTU	0.30	SM2130B-2011	1	05/02/2023 23:15	NRB	A



Results

Client Sample ID	FFMP034W	Collected	05/02/2023 14:03
Lab Sample ID	3300852003	Lab Receipt	05/02/2023 16:54

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	9.61	S1	Feet		Field	1	05/02/2023 14:03	BGS	H
Dissolved Oxygen	1.69	S1	mg/L	0.01	Field	1	05/02/2023 14:03	BGS	H
Elev Top MW Casing above MSL	472.88	S1	Feet		Field	1	05/02/2023 14:03	BGS	H
Flow Rate	1.37	S1	gal/min		Field	1	05/02/2023 14:03	BGS	H
Ground Water Elevation	463.27	S1	ft/MSL		Field	1	05/02/2023 14:03	BGS	H
Oxidation-Reduction Potential	121	S1	mV		Field	1	05/02/2023 14:03	BGS	H
pH, Field (SM4500B)	5.80	S1	pH_Units		Field	1	05/02/2023 14:03	BGS	H
Sample Depth	25.85	S1	Feet		Field	1	05/02/2023 14:03	BGS	H
Specific Conductance, Field	558	S1	umhos/cm	1	Field	1	05/02/2023 14:03	BGS	H
Temperature	13.66	S1	Deg. C		Field	1	05/02/2023 14:03	BGS	H
Total Well Depth	121.00	S1	Feet		Field	1	05/02/2023 14:03	BGS	H
Turbidity, Field	68	S1	NTU	1	Field	1	05/02/2023 14:03	BGS	H
Volume in Water Column	163.74	S1	Gallons		Field	1	05/02/2023 14:03	BGS	H
Water Level After Purge	16.61	S1	Feet		Field	1	05/02/2023 14:03	BGS	H
Well Volumes Purged	0.50	S1	Vol		Field	1	05/02/2023 14:03	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.	S1			Lib Search VOC	1	05/11/2023 02:16	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:01	MO	F1
Arsenic, Dissolved	ND	ND,S1	mg/L	0.0030	SW846 6020A	1	05/12/2023 13:31	MO	D1
Arsenic, Total	ND	ND,S1	mg/L	0.0033	SW846 6020A	1	05/10/2023 12:01	MO	F1
Barium, Dissolved	0.057	S1	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:31	MO	D1
Barium, Total	0.056	S1	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:01	MO	F1
Beryllium, Total	ND	ND,S1	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:01	MO	F1
Cadmium, Dissolved	ND	ND,S1	mg/L	0.0011	SW846 6020A	1	05/12/2023 13:31	MO	D1
Cadmium, Total	ND	ND,S1	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:01	MO	F1
Calcium, Dissolved	56.0	S1	mg/L	0.11	SW846 6020A	1	05/12/2023 13:31	MO	D1
Calcium, Total	57.6	S1	mg/L	0.11	SW846 6020A	1	05/10/2023 12:01	MO	F1
Chromium, Dissolved	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:31	MO	D1
Chromium, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:01	MO	F1
Cobalt, Total	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:01	MO	F1
Copper, Dissolved	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:31	MO	D1
Copper, Total	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:01	MO	F1
Iron, Dissolved	1.1	S1	mg/L	0.056	SW846 6020A	1	05/12/2023 13:31	MO	D1
Iron, Total	1.4	S1	mg/L	0.056	SW846 6020A	1	05/10/2023 12:01	MO	F1
Lead, Dissolved	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:31	MO	D1
Lead, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:01	MO	F1
Magnesium, Dissolved	20.0	S1	mg/L	0.11	SW846 6020A	1	05/12/2023 13:31	MO	D1
Magnesium, Total	21.2	S1	mg/L	0.11	SW846 6020A	1	05/10/2023 12:01	MO	F1
Manganese, Dissolved	0.18	S1	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:31	MO	D1



Results

Client Sample ID	FFMP034W	Collected	05/02/2023 14:03
Lab Sample ID	3300852003	Lab Receipt	05/02/2023 16:54

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.15	S1	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:01	MO	F1
Mercury, Dissolved	ND	ND,S1	mg/L	0.00050	SW846 7470A	1	05/04/2023 15:54	WDA	D
Mercury, Total	ND	ND,S1	mg/L	0.00050	SW846 7470A	1	05/03/2023 12:46	WDA	F
Nickel, Total	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:01	MO	F1
Potassium, Dissolved	3.3	S1	mg/L	0.11	SW846 6020A	1	05/12/2023 13:31	MO	D1
Potassium, Total	3.5	S1	mg/L	0.11	SW846 6020A	1	05/10/2023 12:01	MO	F1
Selenium, Dissolved	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:31	MO	D1
Selenium, Total	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:01	MO	F1
Silver, Dissolved	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:31	MO	D1
Silver, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:01	MO	F1
Sodium, Dissolved	40.1	S1	mg/L	0.11	SW846 6020A	1	05/12/2023 13:31	MO	D1
Sodium, Total	42.7	3,S1	mg/L	0.11	SW846 6020A	1	05/10/2023 17:10	MO	F1
Thallium, Total	ND	ND,S1	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:01	MO	F1
Vanadium, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:01	MO	F1
Zinc, Dissolved	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:31	MO	D1
Zinc, Total	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:01	MO	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,1,1-Trichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,1,2-Trichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,1-Dichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,1-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,2,3-Trichloropropane	ND	ND,S1	ug/L	2.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND,S1	ug/L	7.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,2-Dibromoethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,2-Dichlorobenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,2-Dichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,2-Dichloropropane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,3-Dichlorobenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
1,4-Dichlorobenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
2-Butanone	ND	ND,S1	ug/L	10.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
2-Hexanone	ND	ND,S1	ug/L	5.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
3-Chloro-1-propene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND,S1	ug/L	5.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Acetone	ND	ND,S1	ug/L	10.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Acrylonitrile	ND	ND,S1	ug/L	5.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Benzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Bromochloromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Bromodichloromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Bromoform	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Bromomethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Carbon Disulfide	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Carbon Tetrachloride	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L



Results

Client Sample ID	FFMP034W	Collected	05/02/2023 14:03
Lab Sample ID	3300852003	Lab Receipt	05/02/2023 16:54

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Chlorodibromomethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Chloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Chloroform	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Chloromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
cis-1,2-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
cis-1,3-Dichloropropene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Dibromomethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Dichlorodifluoromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Ethylbenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Iodomethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Methylene Chloride	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Styrene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Tetrachloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Toluene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Total Xylenes	ND	ND,S1	ug/L	3.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
trans-1,2-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
trans-1,3-Dichloropropene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND,S1	ug/L	3.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Trichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Trichlorofluoromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Vinyl Acetate	ND	ND,S1	ug/L	5.0	SW846 8260B	1	05/11/2023 02:16	PDK	L
Vinyl Chloride	ND	ND,S1	ug/L	1.0	SW846 8260B	1	05/11/2023 02:16	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.8%	62 - 133	05/11/2023 02:16	
4-Bromofluorobenzene	460-00-4	102%	79 - 114	05/11/2023 02:16	
Dibromofluoromethane	1868-53-7	103%	78 - 116	05/11/2023 02:16	
Toluene-d8	2037-26-5	104%	76 - 127	05/11/2023 02:16	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	42	S1	mg/L	5	SM2320B-2011	1	05/04/2023 23:39	NML	A
Alkalinity, Total	42	1,S1	mg/L	5	SM2320B-2011	1	05/04/2023 23:39	NML	A
Ammonia-N	ND	ND,S1	mg/L	0.100	ASTM D6919-17	10	05/05/2023 20:15	NML	C
Chemical Oxygen Demand (COD)	ND	ND,S1	mg/L	15	EPA 410.4	1	05/04/2023 12:05	KMS	C
Chloride	162	S1	mg/L	2.0	EPA 300.0	2	05/03/2023 11:20	J1W	A
Fluoride	ND	ND,S1	mg/L	0.20	EPA 300.0	2	05/03/2023 11:20	J1W	A
Nitrate-N	10	S1	mg/L	1.0	EPA 300.0	2	05/03/2023 11:20	J1W	A
pH	7.05	2,S1	pH_Units		S4500HB-11	1	05/04/2023 23:39	NML	A
Phenolics	ND	ND,S1	mg/L	0.004	SW846 9066	1	05/08/2023 16:22	AKH	K
Specific Conductance	762	S1	umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	28.9	S1	mg/L	2.0	EPA 300.0	2	05/03/2023 11:20	J1W	A



Results

Client Sample ID	FFMP034W	Collected	05/02/2023 14:03
Lab Sample ID	3300852003	Lab Receipt	05/02/2023 16:54

WET CHEMISTRY (cont.)

<u>Compound</u>	<u>Result</u>	<u>Flag</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Dilution</u>	<u>Analysis Date/Time</u>	<u>By</u>	<u>Cntr</u>
Total Dissolved Solids	488	S1	mg/L	25	SM2540C-15	1	05/08/2023 18:59	GJB	A
Total Organic Carbon (TOC)	2.6	S1	mg/L	0.50	SM5310B-14	1	05/04/2023 05:21	PAG	I
Turbidity	17	S1	NTU	0.30	SM2130B-2011	1	05/02/2023 23:15	NRB	A



Results

Client Sample ID	FFMP033W	Collected	05/02/2023 15:23
Lab Sample ID	3300852004	Lab Receipt	05/02/2023 16:54

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	21.05		Feet		Field	1	05/02/2023 15:23	BGS	H
Dissolved Oxygen	0.97		mg/L	0.01	Field	1	05/02/2023 15:23	BGS	H
Elev Top MW Casing above MSL	516.52		Feet		Field	1	05/02/2023 15:23	BGS	H
Flow Rate	2.09		gal/min		Field	1	05/02/2023 15:23	BGS	H
Ground Water Elevation	495.47		ft/MSL		Field	1	05/02/2023 15:23	BGS	H
Oxidation-Reduction Potential	54		mV		Field	1	05/02/2023 15:23	BGS	H
pH, Field (SM4500B)	5.90		pH_Units		Field	1	05/02/2023 15:23	BGS	H
Sample Depth	79.00		Feet		Field	1	05/02/2023 15:23	BGS	H
Specific Conductance, Field	345		umhos/cm	1	Field	1	05/02/2023 15:23	BGS	H
Temperature	15.29		Deg. C		Field	1	05/02/2023 15:23	BGS	H
Total Well Depth	100.00		Feet		Field	1	05/02/2023 15:23	BGS	H
Turbidity, Field	209		NTU	1	Field	1	05/02/2023 15:23	BGS	H
Volume in Water Column	116.06		Gallons		Field	1	05/02/2023 15:23	BGS	H
Water Level After Purge	37.66		Feet		Field	1	05/02/2023 15:23	BGS	H
Well Volumes Purged	1.08		Vol		Field	1	05/02/2023 15:23	BGS	H

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/11/2023 02:38	VLM	L

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:03	MO	F1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/12/2023 13:33	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/10/2023 12:03	MO	F1
Barium, Dissolved	0.070		mg/L	0.0056	SW846 6020A	1	05/12/2023 13:33	MO	D1
Barium, Total	0.069		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:03	MO	F1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:03	MO	F1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/12/2023 13:33	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:03	MO	F1
Calcium, Dissolved	37.2		mg/L	0.11	SW846 6020A	1	05/12/2023 13:33	MO	D1
Calcium, Total	37.9		mg/L	0.11	SW846 6020A	1	05/10/2023 12:03	MO	F1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:33	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:03	MO	F1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:03	MO	F1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:33	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:03	MO	F1
Iron, Dissolved	6.0		mg/L	0.056	SW846 6020A	1	05/12/2023 13:33	MO	D1
Iron, Total	8.6		mg/L	0.056	SW846 6020A	1	05/10/2023 12:03	MO	F1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:33	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:03	MO	F1
Magnesium, Dissolved	12.6		mg/L	0.11	SW846 6020A	1	05/12/2023 13:33	MO	D1
Magnesium, Total	13.3		mg/L	0.11	SW846 6020A	1	05/10/2023 12:03	MO	F1
Manganese, Dissolved	0.56		mg/L	0.0056	SW846 6020A	1	05/12/2023 13:33	MO	D1



Results

Client Sample ID	FFMP033W	Collected	05/02/2023 15:23
Lab Sample ID	3300852004	Lab Receipt	05/02/2023 16:54

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.60		mg/L	0.0056	SW846 6020A	1	05/10/2023 12:03	MO	F1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/04/2023 15:56	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/03/2023 12:50	WDA	F
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:03	MO	F1
Potassium, Dissolved	1.9		mg/L	0.11	SW846 6020A	1	05/12/2023 13:33	MO	D1
Potassium, Total	1.9		mg/L	0.11	SW846 6020A	1	05/10/2023 12:03	MO	F1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:33	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:03	MO	F1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/12/2023 13:33	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:03	MO	F1
Sodium, Dissolved	17.6		mg/L	0.11	SW846 6020A	1	05/12/2023 13:33	MO	D1
Sodium, Total	18.4	3	mg/L	0.11	SW846 6020A	1	05/10/2023 17:12	MO	F1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/10/2023 12:03	MO	F1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/10/2023 12:03	MO	F1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/12/2023 13:33	MO	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/10/2023 12:03	MO	F1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L



Results

Client Sample ID	FFMP033W	Collected	05/02/2023 15:23
Lab Sample ID	3300852004	Lab Receipt	05/02/2023 16:54

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/11/2023 02:38	PDK	L
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/11/2023 02:38	PDK	L

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.2%	62 - 133	05/11/2023 02:38	
4-Bromofluorobenzene	460-00-4	101%	79 - 114	05/11/2023 02:38	
Dibromofluoromethane	1868-53-7	101%	78 - 116	05/11/2023 02:38	
Toluene-d8	2037-26-5	103%	76 - 127	05/11/2023 02:38	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	44		mg/L	5	SM2320B-2011	1	05/05/2023 00:28	NML	A
Alkalinity, Total	44	1	mg/L	5	SM2320B-2011	1	05/05/2023 00:28	NML	A
Ammonia-N	0.426		mg/L	0.100	ASTM D6919-17	10	05/05/2023 20:29	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	05/04/2023 12:05	KMS	C
Chloride	86.5		mg/L	2.0	EPA 300.0	2	05/03/2023 11:30	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/03/2023 11:30	J1W	A
Nitrate-N	9.1		mg/L	1.0	EPA 300.0	2	05/03/2023 11:30	J1W	A
pH	6.99	2	pH_Units		S4500HB-11	1	05/05/2023 00:28	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 16:25	AKH	K
Specific Conductance	483		umhos/cm	5	SM2510B-2011	1	05/09/2023 10:15	JXL	A
Sulfate	6.8		mg/L	2.0	EPA 300.0	2	05/03/2023 11:30	J1W	A



Results

Client Sample ID	FFMP033W	Collected	05/02/2023 15:23
Lab Sample ID	3300852004	Lab Receipt	05/02/2023 16:54

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Ctr
Total Dissolved Solids	316		mg/L	25	SM2540C-15	1	05/08/2023 18:59	GJB	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	05/04/2023 05:21	PAG	I
Turbidity	25		NTU	0.30	SM2130B-2011	1	05/02/2023 23:15	NRB	A



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3300852001	FFMP017W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3300852002	FFMP029W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3300852003	FFMP034W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	



Project 2ND QTR 2023 FFMP-FORM 19A
Workorder 3300852

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3300852004	FFMP033W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	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
3300852001	FFMP017W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	992370
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	993509
		SW846 3015A	984842	05/02/2023 23:54	ANN	SW846 6020A	996666
		SW846 7470A	985152	05/03/2023 08:10	WDA	SW846 7470A	986415
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987656
		N/A	N/A	N/A		EPA 300.0	985253
		N/A	N/A	N/A		EPA 410.4	986956
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	984886
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	987599
		N/A	N/A	N/A		SM5310B-14	986445
	SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066	989660	
3300852002	FFMP029W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	992370
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	993509
		SW846 3015A	984842	05/02/2023 23:54	ANN	SW846 6020A	996666
		SW846 7470A	985152	05/03/2023 08:10	WDA	SW846 7470A	986415
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987656
		N/A	N/A	N/A		EPA 300.0	985253
		N/A	N/A	N/A		EPA 410.4	986956
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	984886
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	987599
		N/A	N/A	N/A		SM5310B-14	986445
	SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066	989660	
3300852003	FFMP034W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	992370
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	993509
		SW846 3015A	984842	05/02/2023 23:54	ANN	SW846 6020A	996666
		SW846 7470A	985152	05/03/2023 08:10	WDA	SW846 7470A	986415
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987656
		N/A	N/A	N/A		EPA 300.0	985253
		N/A	N/A	N/A		EPA 410.4	986956
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	984886
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	987599
		N/A	N/A	N/A		SM5310B-14	986445
	SW846 9066	987591	05/08/2023 07:09	AKH	SW846 9066	989660	



Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3300852004	FFMP033W	N/A	N/A	N/A		Field	1003965
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	992370
		SW846 3015A	984840	05/02/2023 22:45	ANN	SW846 6020A	993509
		SW846 3015A	984842	05/02/2023 23:54	ANN	SW846 6020A	996666
		SW846 7470A	985152	05/03/2023 08:10	WDA	SW846 7470A	986415
		SW846 7470A	986765	05/04/2023 11:10	WDA	SW846 7470A	987300
		N/A	N/A	N/A		Lib Search VOC	1002753
		N/A	N/A	N/A		SW846 8260B	993752
		N/A	N/A	N/A		ASTM D6919-17	987656
		N/A	N/A	N/A		EPA 300.0	985253
		N/A	N/A	N/A		EPA 410.4	986956
		N/A	N/A	N/A		S4500HB-11	987163
		N/A	N/A	N/A		SM2130B-2011	984886
		N/A	N/A	N/A		SM2320B-2011	987163
		N/A	N/A	N/A		SM2510B-2011	989833
		N/A	N/A	N/A		SM2540C-15	987599
		N/A	N/A	N/A		SM5310B-14	986445
			SW846 9066		987591	05/08/2023 07:09	AKH



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COC #: 3300852

1 of 1

**CHAIN OF CUSTODY/
REQUEST FOR ANALYSIS**

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

Client Name: Lancaster County Solid Waste MA

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

Contact: Dan Brown

Phone#: (717) 735-0193

Project Name#: Frey Farm Annual

Bill To: Lancaster County Solid Waste MA

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

Date Required: Rush-Subject to ALS approval and surcharges.

Email? -Y Approved By: _____

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

Sample Description/Location

(as it will appear on the lab report)

Sample Date Time

1. FFMP017W 05/02/23 1130

2. FFMP029W 05/02/23 1241

3. FFMP034W 05/02/23 1403

4. FFMP033W 05/02/23 1523

5

6

7

8

9

10

Project Comments:

LOGGED BY (signature):

REVIEWED BY (signature):

Relinquished By / Company Name

1. *[Signature]* Date 5-2-23 16402

3. *[Signature]* Date 5/2/23 16170

5. *[Signature]* Date

7. *[Signature]* Date

9. *[Signature]* Date

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

ANALYSES/METHOD REQUESTED

Field Measurements	8260 - FORM 19A & Subtitle D	Sample Depth for AUX Data	NH3-N, COD	Filtered	Total Metals Form 19A + Subtitle D	pH, Cl, SPC, F, SO4, TDS, NO3, Turb	Alkalinity, HCO3
TOC	2	1	2	2	2	1	1
*G or C	GW	GW	GW	GW	GW	GW	GW

Enter Number of Containers Per Sample or Field Results Below.

Field Measurements	8260 - FORM 19A & Subtitle D	Sample Depth for AUX Data	NH3-N, COD	Filtered	Total Metals Form 19A + Subtitle D	pH, Cl, SPC, F, SO4, TDS, NO3, Turb	Alkalinity, HCO3
TOC	2	1	2	2	2	1	1
*G or C	GW	GW	GW	GW	GW	GW	GW

Cooler Temp: 19 Therm ID: TH524

No. of Coolers: Y N Initial

Temp By: ME 16 WO Temp (°C) 524

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

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

Data	Deliverables	Special Processing	State Samples Collected In
<input type="checkbox"/> Standard	<input type="checkbox"/> USACE	<input type="checkbox"/> USACE	<input type="checkbox"/> NY
<input type="checkbox"/> CLP-like	<input type="checkbox"/> Navy	<input type="checkbox"/> Navy	<input type="checkbox"/> NJ
<input type="checkbox"/> USACE	<input type="checkbox"/> USACE	<input type="checkbox"/> USACE	<input type="checkbox"/> PA
<input type="checkbox"/> Reportable to PADEP?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Lab <input checked="" type="checkbox"/> Special	<input type="checkbox"/> NC
<input type="checkbox"/> PWSID #	<input type="checkbox"/> PWSID #	<input type="checkbox"/> PWSID #	<input type="checkbox"/> PWSID #
<input type="checkbox"/> EDDS: Format Type	<input type="checkbox"/> EDDS: Format Type	<input type="checkbox"/> EDDS: Format Type	<input type="checkbox"/> EDDS: Format Type

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