



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP007W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 24.53 " Longitude: 76 ° 26 ' 33.28 "

Depth to Water Level: 5.68 ft Measured from: Land Surface TOC

Casing Stickup: 1.50 ft Elevation of Water Level: 447.72 ft./MSL

Sampling Depth: 33 ft Volume of Water Column: 45.26 gal

Total Well Depth: 36.5 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 2.1

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 4/18/2022 Sample Collection Time: 9:51

Sample Collector's Name: Mr. Jack Borden

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): 3238053001 Final Lab Analysis Completion Date: 4/27/2022

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

Comments:

I.D. No 100008

Monitoring Point No. CWMP007W

Sample Date 4/18/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.212	ASTM D6919-09
BICARBONATE	13	SM20 2321
CALCIUM, TOTAL	18.5	SW846 6010C
CALCIUM, DISSOLVED	17.6	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	70.6	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	9.8	SW846 6010C
MAGNESIUM, DISSOLVED	9.9	SW846 6010C
MANGANESE, TOTAL (ug/l)	7.4	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	7	SW846 6010C
NITRATE-NITROGEN	9.5	EPA 300
pH-FIELD (SU)	5.03	FIELD
pH-LAB (SU)	6.78	SM4500B
POTASSIUM, TOTAL	2.2	SW846 6010C
POTASSIUM, DISSOLVED	2.1	6SW846 010C
SODIUM, TOTAL	34.5	SW846 6010C
SODIUM, DISSOLVED	34.3	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	547	FIELD
SPEC. COND., LAB (umhos/cm)	408	EPA 120.1
SULFATE	16.3	EPA 300
ALKALINITY	13	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	212	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.53	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.19	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP007W

Sample Date 4/18/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP007W

Sample Date 4/18/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	53	SW846 6010C
BARIUM, DISSOLVED	52	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	6.3	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	7.2	SW846 6010C
ZINC, DISSOLVED	6.6	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP007W

Sample Date 4/18/2022

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	1.7	SW846 8260B
DIBROMOCHLOROMETHANE (CHLORODIBROMOMET	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 (MIBK)	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	100008
Monitoring Point No.	CWMP007W
Sample Date	4/18/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	6.4	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP005W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 11.17 " Longitude: 76 ° 26 ' 7.08 "

Depth to Water Level: 42.72 ft Measured from: Land Surface TOC

Casing Stickup: -0.37 ft Elevation of Water Level: 470.71 ft./MSL

Sampling Depth: 130 ft Volume of Water Column: 142.87 gal

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

Well Purged: Yes No Well Volumes Purged: 0.9

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 4/18/2022 Sample Collection Time: 11:16

Sample Collector's Name: Mr. Jack Borden

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): 3238053002 Final Lab Analysis Completion Date: 4/27/2022

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

Comments: _____

I.D. No 100008

Monitoring Point No. CWMP005W

Sample Date 4/18/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.274	ASTM D6919-09
BICARBONATE	17	SM20 2321
CALCIUM, TOTAL	14.3	SW846 6010C
CALCIUM, DISSOLVED	13.2	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	61.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	7.8	SW846 6010C
MAGNESIUM, DISSOLVED	7.6	SW846 6010C
MANGANESE, TOTAL (ug/l)	63	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	55	SW846 6010C
NITRATE-NITROGEN	8	EPA 300
pH-FIELD (SU)	5.1	FIELD
pH-LAB (SU)	6.98	SM4500B
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED	2.1	6SW846 010C
SODIUM, TOTAL	33.4	SW846 6010C
SODIUM, DISSOLVED	32.3	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	457	FIELD
SPEC. COND., LAB (umhos/cm)	346	EPA 120.1
SULFATE	4.8	EPA 300
ALKALINITY	17	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	203	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.64	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.68	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP005W

Sample Date 4/18/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP005W

Sample Date 4/18/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	47	SW846 6010C
BARIUM, DISSOLVED	44	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	9.2	SW846 6010C
ZINC, DISSOLVED	8.9	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP005W

Sample Date 4/18/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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	100008
Monitoring Point No.	CWMP005W
Sample Date	4/18/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	6.3	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	4/18/2022

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
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP001W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 27.43 " Longitude: 76 ° 26 ' 14.4 "

Depth to Water Level: 28.42 ft Measured from: Land Surface TOC

Casing Stickup: 1.23 ft Elevation of Water Level: 486.71 ft./MSL

Sampling Depth: 57 ft Volume of Water Column: 55.63 gal

Total Well Depth: 66.3 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 4/18/2022 Sample Collection Time: 12:41

Sample Collector's Name: Mr. Jack Borden

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): 3238053003 Final Lab Analysis Completion Date: 4/27/2022

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

Comments:

I.D. No 100008

Monitoring Point No. CWMP001W

Sample Date 4/18/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.215	ASTM D6919-09
BICARBONATE	6	SM20 2321
CALCIUM, TOTAL	14.2	SW846 6010C
CALCIUM, DISSOLVED	13.6	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	24.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	660	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	10.2	SW846 6010C
MAGNESIUM, DISSOLVED	10.1	SW846 6010C
MANGANESE, TOTAL (ug/l)	51	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	41	SW846 6010C
NITRATE-NITROGEN	17.5	EPA 300
pH-FIELD (SU)	5.14	FIELD
pH-LAB (SU)	6.6	SM4500B
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED	2.1	6SW846 010C
SODIUM, TOTAL	13.2	SW846 6010C
SODIUM, DISSOLVED	13.3	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	365	FIELD
SPEC. COND., LAB (umhos/cm)	278	EPA 120.1
SULFATE	2.5	EPA 300
ALKALINITY	6	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	186	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.54	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	36.9	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP001W

Sample Date 4/18/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP001W

Sample Date 4/18/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	80	SW846 6010C
BARIUM, DISSOLVED	73	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	3.4	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	20	SW846 6010C
ZINC, DISSOLVED	19	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP001W

Sample Date 4/18/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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 100008

Monitoring Point No. CWMP001W

Sample Date 4/18/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	7.2	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

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



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP002W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 19.97 " Longitude: 76 ° 26 ' 12.3 "

Depth to Water Level: 64.13 ft Measured from: Land Surface TOC

Casing Stickup: -1.19 ft Elevation of Water Level: 461.68 ft./MSL

Sampling Depth: 85 ft Volume of Water Column: 52.68 gal

Total Well Depth: 100 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: _____

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 4/19/2022 Sample Collection Time: 13:58

Sample Collector's Name: Mr. Jack Borden

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): 3238220001 Final Lab Analysis Completion Date: 4/29/2022

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	ASTM D6919-09
BICARBONATE	30	SM20 2321
CALCIUM, TOTAL	30.2	SW846 6010C
CALCIUM, DISSOLVED	29.2	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	65.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	12	SW846 6010C
MAGNESIUM, DISSOLVED	11.9	SW846 6010C
MANGANESE, TOTAL (ug/l)	450	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	440	SW846 6010C
NITRATE-NITROGEN	5.5	EPA 300
pH-FIELD (SU)	5.59	FIELD
pH-LAB (SU)	6.16	SM4500B
POTASSIUM, TOTAL	2.4	SW846 6010C
POTASSIUM, DISSOLVED	2.3	6SW846 010C
SODIUM, TOTAL	23.3	SW846 6010C
SODIUM, DISSOLVED	22.2	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	558	FIELD
SPEC. COND., LAB (umhos/cm)	410	EPA 120.1
SULFATE	12	EPA 300
ALKALINITY	30	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	298	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	1.7	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	2.18	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP002W

Sample Date 4/19/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	4.6	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. 100008

Monitoring Point No. CWMP002W

Sample Date 4/19/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	35	SW846 6010C
BARIUM, DISSOLVED	34	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	6.8	SW846 6010C
ZINC, DISSOLVED	7.2	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP002W

Sample Date 4/19/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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 100008

Monitoring Point No. CWMP002W

Sample Date 4/19/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	10	SW846 6010C
NICKEL	18	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP002W
Sample Date	4/19/2022

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
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP016W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 56 ' 55.57 " Longitude: 76 ° 26 ' 50.59 "

Depth to Water Level: 8.25 ft Measured from: Land Surface TOC

Casing Stickup: 2.53 ft Elevation of Water Level: 303.72 ft./MSL

Sampling Depth: 71 ft Volume of Water Column: _____ gal

Total Well Depth: 78.03 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.9

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 4/20/2022 Sample Collection Time: 12:57

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3238431001 Final Lab Analysis Completion Date: 4/29/2022

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

Comments: _____

I.D. No 100008

Monitoring Point No. CWMP016W

Sample Date 4/20/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.527	ASTM D6919-09
BICARBONATE	8	SM20 2321
CALCIUM, TOTAL	5.6	SW846 6010C
CALCIUM, DISSOLVED	6.2	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	2.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	67	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	1.5	SW846 6010C
MAGNESIUM, DISSOLVED	1.6	SW846 6010C
MANGANESE, TOTAL (ug/l)	8.4	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	9.1	SW846 6010C
NITRATE-NITROGEN	2.7	EPA 300
pH-FIELD (SU)	5.22	FIELD
pH-LAB (SU)	6.71	SM4500B
POTASSIUM, TOTAL	0.52	SW846 6010C
POTASSIUM, DISSOLVED	0.55	6SW846 010C
SODIUM, TOTAL	3.4	SW846 6010C
SODIUM, DISSOLVED	3.4	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	97	FIELD
SPEC. COND., LAB (umhos/cm)	82	EPA 120.1
SULFATE	8.4	EPA 300
ALKALINITY	8	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	64	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.78	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.45	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP016W

Sample Date 4/20/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP016W

Sample Date 4/20/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	11	SW846 6010C
BARIUM, DISSOLVED	12	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	5.6 ND	SW846 6010C
ZINC, DISSOLVED	5.6 ND	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP016W

Sample Date 4/20/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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 100008

Monitoring Point No. CWMP016W

Sample Date 4/20/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	6.6	SW846 6010C
NICKEL	5.6 ND	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP016W
Sample Date	4/20/2022

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
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP009W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 10.82 " Longitude: 76 ° 26 ' 55.8 "

Depth to Water Level: 8.84 ft Measured from: Land Surface TOC

Casing Stickup: 2.70 ft Elevation of Water Level: 395.36 ft./MSL

Sampling Depth: 16 ft Volume of Water Column: 7.09 gal

Total Well Depth: 19.7 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 4.0

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 4/20/2022 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): 3238431002 Final Lab Analysis Completion Date: 4/30/2022

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

Comments:

I.D. No 100008

Monitoring Point No. CWMP009W

Sample Date 4/20/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	29.3	ASTM D6919-09
BICARBONATE	564	SM20 2321
CALCIUM, TOTAL	152	SW846 6010C
CALCIUM, DISSOLVED	163	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	104	EPA 410.4
CHLORIDE	572	EPA 300
FLUORIDE	1 ND	EPA 300
IRON, TOTAL (ug/l)	34500	SW846 6010C
IRON, DISSOLVED (ug/l)	36200	SW846 6010C
MAGNESIUM, TOTAL	85.8	SW846 6010C
MAGNESIUM, DISSOLVED	86.9	SW846 6010C
MANGANESE, TOTAL (ug/l)	12600	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	13000	SW846 6010C
NITRATE-NITROGEN	5 ND	EPA 300
pH-FIELD (SU)	6.17	FIELD
pH-LAB (SU)	7.26	SM4500B
POTASSIUM, TOTAL	33	SW846 6010C
POTASSIUM, DISSOLVED	34	6SW846 010C
SODIUM, TOTAL	195	SW846 6010C
SODIUM, DISSOLVED	194	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	3986	FIELD
SPEC. COND., LAB (umhos/cm)	3150	EPA 120.1
SULFATE	10 ND	EPA 300
ALKALINITY	564	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	1550	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	35.6	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	15.9	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP009W

Sample Date 4/20/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1.8	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1.2	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. 100008

Monitoring Point No. CWMP009W

Sample Date 4/20/2022

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	3.9	SW846 6010C
ARSENIC, DISSOLVED	4	SW846 6010C
BARIUM, TOTAL	810	SW846 6010C
BARIUM, DISSOLVED	850	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.9	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	5.6 ND	SW846 6010C
ZINC, DISSOLVED	5.6 ND	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP009W

Sample Date 4/20/2022

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	19.3	SW846 8260B
CHLOROETHANE	9.6	SW846 8260B
DIBROMOCHLOROMETHANE (CHLORODIBROMOMET	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	2.2	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	9.2	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 (MIBK)	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	100008
Monitoring Point No.	CWMP009W
Sample Date	4/20/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	59	SW846 6010C
NICKEL	88	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP008W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 16.97 " Longitude: 76 ° 26 ' 47.58 "

Depth to Water Level: 2.1 ft Measured from: Land Surface TOC

Casing Stickup: 2.80 ft Elevation of Water Level: 420.2 ft./MSL

Sampling Depth: 19 ft Volume of Water Column: 3.38 gal

Total Well Depth: 22.8 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 7.9

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 4/21/2022 Sample Collection Time: 10:30

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): 3238721001 Final Lab Analysis Completion Date: 4/29/2022

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

Comments:

I.D. No 100008

Monitoring Point No. CWMP008W

Sample Date 4/21/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	5.39	ASTM D6919-09
BICARBONATE	353	SM20 2321
CALCIUM, TOTAL	61.3	SW846 6010C
CALCIUM, DISSOLVED	61	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	18	EPA 410.4
CHLORIDE	25	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	22200	SW846 6010C
IRON, DISSOLVED (ug/l)	22600	SW846 6010C
MAGNESIUM, TOTAL	29.6	SW846 6010C
MAGNESIUM, DISSOLVED	30	SW846 6010C
MANGANESE, TOTAL (ug/l)	16400	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	15600	SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	5.81	FIELD
pH-LAB (SU)	7.36	SM4500B
POTASSIUM, TOTAL	7.6	SW846 6010C
POTASSIUM, DISSOLVED	7.6	6SW846 010C
SODIUM, TOTAL	31.7	SW846 6010C
SODIUM, DISSOLVED	32.3	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	1066	FIELD
SPEC. COND., LAB (umhos/cm)	826	EPA 120.1
SULFATE	7	EPA 300
ALKALINITY	353	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	424	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	7	SM20 5310B
TOTAL PHENOLICS (ug/l)	8 ND	SW846 9066
TURBIDITY (N.T.U.)	19.9	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP008W

Sample Date 4/21/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1.4	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	2.2	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. 100008

Monitoring Point No. CWMP008W

Sample Date 4/21/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	130	SW846 6010C
BARIUM, DISSOLVED	130	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.4	SW846 6010C
CHROMIUM, DISSOLVED	2.4	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	5.6 ND	SW846 6010C
ZINC, DISSOLVED	5.6 ND	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP008W

Sample Date 4/21/2022

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	8.6	SW846 8260B
CHLOROETHANE	5.6	SW846 8260B
DIBROMOCHLOROMETHANE (CHLORODIBROMOMET	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROENZENE	1.2	SW846 8260B
1,3-DICHLOROENZENE	1 ND	SW846 8260B
1,4-DICHLOROENZENE	9.8	SW846 8260B
DICHLORODIFLUOROMETHANE	1.2	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 (MIBK)	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 100008

Monitoring Point No. CWMP008W

Sample Date 4/21/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	30	SW846 6010C
NICKEL	18	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP010W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 2.38 " Longitude: 76 ° 26 ' 57.92 "

Depth to Water Level: 8.56 ft Measured from: Land Surface TOC

Casing Stickup: 2.10 ft Elevation of Water Level: 352.34 ft./MSL

Sampling Depth: 17 ft Volume of Water Column: 7.21 gal

Total Well Depth: 19.6 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: 1.7

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

Spring Flow Rate: gpm

Sample Date (mm/dd/yy): 4/21/2022 Sample Collection Time: 11:06

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): 3238721002 Final Lab Analysis Completion Date: 4/29/2022

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

Comments:

I.D. No 100008

Monitoring Point No. CWMP010W

Sample Date 4/21/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.128	ASTM D6919-09
BICARBONATE	142	SM20 2321
CALCIUM, TOTAL	32.2	SW846 6010C
CALCIUM, DISSOLVED	33.6	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	110	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	340	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	27.7	SW846 6010C
MAGNESIUM, DISSOLVED	26.3	SW846 6010C
MANGANESE, TOTAL (ug/l)	65	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	27	SW846 6010C
NITRATE-NITROGEN	14.5	EPA 300
pH-FIELD (SU)	6.16	FIELD
pH-LAB (SU)	7.9	SM4500B
POTASSIUM, TOTAL	5.8	SW846 6010C
POTASSIUM, DISSOLVED	5.7	6SW846 010C
SODIUM, TOTAL	80.4	SW846 6010C
SODIUM, DISSOLVED	76.4	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	1303	FIELD
SPEC. COND., LAB (umhos/cm)	837	EPA 120.1
SULFATE	18.8	EPA 300
ALKALINITY	142	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	432	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	2.8	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	8.82	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP010W

Sample Date 4/21/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP010W

Sample Date 4/21/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	38	SW846 6010C
BARIUM, DISSOLVED	34	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	14	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	12	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	5.6 ND	SW846 6010C
ZINC, DISSOLVED	5.6 ND	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP010W

Sample Date 4/21/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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 100008

Monitoring Point No. CWMP010W

Sample Date 4/21/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	8.1	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No _____	100008
Monitoring Point No. _____	CWMP010W
Sample Date _____	4/21/2022

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
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP003W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 20.17 " Longitude: 76 ° 26 ' 8.37 "

Depth to Water Level: 77.41 ft Measured from: Land Surface TOC

Casing Stickup: -1.29 ft Elevation of Water Level: 446.80 ft./MSL

Sampling Depth: 100 ft Volume of Water Column: -3.54 gal

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

Well Purged: Yes No Well Volumes Purged: _____

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 4/21/2022 Sample Collection Time: 12:43

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis: ALS Environmental

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

Lab Accreditation Number(s): 22-293

Lab Sample Number(s): 3238721003 Final Lab Analysis Completion Date: 4/29/2022

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

Comments: _____

I.D. No 100008

Monitoring Point No. CWMP003W

Sample Date 4/21/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.126	ASTM D6919-09
BICARBONATE	23	SM20 2321
CALCIUM, TOTAL	18.1	SW846 6010C
CALCIUM, DISSOLVED	18	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	52.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	7.4	SW846 6010C
MAGNESIUM, DISSOLVED	7.6	SW846 6010C
MANGANESE, TOTAL (ug/l)	6.2	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	7.5	SW846 6010C
NITRATE-NITROGEN	4.8	EPA 300
pH-FIELD (SU)	5.5	FIELD
pH-LAB (SU)	6.92	SM4500B
POTASSIUM, TOTAL	2	SW846 6010C
POTASSIUM, DISSOLVED	2	6SW846 010C
SODIUM, TOTAL	18	SW846 6010C
SODIUM, DISSOLVED	18.5	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	378	FIELD
SPEC. COND., LAB (umhos/cm)	282	EPA 120.1
SULFATE	6.4	EPA 300
ALKALINITY	23	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	190	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	1.5	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.48	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP003W

Sample Date 4/21/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1.7	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. 100008

Monitoring Point No. CWMP003W

Sample Date 4/21/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	21	SW846 6010C
BARIUM, DISSOLVED	23	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	5.6 ND	SW846 6010C
ZINC, DISSOLVED	5.6 ND	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP003W

Sample Date 4/21/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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 100008

Monitoring Point No. CWMP003W

Sample Date 4/21/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	8.2	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP003W
Sample Date	4/21/2022

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
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP004W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 17.9 " Longitude: 76 ° 26 ' 7.05 "

Depth to Water Level: 100.24 ft Measured from: Land Surface TOC

Casing Stickup: -1.37 ft Elevation of Water Level: 429.29 ft./MSL

Sampling Depth: 130 ft Volume of Water Column: 58.39 gal

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

Well Purged: Yes No Well Volumes Purged: _____

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 4/21/2022 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): 3238721004 Final Lab Analysis Completion Date: 4/29/2022

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

Comments: _____

I.D. No 100008

Monitoring Point No. CWMP004W

Sample Date 4/21/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.212	ASTM D6919-09
BICARBONATE	31	SM20 2321
CALCIUM, TOTAL	21.5	SW846 6010C
CALCIUM, DISSOLVED	21.6	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	50.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	56 ND	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	7.6	SW846 6010C
MAGNESIUM, DISSOLVED	7.6	SW846 6010C
MANGANESE, TOTAL (ug/l)	9.700001	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	9.8	SW846 6010C
NITRATE-NITROGEN	5.5	EPA 300
pH-FIELD (SU)	5.76	FIELD
pH-LAB (SU)	7.13	SM4500B
POTASSIUM, TOTAL	1.4	SW846 6010C
POTASSIUM, DISSOLVED	1.5	6SW846 010C
SODIUM, TOTAL	17.9	SW846 6010C
SODIUM, DISSOLVED	18.3	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	393	FIELD
SPEC. COND., LAB (umhos/cm)	296	EPA 120.1
SULFATE	6.5	EPA 300
ALKALINITY	31	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	192	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.94	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.15	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP004W

Sample Date 4/21/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP004W

Sample Date 4/21/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	27	SW846 6010C
BARIUM, DISSOLVED	27	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	5.6 ND	SW846 6010C
ZINC, DISSOLVED	5.6 ND	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP004W

Sample Date 4/21/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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 100008

Monitoring Point No. CWMP004W

Sample Date 4/21/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	5.6 ND	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP017S Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 20.41 " Longitude: 76 ° 26 ' 45.1 "

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

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

Sampling Depth: 0 ft Volume of Water Column: #Error gal

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

Well Purged: Yes No Well Volumes Purged: _____

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 4/22/2022 Sample Collection Time: 9:57

Sample Collector's Name: Ms. Jordan Galladher

Sample Collector's Affiliation: LCSWMA

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): 3238926001 Final Lab Analysis Completion Date: 4/30/2022

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

Comments: _____

I.D. No 100008

Monitoring Point No. CWMP017S

Sample Date 4/22/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.791	ASTM D6919-09
BICARBONATE	5 ND	SM20 2321
CALCIUM, TOTAL	65.1	SW846 6010C
CALCIUM, DISSOLVED	67	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	560	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	580	SW846 6010C
IRON, DISSOLVED (ug/l)	140	SW846 6010C
MAGNESIUM, TOTAL	84.6	SW846 6010C
MAGNESIUM, DISSOLVED	91	SW846 6010C
MANGANESE, TOTAL (ug/l)	97	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	82	SW846 6010C
NITRATE-NITROGEN	12.7	EPA 300
pH-FIELD (SU)	7.78	FIELD
pH-LAB (SU)	8.3	SM4500B
POTASSIUM, TOTAL	12.4	SW846 6010C
POTASSIUM, DISSOLVED	13.4	6SW846 010C
SODIUM, TOTAL	353	SW846 6010C
SODIUM, DISSOLVED	373	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	3567	FIELD
SPEC. COND., LAB (umhos/cm)	2890	EPA 120.1
SULFATE	31.2	EPA 300
ALKALINITY	5 ND	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	1320	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	3.7	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	5.19	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP017S

Sample Date 4/22/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP017S

Sample Date 4/22/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	32	SW846 6010C
BARIUM, DISSOLVED	31	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	11	SW846 6010C
COPPER, DISSOLVED	11	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	280	SW846 6010C
ZINC, DISSOLVED	240	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP017S

Sample Date 4/22/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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 100008

Monitoring Point No. CWMP017S

Sample Date 4/22/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	9.2	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP017S
Sample Date	4/22/2022

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
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP018S Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County

Municipality: Manor

Sampling Point: Latitude: 39 ° 56 ' 55.11 " Longitude: 76 ° 26 ' 51.66 "

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

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

Sampling Depth: 0 ft Volume of Water Column: #Error gal

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

Well Purged: Yes No Well Volumes Purged: _____

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 4/22/2022 Sample Collection Time: 8:30

Sample Collector's Name: Ms. Jordan Galladher

Sample Collector's Affiliation: LCSWMA

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): 3238926002 Final Lab Analysis Completion Date: 4/30/2022

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

Comments: _____

I.D. No 100008

Monitoring Point No. CWMP018S

Sample Date 4/22/2022

FORM 19
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE ^T	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.781	ASTM D6919-09
BICARBONATE	216	SM20 2321
CALCIUM, TOTAL	63.2	SW846 6010C
CALCIUM, DISSOLVED	63	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	19	EPA 410.4
CHLORIDE	346	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	60	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	51.1	SW846 6010C
MAGNESIUM, DISSOLVED	50.9	SW846 6010C
MANGANESE, TOTAL (ug/l)	6.3	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	5.6 ND	SW846 6010C
NITRATE-NITROGEN	11.7	EPA 300
pH-FIELD (SU)	7.84	FIELD
pH-LAB (SU)	8.82	SM4500B
POTASSIUM, TOTAL	15.4	SW846 6010C
POTASSIUM, DISSOLVED	15.1	6SW846 010C
SODIUM, TOTAL	224	SW846 6010C
SODIUM, DISSOLVED	217	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	1972	FIELD
SPEC. COND., LAB (umhos/cm)	1850	EPA 120.1
SULFATE	38.2	EPA 300
ALKALINITY	255	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	918	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	6.8	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.68	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP018S

Sample Date 4/22/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP018S

Sample Date 4/22/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	38	SW846 6010C
BARIUM, DISSOLVED	39	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	6.6	SW846 6010C
COPPER, DISSOLVED	6.3	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	46	SW846 6010C
ZINC, DISSOLVED	45	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP018S

Sample Date 4/22/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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	100008
Monitoring Point No.	CWMP018S
Sample Date	4/22/2022

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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	14	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP018S
Sample Date	4/22/2022

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
07/05/2022

DEP USE ONLY

Date Received

FORM 19
MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facility ID (as issued by DEP): 100008

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: CWMP012W Well Spring Stream Other
 Upgradient/Upstream Downgradient/Downstream

Location (County): Lancaster County Municipality: Manor Township

Sampling Point: Latitude: 39 ° 57 ' 1.48 " Longitude: 76 ° 26 ' 36.02 "

Depth to Water Level: 64.82 ft Measured from: Land Surface TOC

Casing Stickup: 1.90 ft Elevation of Water Level: 317.88 ft./MSL

Sampling Depth: 0 ft Volume of Water Column: 54.46 gal

Total Well Depth: 101.9 ft Sampling Method: Pumped Bailed Grab

Well Purged: Yes No Well Volumes Purged: _____

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

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 5/6/2022 Sample Collection Time: 12:42

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): 3241423001 Final Lab Analysis Completion Date: 5/19/2022

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	0.298	ASTM D6919-09
BICARBONATE	5 ND	SM20 2321
CALCIUM, TOTAL	30.8	SW846 6010C
CALCIUM, DISSOLVED	30.3	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	31.9	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	39000	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	9.3	SW846 6010C
MAGNESIUM, DISSOLVED	8.9	SW846 6010C
MANGANESE, TOTAL (ug/l)	400	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	280	SW846 6010C
NITRATE-NITROGEN	7.2	EPA 300
pH-FIELD (SU)	5.74	FIELD
pH-LAB (SU)	5.69	SM4500B
POTASSIUM, TOTAL	1.4	SW846 6010C
POTASSIUM, DISSOLVED	1.3	6SW846 010C
SODIUM, TOTAL	15.5	SW846 6010C
SODIUM, DISSOLVED	14.5	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	319	FIELD
SPEC. COND., LAB (umhos/cm)	326	EPA 120.1
SULFATE	4.5	EPA 300
ALKALINITY	5 ND	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	182	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	1.5	SM20 5310B
TOTAL PHENOLICS (ug/l)	70	SW846 9066
TURBIDITY (N.T.U.)	83.3	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.

T Please indicate detection limit if analyte is not detected.

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

I.D. No. 100008

Monitoring Point No. CWMP012W

Sample Date 5/6/2022

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

ANALYTE	VALUE^T	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	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. 100008

Monitoring Point No. CWMP012W

Sample Date 5/6/2022

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 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	110	SW846 6010C
BARIUM, DISSOLVED	82	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	2.2 ND	SW846 6010C
CHROMIUM, DISSOLVED	2.2 ND	SW846 6010C
COPPER, TOTAL	5.6 ND	SW846 6010C
COPPER, DISSOLVED	5.6 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	2.2 ND	SW846 6010C
LEAD, DISSOLVED	2.2 ND	SW846 6010C
MERCURY, TOTAL	0.5 ND	SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	5.6 ND	SW846 6010C
SELENIUM, DISSOLVED	5.6 ND	SW846 6010C
SILVER, TOTAL	2.2 ND	SW846 6010C
SILVER, DISSOLVED	2.2 ND	SW846 6010C
ZINC, TOTAL	8.4	SW846 6010C
ZINC, DISSOLVED	6.2	SW846 6010C

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

I.D. No 100008

Monitoring Point No. CWMP012W

Sample Date 5/6/2022

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 (CHLORODIBROMOMET	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 (MIBK)	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 100008

Monitoring Point No. CWMP012W

Sample Date 5/6/2022

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	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 (DBCP) (DIBROMO	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	EPA 200.8
BERYLLIUM	1.1 ND	EPA 200.8
COBALT	5.6 ND	SW846 6010C
NICKEL	13	SW846 6010C
THALLIUM	1.1 ND	EPA 200.8
VANADIUM	2.2 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP012W
Sample Date	5/6/2022

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>



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 2022 CWMP-FORM 19A
Workorder 3238053
Report ID 165858 on 4/29/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 18, 2022.

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

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

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

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

Recipient(s):

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

Susan Scherer

Susan Scherer
Project Coordinator

(ALS Digital Signature)

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



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>
3238053001	CWMP007W	Ground Water	04/18/2022 09:51	04/18/2022 15:57	JB	ALS Environmental-Middletown
3238053002	CWMP005W	Ground Water	04/18/2022 11:16	04/18/2022 15:57	JB	ALS Environmental-Middletown
3238053003	CWMP001W	Ground Water	04/18/2022 12:41	04/18/2022 15:57	JB	ALS Environmental-Middletown
3238053004	Trip Blank	Water	04/18/2022 00:00	04/18/2022 15:57	JB	ALS Environmental-Middletown



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



Project Notations

Sample Notations

Lab ID **Sample ID**

Result Notations

Notation Ref.

- | | |
|---|---|
| 1 | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg 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. |



Detected Results Summary

Client Sample ID	CWMP007W	Collected	04/18/2022 09:51
Lab Sample ID	3238053001	Lab Receipt	04/18/2022 15:57

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	5.68	Feet		Field	#
Dissolved Oxygen	5.23	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	453.40	Feet		Field	#
Flow Rate	1.38	gal/min		Field	#
Ground Water Elevation	447.72	ft/MSL		Field	#
Oxidation-Reduction Potential	339	mV		Field	#
pH, Field (SM4500B)	5.03	pH_Units		Field	#
Sample Depth	33.00	Feet		Field	#
Specific Conductance, Field	547	umhos/cm	1	Field	#
Temperature	12.59	Deg. C		Field	#
Total Well Depth	36.50	Feet		Field	#
Volume in Water Column	45.31	Gallons		Field	#
Water Level After Purge	6.45	Feet		Field	#
Well Volumes Purged	2.13	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.052	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.053	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	17.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	18.5	mg/L	0.11	SW846 6020A	#
Copper, Total	0.0063	mg/L	0.0056	SW846 6020A	#
Magnesium, Dissolved	9.9	mg/L	0.11	SW846 6020A	#
Magnesium, Total	9.8	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.0070	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.0074	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0064	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.1	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.2	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	34.3	mg/L	0.11	SW846 6020A	#
Sodium, Total	34.5	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0066	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0072	mg/L	0.0056	SW846 6020A	#
VOLATILE ORGANICS					
Chloroethane	1.7	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	13	mg/L	5	SM2320B-2011	#
Alkalinity, Total	13	mg/L	5	SM2320B-2011	#
Ammonia-N	0.212	mg/L	0.100	ASTM D6919-09	#
Chloride	70.6	mg/L		EPA 300.0	#
Fluoride	0.0	mg/L		EPA 300.0	#
Nitrate-N	9.5	mg/L		EPA 300.0	#
pH	6.78	pH_Units		S4500HB-11	#
Specific Conductance	408	umhos/cm	1	SM2510B-2011	#



Detected Results Summary

Sample - CWMP007W (cont.)

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
WET CHEMISTRY (cont.)					
Sulfate	16.3	mg/L		EPA 300.0	#
Total Dissolved Solids	212	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.53	mg/L	0.50	SM5310B-2011	#
Turbidity	0.19	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	CWMP005W	Collected	04/18/2022 11:16
Lab Sample ID	3238053002	Lab Receipt	04/18/2022 15:57

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	42.72	Feet		Field	#
Dissolved Oxygen	6.64	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	513.43	Feet		Field	#
Flow Rate	2.23	gal/min		Field	#
Ground Water Elevation	470.71	ft/MSL		Field	#
Oxidation-Reduction Potential	321	mV		Field	#
pH, Field (SM4500B)	5.10	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	457	umhos/cm	1	Field	#
Temperature	12.88	Deg. C		Field	#
Total Well Depth	138.92	Feet		Field	#
Volume in Water Column	141.41	Gallons		Field	#
Water Level After Purge	44.34	Feet		Field	#
Well Volumes Purged	0.95	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.044	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.047	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	13.2	mg/L	0.11	SW846 6020A	#
Calcium, Total	14.3	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	7.6	mg/L	0.11	SW846 6020A	#
Magnesium, Total	7.8	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.055	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.063	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0063	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.1	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.1	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	32.3	mg/L	0.11	SW846 6020A	#
Sodium, Total	33.4	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0089	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0092	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	17	mg/L	5	SM2320B-2011	#
Alkalinity, Total	17	mg/L	5	SM2320B-2011	#
Ammonia-N	0.274	mg/L	0.100	ASTM D6919-09	#
Chloride	61.7	mg/L		EPA 300.0	#
Fluoride	0.075	mg/L		EPA 300.0	#
Nitrate-N	8.0	mg/L		EPA 300.0	#
pH	6.98	pH_Units		S4500HB-11	#
Specific Conductance	346	umhos/cm	1	SM2510B-2011	#
Sulfate	4.8	mg/L		EPA 300.0	#
Total Dissolved Solids	203	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.64	mg/L	0.50	SM5310B-2011	#
Turbidity	0.68	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Sample - CWMP005W (cont.)

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
-----------------	---------------	--------------	------------	---------------	-------------



Detected Results Summary

Client Sample ID	CWMP001W	Collected	04/18/2022 12:41
Lab Sample ID	3238053003	Lab Receipt	04/18/2022 15:57

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	28.42	Feet		Field	#
Dissolved Oxygen	8.59	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	515.13	Feet		Field	#
Flow Rate	1.61	gal/min		Field	#
Ground Water Elevation	486.71	ft/MSL		Field	#
Oxidation-Reduction Potential	347	mV		Field	#
pH, Field (SM4500B)	5.14	pH_Units		Field	#
Sample Depth	57.00	Feet		Field	#
Specific Conductance, Field	365	umhos/cm	1	Field	#
Temperature	13.48	Deg. C		Field	#
Total Well Depth	66.30	Feet		Field	#
Turbidity, Field	17	NTU	1	Field	#
Volume in Water Column	55.68	Gallons		Field	#
Water Level After Purge	49.00	Feet		Field	#
Well Volumes Purged	1.74	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.073	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.080	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	13.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	14.2	mg/L	0.11	SW846 6020A	#
Iron, Total	0.66	mg/L	0.056	SW846 6020A	#
Lead, Total	0.0034	mg/L	0.0022	SW846 6020A	#
Magnesium, Dissolved	10.1	mg/L	0.11	SW846 6020A	#
Magnesium, Total	10.2	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.041	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.051	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0072	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.1	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.1	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	13.3	mg/L	0.11	SW846 6020A	#
Sodium, Total	13.2	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.019	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.020	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	6	mg/L	5	SM2320B-2011	#
Alkalinity, Total	6	mg/L	5	SM2320B-2011	#
Ammonia-N	0.215	mg/L	0.100	ASTM D6919-09	#
Chloride	24.9	mg/L		EPA 300.0	#
Fluoride	0.072	mg/L		EPA 300.0	#
Nitrate-N	17.5	mg/L		EPA 300.0	#
pH	6.60	pH_Units		S4500HB-11	#
Specific Conductance	278	umhos/cm	1	SM2510B-2011	#
Sulfate	2.5	mg/L		EPA 300.0	#



Detected Results Summary

Sample - CWMP001W (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	186	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.54	mg/L	0.50	SM5310B-2011	#
Turbidity	36.9	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	Trip Blank	Collected	04/18/2022 00:00
Lab Sample ID	3238053004	Lab Receipt	04/18/2022 15:57

<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	CWMP007W	Collected	04/18/2022 09:51
Lab Sample ID	3238053001	Lab Receipt	04/18/2022 15:57

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	5.68		Feet		Field	1	04/18/2022 10:01	BGS	F
Dissolved Oxygen	5.23		mg/L	0.01	Field	1	04/18/2022 10:01	BGS	F
Elev Top MW Casing above MSL	453.40		Feet		Field	1	04/18/2022 10:01	BGS	F
Flow Rate	1.38		gal/min		Field	1	04/18/2022 10:01	BGS	F
Ground Water Elevation	447.72		ft/MSL		Field	1	04/18/2022 10:01	BGS	F
Oxidation-Reduction Potential	339		mV		Field	1	04/18/2022 10:01	BGS	F
pH, Field (SM4500B)	5.03		pH_Units		Field	1	04/18/2022 10:01	BGS	F
Sample Depth	33.00		Feet		Field	1	04/18/2022 10:01	BGS	F
Specific Conductance, Field	547		umhos/cm	1	Field	1	04/18/2022 10:01	BGS	F
Temperature	12.59		Deg. C		Field	1	04/18/2022 10:01	BGS	F
Total Well Depth	36.50		Feet		Field	1	04/18/2022 10:01	BGS	F
Turbidity, Field	ND	ND	NTU	1	Field	1	04/18/2022 10:01	BGS	F
Volume in Water Column	45.31		Gallons		Field	1	04/18/2022 10:01	BGS	F
Water Level After Purge	6.45		Feet		Field	1	04/18/2022 10:01	BGS	F
Well Volumes Purged	2.13		Vol		Field	1	04/18/2022 10:01	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	04/20/2022 01:27	DD	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	04/21/2022 13:15	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/22/2022 11:48	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/21/2022 13:15	MO	E1
Barium, Dissolved	0.052		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:48	MO	D1
Barium, Total	0.053		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:15	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:15	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 11:48	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:15	MO	E1
Calcium, Dissolved	17.6		mg/L	0.11	SW846 6020A	1	04/22/2022 11:48	MO	D1
Calcium, Total	18.5		mg/L	0.11	SW846 6020A	1	04/21/2022 13:15	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:48	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:15	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 13:15	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 11:48	MO	D1
Copper, Total	0.0063		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:15	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/22/2022 11:48	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	04/21/2022 13:15	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:48	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:15	MO	E1
Magnesium, Dissolved	9.9		mg/L	0.11	SW846 6020A	1	04/22/2022 11:48	MO	D1
Magnesium, Total	9.8		mg/L	0.11	SW846 6020A	1	04/21/2022 13:15	MO	E1
Manganese, Dissolved	0.0070		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:48	MO	D1



Results

Client Sample ID	CWMP007W	Collected	04/18/2022 09:51
Lab Sample ID	3238053001	Lab Receipt	04/18/2022 15:57

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.0074		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:15	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2022 14:00	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/27/2022 11:18	A1S	E
Nickel, Total	0.0064		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:15	MO	E1
Potassium, Dissolved	2.1		mg/L	0.11	SW846 6020A	1	04/22/2022 11:48	MO	D1
Potassium, Total	2.2		mg/L	0.11	SW846 6020A	1	04/21/2022 13:15	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 11:48	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 13:15	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:48	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:15	MO	E1
Sodium, Dissolved	34.3		mg/L	0.11	SW846 6020A	1	04/22/2022 11:48	MO	D1
Sodium, Total	34.5		mg/L	0.11	SW846 6020A	1	04/21/2022 13:15	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:15	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:15	MO	E1
Zinc, Dissolved	0.0066		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:48	MO	D1
Zinc, Total	0.0072		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:15	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	04/20/2022 01:27	PKD	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PKD	J



Results

Client Sample ID	CWMP007W	Collected	04/18/2022 09:51
Lab Sample ID	3238053001	Lab Receipt	04/18/2022 15:57

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	04/20/2022 01:27	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Chloroethane	1.7		ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 01:27	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:27	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	92.8%	62 – 133	04/20/2022 01:27	
4-Bromofluorobenzene	460-00-4	92.9%	79 – 114	04/20/2022 01:27	
Dibromofluoromethane	1868-53-7	90.9%	78 – 116	04/20/2022 01:27	
Toluene-d8	2037-26-5	91.3%	76 – 127	04/20/2022 01:27	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	13		mg/L	5	SM2320B-2011	1	04/21/2022 16:13	BXD	A
Alkalinity, Total	13	1	mg/L	5	SM2320B-2011	1	04/21/2022 16:13	BXD	A
Ammonia-N	0.212		mg/L	0.100	ASTM D6919-09	10	04/20/2022 18:42	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/21/2022 16:30	ALK	C
Chloride	70.6		mg/L		EPA 300.0	2	04/19/2022 19:03	M1D	A
Fluoride	0.0		mg/L		EPA 300.0	2	04/19/2022 19:03	M1D	A
Nitrate-N	9.5		mg/L		EPA 300.0	2	04/19/2022 19:03	M1D	A
pH	6.78	2	pH_Units		S4500HB-11	1	04/21/2022 16:13	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/21/2022 13:09	AKH	I
Specific Conductance	408		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	16.3		mg/L		EPA 300.0	2	04/19/2022 19:03	M1D	A



Results

Client Sample ID	CWMP007W	Collected	04/18/2022 09:51
Lab Sample ID	3238053001	Lab Receipt	04/18/2022 15:57

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	212		mg/L	25	S2540C-11	1	04/20/2022 07:57	SMS	A
Total Organic Carbon (TOC)	0.53		mg/L	0.50	SM5310B-2011	1	04/20/2022 20:14	PAG	G
Turbidity	0.19		NTU	0.10	SM2130B-2011	1	04/20/2022 02:38	LXZ	A



Results

Client Sample ID	CWMP005W	Collected	04/18/2022 11:16
Lab Sample ID	3238053002	Lab Receipt	04/18/2022 15:57

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	42.72		Feet		Field	1	04/18/2022 11:16	BGS	F
Dissolved Oxygen	6.64		mg/L	0.01	Field	1	04/18/2022 11:16	BGS	F
Elev Top MW Casing above MSL	513.43		Feet		Field	1	04/18/2022 11:16	BGS	F
Flow Rate	2.23		gal/min		Field	1	04/18/2022 11:16	BGS	F
Ground Water Elevation	470.71		ft/MSL		Field	1	04/18/2022 11:16	BGS	F
Oxidation-Reduction Potential	321		mV		Field	1	04/18/2022 11:16	BGS	F
pH, Field (SM4500B)	5.10		pH_Units		Field	1	04/18/2022 11:16	BGS	F
Sample Depth	130.00		Feet		Field	1	04/18/2022 11:16	BGS	F
Specific Conductance, Field	457		umhos/cm	1	Field	1	04/18/2022 11:16	BGS	F
Temperature	12.88		Deg. C		Field	1	04/18/2022 11:16	BGS	F
Total Well Depth	138.92		Feet		Field	1	04/18/2022 11:16	BGS	F
Turbidity, Field	ND	ND	NTU	1	Field	1	04/18/2022 11:16	BGS	F
Volume in Water Column	141.41		Gallons		Field	1	04/18/2022 11:16	BGS	F
Water Level After Purge	44.34		Feet		Field	1	04/18/2022 11:16	BGS	F
Well Volumes Purged	0.95		Vol		Field	1	04/18/2022 11:16	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	04/20/2022 01:50	DD	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	04/21/2022 13:17	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/22/2022 11:50	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/21/2022 13:17	MO	E1
Barium, Dissolved	0.044		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:50	MO	D1
Barium, Total	0.047		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:17	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:17	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 11:50	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:17	MO	E1
Calcium, Dissolved	13.2		mg/L	0.11	SW846 6020A	1	04/22/2022 11:50	MO	D1
Calcium, Total	14.3		mg/L	0.11	SW846 6020A	1	04/21/2022 13:17	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:50	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:17	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 13:17	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 11:50	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 13:17	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/22/2022 11:50	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	04/21/2022 13:17	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:50	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:17	MO	E1
Magnesium, Dissolved	7.6		mg/L	0.11	SW846 6020A	1	04/22/2022 11:50	MO	D1
Magnesium, Total	7.8		mg/L	0.11	SW846 6020A	1	04/21/2022 13:17	MO	E1
Manganese, Dissolved	0.055		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:50	MO	D1



Results

Client Sample ID	CWMP005W	Collected	04/18/2022 11:16
Lab Sample ID	3238053002	Lab Receipt	04/18/2022 15:57

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.063		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:17	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2022 14:01	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/27/2022 11:19	A1S	E
Nickel, Total	0.0063		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:17	MO	E1
Potassium, Dissolved	2.1		mg/L	0.11	SW846 6020A	1	04/22/2022 11:50	MO	D1
Potassium, Total	2.1		mg/L	0.11	SW846 6020A	1	04/21/2022 13:17	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 11:50	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 13:17	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:50	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:17	MO	E1
Sodium, Dissolved	32.3		mg/L	0.11	SW846 6020A	1	04/22/2022 11:50	MO	D1
Sodium, Total	33.4		mg/L	0.11	SW846 6020A	1	04/21/2022 13:17	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:17	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:17	MO	E1
Zinc, Dissolved	0.0089		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:50	MO	D1
Zinc, Total	0.0092		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:17	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	04/20/2022 01:50	PKD	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PKD	J



Results

Client Sample ID	CWMP005W	Collected	04/18/2022 11:16
Lab Sample ID	3238053002	Lab Receipt	04/18/2022 15:57

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	04/20/2022 01:50	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 01:50	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 01:50	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94%	62 – 133	04/20/2022 01:50	
4-Bromofluorobenzene	460-00-4	90.5%	79 – 114	04/20/2022 01:50	
Dibromofluoromethane	1868-53-7	92.3%	78 – 116	04/20/2022 01:50	
Toluene-d8	2037-26-5	90.8%	76 – 127	04/20/2022 01:50	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	17		mg/L	5	SM2320B-2011	1	04/21/2022 16:23	BXD	A
Alkalinity, Total	17	1	mg/L	5	SM2320B-2011	1	04/21/2022 16:23	BXD	A
Ammonia-N	0.274		mg/L	0.100	ASTM D6919-09	10	04/20/2022 21:12	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/21/2022 16:30	ALK	C
Chloride	61.7		mg/L		EPA 300.0	2	04/19/2022 19:14	M1D	A
Fluoride	0.075		mg/L		EPA 300.0	2	04/19/2022 19:14	M1D	A
Nitrate-N	8.0		mg/L		EPA 300.0	2	04/19/2022 19:14	M1D	A
pH	6.98	2	pH_Units		S4500HB-11	1	04/21/2022 16:23	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/21/2022 13:12	AKH	I
Specific Conductance	346		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	4.8		mg/L		EPA 300.0	2	04/19/2022 19:14	M1D	A



Results

Client Sample ID	CWMP005W	Collected	04/18/2022 11:16
Lab Sample ID	3238053002	Lab Receipt	04/18/2022 15:57

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	203		mg/L	25	S2540C-11	1	04/20/2022 07:57	SMS	A
Total Organic Carbon (TOC)	0.64		mg/L	0.50	SM5310B-2011	1	04/20/2022 20:14	PAG	G
Turbidity	0.68		NTU	0.10	SM2130B-2011	1	04/20/2022 02:38	LXZ	A



Results

Client Sample ID	CWMP001W	Collected	04/18/2022 12:41
Lab Sample ID	3238053003	Lab Receipt	04/18/2022 15:57

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	28.42		Feet		Field	1	04/18/2022 12:41	BGS	F
Dissolved Oxygen	8.59		mg/L	0.01	Field	1	04/18/2022 12:41	BGS	F
Elev Top MW Casing above MSL	515.13		Feet		Field	1	04/18/2022 12:41	BGS	F
Flow Rate	1.61		gal/min		Field	1	04/18/2022 12:41	BGS	F
Ground Water Elevation	486.71		ft/MSL		Field	1	04/18/2022 12:41	BGS	F
Oxidation-Reduction Potential	347		mV		Field	1	04/18/2022 12:41	BGS	F
pH, Field (SM4500B)	5.14		pH_Units		Field	1	04/18/2022 12:41	BGS	F
Sample Depth	57.00		Feet		Field	1	04/18/2022 12:41	BGS	F
Specific Conductance, Field	365		umhos/cm	1	Field	1	04/18/2022 12:41	BGS	F
Temperature	13.48		Deg. C		Field	1	04/18/2022 12:41	BGS	F
Total Well Depth	66.30		Feet		Field	1	04/18/2022 12:41	BGS	F
Turbidity, Field	17		NTU	1	Field	1	04/18/2022 12:41	BGS	F
Volume in Water Column	55.68		Gallons		Field	1	04/18/2022 12:41	BGS	F
Water Level After Purge	49.00		Feet		Field	1	04/18/2022 12:41	BGS	F
Well Volumes Purged	1.74		Vol		Field	1	04/18/2022 12:41	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	04/20/2022 02:13	DD	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	04/21/2022 13:19	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/22/2022 11:52	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/21/2022 13:19	MO	E1
Barium, Dissolved	0.073		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:52	MO	D1
Barium, Total	0.080		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:19	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:19	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 11:52	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:19	MO	E1
Calcium, Dissolved	13.6		mg/L	0.11	SW846 6020A	1	04/22/2022 11:52	MO	D1
Calcium, Total	14.2		mg/L	0.11	SW846 6020A	1	04/21/2022 13:19	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:52	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:19	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 13:19	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 11:52	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 13:19	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/22/2022 11:52	MO	D1
Iron, Total	0.66		mg/L	0.056	SW846 6020A	1	04/21/2022 13:19	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:52	MO	D1
Lead, Total	0.0034		mg/L	0.0022	SW846 6020A	1	04/21/2022 13:19	MO	E1
Magnesium, Dissolved	10.1		mg/L	0.11	SW846 6020A	1	04/22/2022 11:52	MO	D1
Magnesium, Total	10.2		mg/L	0.11	SW846 6020A	1	04/21/2022 13:19	MO	E1
Manganese, Dissolved	0.041		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:52	MO	D1



Results

Client Sample ID	CWMP001W	Collected	04/18/2022 12:41
Lab Sample ID	3238053003	Lab Receipt	04/18/2022 15:57

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.051		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:19	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2022 14:02	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/27/2022 11:20	A1S	E
Nickel, Total	0.0072		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:19	MO	E1
Potassium, Dissolved	2.1		mg/L	0.11	SW846 6020A	1	04/22/2022 11:52	MO	D1
Potassium, Total	2.1		mg/L	0.11	SW846 6020A	1	04/21/2022 13:19	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 11:52	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 13:19	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:52	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:19	MO	E1
Sodium, Dissolved	13.3		mg/L	0.11	SW846 6020A	1	04/22/2022 11:52	MO	D1
Sodium, Total	13.2		mg/L	0.11	SW846 6020A	1	04/21/2022 13:19	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 13:19	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 13:19	MO	E1
Zinc, Dissolved	0.019		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:52	MO	D1
Zinc, Total	0.020		mg/L	0.0056	SW846 6020A	1	04/21/2022 13:19	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	04/20/2022 02:13	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J



Results

Client Sample ID	CWMP001W	Collected	04/18/2022 12:41
Lab Sample ID	3238053003	Lab Receipt	04/18/2022 15:57

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	04/20/2022 02:13	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 02:13	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 02:13	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	93.5%	62 – 133	04/20/2022 02:13	
4-Bromofluorobenzene	460-00-4	92.5%	79 – 114	04/20/2022 02:13	
Dibromofluoromethane	1868-53-7	91.9%	78 – 116	04/20/2022 02:13	
Toluene-d8	2037-26-5	90.9%	76 – 127	04/20/2022 02:13	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	6		mg/L	5	SM2320B-2011	1	04/21/2022 16:35	BXD	A
Alkalinity, Total	6	1	mg/L	5	SM2320B-2011	1	04/21/2022 16:35	BXD	A
Ammonia-N	0.215		mg/L	0.100	ASTM D6919-09	10	04/20/2022 20:45	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/21/2022 16:30	ALK	C
Chloride	24.9		mg/L		EPA 300.0	2	04/19/2022 20:06	M1D	A
Fluoride	0.072		mg/L		EPA 300.0	2	04/19/2022 20:06	M1D	A
Nitrate-N	17.5		mg/L		EPA 300.0	2	04/19/2022 20:06	M1D	A
pH	6.60	2	pH_Units		S4500HB-11	1	04/21/2022 16:35	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/21/2022 13:16	AKH	I
Specific Conductance	278		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	2.5		mg/L		EPA 300.0	2	04/19/2022 20:06	M1D	A



Results

Client Sample ID	CWMP001W	Collected	04/18/2022 12:41
Lab Sample ID	3238053003	Lab Receipt	04/18/2022 15:57

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	186		mg/L	25	S2540C-11	1	04/20/2022 07:57	SMS	A
Total Organic Carbon (TOC)	0.54		mg/L	0.50	SM5310B-2011	1	04/20/2022 20:14	PAG	G
Turbidity	36.9		NTU	0.10	SM2130B-2011	1	04/20/2022 02:38	LXZ	A



Results

Client Sample ID	Trip Blank	Collected	04/18/2022 00:00
Lab Sample ID	3238053004	Lab Receipt	04/18/2022 15:57

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected					Lib Search VOC	1	04/19/2022 23:34	DD	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	04/19/2022 23:34	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A



Results

Client Sample ID	Trip Blank	Collected	04/18/2022 00:00
Lab Sample ID	3238053004	Lab Receipt	04/18/2022 15:57

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	04/19/2022 23:34	PDK	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/19/2022 23:34	PDK	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/19/2022 23:34	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.2%	62 – 133	04/19/2022 23:34	
4-Bromofluorobenzene	460-00-4	91.8%	79 – 114	04/19/2022 23:34	
Dibromofluoromethane	1868-53-7	90%	78 – 116	04/19/2022 23:34	
Toluene-d8	2037-26-5	89.8%	76 – 127	04/19/2022 23:34	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3238053001	CWMP007W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	
3238053002	CWMP005W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	
3238053003	CWMP001W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	
3238053004	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
3238053001	CWMP007W	N/A	N/A	N/A		Field	843038
		SW846 3015	840812	04/21/2022 08:00	JSE	SW846 6020A	841284
		SW846 3015	841196	04/21/2022 10:32	JSE	SW846 6020A	841347
		SW846 7470A	841510	04/26/2022 14:00	A1S	SW846 7470A	842838
		SW846 7470A	840140	04/20/2022 08:40	A1S	SW846 7470A	840835
		N/A	N/A	N/A		Lib Search VOC	841272
		N/A	N/A	N/A		SW846 8260B	840340
		N/A	N/A	N/A		ASTM D6919-09	840639
		N/A	N/A	N/A		EPA 300.0	840079
		N/A	N/A	N/A		EPA 410.4	840863
		N/A	N/A	N/A		S2540C-11	840087
		N/A	N/A	N/A		S4500HB-11	841246
		N/A	N/A	N/A		SM2130B-2011	840476
		N/A	N/A	N/A		SM2320B-2011	841246
		N/A	N/A	N/A		SM2510B-2011	842235
		N/A	N/A	N/A		SM5310B-2011	840308
			420.4/9066	840678	04/20/2022 15:21	AKH	SW846 9066
3238053002	CWMP005W	N/A	N/A	N/A		Field	843038
		SW846 3015	840812	04/21/2022 08:00	JSE	SW846 6020A	841284
		SW846 3015	841196	04/21/2022 10:32	JSE	SW846 6020A	841347
		SW846 7470A	841510	04/26/2022 14:00	A1S	SW846 7470A	842838
		SW846 7470A	840140	04/20/2022 08:40	A1S	SW846 7470A	840835
		N/A	N/A	N/A		Lib Search VOC	841272
		N/A	N/A	N/A		SW846 8260B	840340
		N/A	N/A	N/A		ASTM D6919-09	840639
		N/A	N/A	N/A		EPA 300.0	840079
		N/A	N/A	N/A		EPA 410.4	840863
		N/A	N/A	N/A		S2540C-11	840087
		N/A	N/A	N/A		S4500HB-11	841246
		N/A	N/A	N/A		SM2130B-2011	840476
		N/A	N/A	N/A		SM2320B-2011	841246
		N/A	N/A	N/A		SM2510B-2011	842235
		N/A	N/A	N/A		SM5310B-2011	840308
			420.4/9066	840678	04/20/2022 15:21	AKH	SW846 9066
3238053003	CWMP001W	N/A	N/A	N/A		Field	843038
		SW846 3015	841196	04/21/2022 10:32	JSE	SW846 6020A	841347
		SW846 3015	840812	04/21/2022 08:00	JSE	SW846 6020A	841284
		SW846 7470A	841510	04/26/2022 14:00	A1S	SW846 7470A	842838
		SW846 7470A	840140	04/20/2022 08:40	A1S	SW846 7470A	840835
		N/A	N/A	N/A		Lib Search VOC	841272
		N/A	N/A	N/A		SW846 8260B	840340
		N/A	N/A	N/A		ASTM D6919-09	840639
		N/A	N/A	N/A		EPA 300.0	840079
		N/A	N/A	N/A		EPA 410.4	840863
		N/A	N/A	N/A		S2540C-11	840087
		N/A	N/A	N/A		S4500HB-11	841246
		N/A	N/A	N/A		SM2130B-2011	840476
		N/A	N/A	N/A		SM2320B-2011	841246
		N/A	N/A	N/A		SM2510B-2011	842235
		N/A	N/A	N/A		SM5310B-2011	840308
			420.4/9066	840678	04/20/2022 15:21	AKH	SW846 9066
3238053004	Trip Blank	N/A	N/A	N/A		Lib Search VOC	841272
		N/A	N/A	N/A		SW846 8260B	840340



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

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#: Creswell/GWMP Form 19A
 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 Email: dbrown@LCSWMA.org
 Fax? Y N Fax No.: (717) 397-9973

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1. LWMPO07W	4.18.22	0951
2. CWMPO05W	4.18.22	1110
3. CWMPO01W	4.18.22	1241
4		
5		
6		
7		
8		
9		
10		

Project Comments:	LOGGED BY (signature):	REVIEWED BY (signature):	Date	Time	Received By / Company Name
			4.18.22	1557	2 <i>[Signature]</i> ALS
					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	AN	CG	CG	CG	PL
Container Size	40 ml	125 ml	40 ml	40 ml	40 ml	500 ml
Preservative	HCl	H2SO4	HCl	HCl	HCl	HNO3

ANALYSES/METHOD REQUESTED						
Container Type	AG	AN	CG	CG	CG	PL
Container Size	40 ml	125 ml	40 ml	40 ml	40 ml	500 ml
Preservative	HCl	H2SO4	HCl	HCl	HCl	HNO3
Enter Number of Containers Per Sample or Field Results Below.						
TOC	2	1	2	2	2	1
O-OH	1	1	2	2	2	1
8260 VOCs - Form 19A + Subtitle D + TICs	2	1	2	2	2	1
Field Blank						
Field Blank						
Field Blank						
FM						
Sample Depth for AUX Data						
NH3-N, COD						
Diss Metals Form 19A (Field Filtered)						
Total Metals Form 19A + Subtitle D						

Standard	Special Processing	State Samples Collected In
<input type="checkbox"/> Standard	USACE	<input type="checkbox"/> NY
<input type="checkbox"/> CLP-like	Navy	<input type="checkbox"/> NJ
<input type="checkbox"/> USACE		<input checked="" type="checkbox"/> PA
<input type="checkbox"/>		<input type="checkbox"/> NC

COC: _____
 ALS: _____

Temp Taken By: _____
 WO Temp (°C): _____
 Therm ID: 570
 Receipt Info Completed By: SA
 Cooler Custody Seal Intact: Y N
 Sample Custody Seal Intact: Y N
 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
 VOA Headspace Present: Y N NA
 Voa Trip Blank: Y N NA
 NLS: 4 Days? Y N
 Rad Screen (uCi): _____
 Courier/Tracking #: _____
 SDWA Compliance: Y
 PWSID: _____

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

Reportable to PADEP? Yes No
 PWSID # _____
 EDDS: Format Type: _____

3238053
 Logged By: KSB
 PM: SJB

Cooler Temp: 3
 Therm ID: 570
 No. of Coolers: Y N Initial

1 of 2

COC #: **3238053**
 ALS Quote #: _____

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

ALS Environmental
 34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5441 • Fax: 717-944-1430
 www.alsglobal.com

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#: Creswell/GWMP Form 19A
 Bill To: Lancaster County Solid Waste MA

TAT Normal-Standard TAT is 10-12 business days.
 Rush-Subject to ALS approval and surcharges.
 Date Required: _____ Approved By: _____
 Email? Y N dbrown@LCSWMA.org
 Fax? Y N (717) 397-9973

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Enter Number of Containers Per Sample or Field Results Below.
1. CWM7007W	4.18.22	0951	1
2. CWM7005W	4.18.22	1116	1
3. CWM7001W	4.18.22	1241	1
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Project Comments: _____

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

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

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
<i>[Signature]</i> ALS	4.18.22	1557	<i>[Signature]</i> ALS	4/18/22	1557

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

Special Processing: Standard CLP-like USACE Navy USACE

State Samples Collected in: NY NJ PA NC

Reportable to PADEP? Yes No

Sample Disposal: Lab Special

PWSID #: _____ EDDS: Format Type: _____

* G=Grab; C=Composite **Matrix - A=Air; DW=Drinking Water; GW=Groundwater; O=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
 ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057 Rev 8/04



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

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

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 2ND QTR 2022 CWMP-FORM 19A
Workorder 3238220
Report ID 166052 on 4/30/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 19, 2022.

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

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

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

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

Recipient(s):

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

Susan Scherer

Susan Scherer
Project Coordinator

(ALS Digital Signature)

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



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>
3238220001	CWMP002W	Ground Water	04/19/2022 13:58	04/19/2022 16:55	JB	ALS Environmental-Middletown
3238220002	Trip Blank	Water	04/19/2022 00:00	04/19/2022 16:55	JB	ALS Environmental-Middletown



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



Project Notations

Sample Notations

Lab ID **Sample ID**

Result Notations

Notation Ref.

- | | |
|---|---|
| 1 | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg 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. |



Detected Results Summary

Client Sample ID	CWMP002W	Collected	04/19/2022 13:58
Lab Sample ID	3238220001	Lab Receipt	04/19/2022 16:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	64.13	Feet		Field	#
Dissolved Oxygen	5.67	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	525.81	Feet		Field	#
Ground Water Elevation	461.68	ft/MSL		Field	#
Oxidation-Reduction Potential	91	mV		Field	#
pH, Field (SM4500B)	5.59	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	558	umhos/cm	1	Field	#
Temperature	14.12	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.034	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.035	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	29.2	mg/L	0.11	SW846 6020A	#
Calcium, Total	30.2	mg/L	0.11	SW846 6020A	#
Cobalt, Total	0.010	mg/L	0.0056	SW846 6020A	#
Magnesium, Dissolved	11.9	mg/L	0.11	SW846 6020A	#
Magnesium, Total	12.0	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.44	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.45	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.018	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	22.2	mg/L	0.11	SW846 6020A	#
Sodium, Total	23.3	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0072	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0068	mg/L	0.0056	SW846 6020A	#
VOLATILE ORGANICS					
1,1-Dichloroethane	4.6	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	30	mg/L	5	SM2320B-2011	#
Alkalinity, Total	30	mg/L	5	SM2320B-2011	#
Chloride	65.5	mg/L		EPA 300.0	#
Fluoride	0.056	mg/L		EPA 300.0	#
Nitrate-N	5.5	mg/L		EPA 300.0	#
pH	6.16	pH_Units		S4500HB-11	#
Specific Conductance	410	umhos/cm	1	SM2510B-2011	#
Sulfate	12.0	mg/L		EPA 300.0	#
Total Dissolved Solids	298	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.7	mg/L	0.50	SM5310B-2011	#
Turbidity	2.18	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	Trip Blank	Collected	04/19/2022 00:00
Lab Sample ID	3238220002	Lab Receipt	04/19/2022 16:55

<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	CWMP002W	Collected	04/19/2022 13:58
Lab Sample ID	3238220001	Lab Receipt	04/19/2022 16:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	64.13		Feet		Field	1	04/19/2022 13:58	BGS	F
Dissolved Oxygen	5.67		mg/L	0.01	Field	1	04/19/2022 13:58	BGS	F
Elev Top MW Casing above MSL	525.81		Feet		Field	1	04/19/2022 13:58	BGS	F
Ground Water Elevation	461.68		ft/MSL		Field	1	04/19/2022 13:58	BGS	F
Oxidation-Reduction Potential	91		mV		Field	1	04/19/2022 13:58	BGS	F
pH, Field (SM4500B)	5.59		pH_Units		Field	1	04/19/2022 13:58	BGS	F
Sample Depth	85.00		Feet		Field	1	04/19/2022 13:58	BGS	F
Specific Conductance, Field	558		umhos/cm	1	Field	1	04/19/2022 13:58	BGS	F
Temperature	14.12		Deg. C		Field	1	04/19/2022 13:58	BGS	F
Total Well Depth	100.00		Feet		Field	1	04/19/2022 13:58	BGS	F
Turbidity, Field	ND	ND	NTU	1	Field	1	04/19/2022 13:58	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	04/20/2022 15:25	DD	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	04/21/2022 14:01	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/22/2022 11:54	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/21/2022 14:01	MO	E1
Barium, Dissolved	0.034		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:54	MO	D1
Barium, Total	0.035		mg/L	0.0056	SW846 6020A	1	04/21/2022 14:01	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 14:01	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 11:54	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 14:01	MO	E1
Calcium, Dissolved	29.2		mg/L	0.11	SW846 6020A	1	04/22/2022 11:54	MO	D1
Calcium, Total	30.2		mg/L	0.11	SW846 6020A	1	04/21/2022 14:01	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:54	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 14:01	MO	E1
Cobalt, Total	0.010		mg/L	0.0056	SW846 6020A	1	04/21/2022 14:01	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 11:54	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 14:01	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/22/2022 11:54	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	04/21/2022 14:01	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:54	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 14:01	MO	E1
Magnesium, Dissolved	11.9		mg/L	0.11	SW846 6020A	1	04/22/2022 11:54	MO	D1
Magnesium, Total	12.0		mg/L	0.11	SW846 6020A	1	04/21/2022 14:01	MO	E1
Manganese, Dissolved	0.44		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:54	MO	D1
Manganese, Total	0.45		mg/L	0.0056	SW846 6020A	1	04/21/2022 14:01	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:28	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/27/2022 11:34	A1S	E
Nickel, Total	0.018		mg/L	0.0056	SW846 6020A	1	04/21/2022 14:01	MO	E1



Results

Client Sample ID	CWMP002W	Collected	04/19/2022 13:58
Lab Sample ID	3238220001	Lab Receipt	04/19/2022 16:55

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Potassium, Dissolved	2.3		mg/L	0.11	SW846 6020A	1	04/22/2022 11:54	MO	D1
Potassium, Total	2.4		mg/L	0.11	SW846 6020A	1	04/21/2022 14:01	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 11:54	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/21/2022 14:01	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 11:54	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 14:01	MO	E1
Sodium, Dissolved	22.2		mg/L	0.11	SW846 6020A	1	04/22/2022 11:54	MO	D1
Sodium, Total	23.3		mg/L	0.11	SW846 6020A	1	04/21/2022 14:01	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/21/2022 14:01	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/21/2022 14:01	MO	E1
Zinc, Dissolved	0.0072		mg/L	0.0056	SW846 6020A	1	04/22/2022 11:54	MO	D1
Zinc, Total	0.0068		mg/L	0.0056	SW846 6020A	1	04/21/2022 14:01	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	04/20/2022 15:25	DPC	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,1-Dichloroethane	4.6		ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J



Results

Client Sample ID	CWMP002W	Collected	04/19/2022 13:58
Lab Sample ID	3238220001	Lab Receipt	04/19/2022 16:55

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 15:25	DPC	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 15:25	DPC	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.3%	62 – 133	04/20/2022 15:25	
4-Bromofluorobenzene	460-00-4	95.1%	79 – 114	04/20/2022 15:25	
Dibromofluoromethane	1868-53-7	91.4%	78 – 116	04/20/2022 15:25	
Toluene-d8	2037-26-5	91.2%	76 – 127	04/20/2022 15:25	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	30		mg/L	5	SM2320B-2011	1	04/21/2022 23:05	BXD	A
Alkalinity, Total	30	1	mg/L	5	SM2320B-2011	1	04/21/2022 23:05	BXD	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	10	04/27/2022 00:35	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/22/2022 14:13	ALK	C
Chloride	65.5		mg/L		EPA 300.0	2	04/20/2022 13:53	GJB	A
Fluoride	0.056		mg/L		EPA 300.0	2	04/20/2022 13:53	GJB	A
Nitrate-N	5.5		mg/L		EPA 300.0	2	04/20/2022 13:53	GJB	A
pH	6.16	2	pH_Units		S4500HB-11	1	04/21/2022 23:05	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/21/2022 13:59	AKH	I
Specific Conductance	410		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	12.0		mg/L		EPA 300.0	2	04/20/2022 13:53	GJB	A
Total Dissolved Solids	298		mg/L	25	S2540C-11	1	04/22/2022 08:01	SMS	A
Total Organic Carbon (TOC)	1.7		mg/L	0.50	SM5310B-2011	1	04/21/2022 18:32	PAG	G
Turbidity	2.18		NTU	0.10	SM2130B-2011	1	04/20/2022 02:38	LXZ	A

Project 2ND QTR 2022 CWMP-FORM 19A

Workorder 3238220



Results

Client Sample ID	CWMP002W	Collected	04/19/2022 13:58
Lab Sample ID	3238220001	Lab Receipt	04/19/2022 16:55

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>
-----------------	---------------	-------------	--------------	------------	---------------	-----------------	---------------------------	-----------	-------------



Results

Client Sample ID	Trip Blank	Collected	04/19/2022 00:00
Lab Sample ID	3238220002	Lab Receipt	04/19/2022 16:55

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected					Lib Search VOC	1	04/20/2022 12:24	DD	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	04/20/2022 12:24	DPC	A
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A



Results

Client Sample ID	Trip Blank	Collected	04/19/2022 00:00
Lab Sample ID	3238220002	Lab Receipt	04/19/2022 16:55

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	04/20/2022 12:24	DPC	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/20/2022 12:24	DPC	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/20/2022 12:24	DPC	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	85.8%	62 – 133	04/20/2022 12:24	
4-Bromofluorobenzene	460-00-4	97.4%	79 – 114	04/20/2022 12:24	
Dibromofluoromethane	1868-53-7	90.7%	78 – 116	04/20/2022 12:24	
Toluene-d8	2037-26-5	91.9%	76 – 127	04/20/2022 12:24	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3238220001	CWMP002W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	
3238220002	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
3238220001	CWMP002W	N/A	N/A	N/A		Field	843038
		SW846 3015	841196	04/21/2022 10:32	JSE	SW846 6020A	841347
		SW846 3015	840812	04/21/2022 08:00	JSE	SW846 6020A	841284
		SW846 7470A	841510	04/26/2022 14:00	A1S	SW846 7470A	842838
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275
		N/A	N/A	N/A		Lib Search VOC	841272
		N/A	N/A	N/A		SW846 8260B	840604
		N/A	N/A	N/A		ASTM D6919-09	841500
		N/A	N/A	N/A		EPA 300.0	840614
		N/A	N/A	N/A		EPA 410.4	841367
		N/A	N/A	N/A		S2540C-11	841084
		N/A	N/A	N/A		S4500HB-11	841246
		N/A	N/A	N/A		SM2130B-2011	840476
		N/A	N/A	N/A		SM2320B-2011	841246
		N/A	N/A	N/A		SM2510B-2011	842235
		N/A	N/A	N/A		SM5310B-2011	841271
			420.4/9066		840678	04/20/2022 15:21	AKH
3238220002	Trip Blank	N/A	N/A	N/A		Lib Search VOC	841272
		N/A	N/A	N/A		SW846 8260B	840604

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

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

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#: Creswell/GWMP Form 19A
 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 dbrown@LCSWMA.org
 Fax? Y No.: (717) 397-9973

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1. CWK700ZW	4.19.22	1358
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Temp Taken By: _____
 MO Temp (°C): _____
 Therm ID: 573
 Receipt Info Completed By: _____
 Cooler Custody Seal Intact: Y N
 Sample Custody Seal Intact: Y N
 Received on Ice: Y N
 Cooler & Samples Intact: Y N
 Correct Containers Provided: Y N
 Sample Label/COC Agree: Y N
 Adequate Sample Volumes: Y N
 VOA Headspace Present: Y N
 VOA Trip Blank: Y N
 NIS 4 Days? _____
 Rad Screen (uCi): _____
 Courier/Tracking #: _____
 SDWA Compliance: Y N
 PWSID: _____

ANALYSES/METHOD REQUESTED

Container Type	AG	AN	CG	CG	CG	PL	PL
Container Size	40 ml	125 ml	40 ml	40 ml	40 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	HCl	HCl	H2SO4	HNO3

Container Type	AG	AN	CG	CG	CG	PL	PL
Container Size	40 ml	125 ml	40 ml	40 ml	40 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	HCl	HCl	H2SO4	HNO3

Enter Number of Containers Per Sample or Field Results Below.

Matrix	*G	*C	*O	*R	*C
G GW	2	1	2	2	1

Container Type	AG	AN	CG	CG	CG	PL	PL
Container Size	40 ml	125 ml	40 ml	40 ml	40 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	HCl	HCl	H2SO4	HNO3

Temp Taken By: _____
 MO Temp (°C): _____
 Therm ID: 573
 Receipt Info Completed By: _____
 Cooler Custody Seal Intact: Y N
 Sample Custody Seal Intact: Y N
 Received on Ice: Y N
 Cooler & Samples Intact: Y N
 Correct Containers Provided: Y N
 Sample Label/COC Agree: Y N
 Adequate Sample Volumes: Y N
 VOA Headspace Present: Y N
 VOA Trip Blank: Y N
 NIS 4 Days? _____
 Rad Screen (uCi): _____
 Courier/Tracking #: _____
 SDWA Compliance: Y N
 PWSID: _____

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:

Standard	Special Processing	State Samples Collected In
<input type="checkbox"/> Standard	USACE <input type="checkbox"/>	NY <input type="checkbox"/>
<input type="checkbox"/> CLP-like	Navy <input type="checkbox"/>	NJ <input type="checkbox"/>
<input type="checkbox"/> USACE		PA <input checked="" type="checkbox"/>
		NC <input type="checkbox"/>

Deliverables	Reportable to PADEP?	Sample Disposal
<input type="checkbox"/> Yes	<input type="checkbox"/>	Lab <input checked="" type="checkbox"/>
<input type="checkbox"/> No	<input type="checkbox"/>	Special <input type="checkbox"/>
PWSID #		
EDDS: Format Type		

CHAIN OF CUSTODY / REQUEST FOR ANALYSIS

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

COC #: 8220 2 of 2

ALS Quote #: _____

ALS Environmental
 34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5841 • Fax: 717-944-1430
 www.alsglobal.com

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#: Creswell/GWMP Form 19A
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 **dbrown@LCSWMA.org**
Fax? Y **No.:** (717) 397-9973

ANALYSES/METHOD REQUESTED			
Container Type	PL	PL	Receipt Information (completed by Receiving Lab)
Container Size	1 L	500 ml	Cooler Temp: 5 Therm ID: 573
Preservative	None	None	No. / al

* G or C	* Matrix	Enter Number of Containers Per Sample or Field Results Below.	Temp Taken By: _____
PH, Cl, Spc, F, SO4, NO3, Td, TDS	Alkalinity, HCO3	1	WO Temp (°C) _____
			Therm ID: 573
			Receipt Info Completed By: _____
			Cooler Custody Seal Intact: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			Sample Custody Seal Intact: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			Received on Ice: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			Cooler & Samples Intact: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			Correct Containers Provided: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			Sample Label/COC Agree: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			Adequate Sample Volumes: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			VOA Headspace Present: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			Voa Trip Blank: Y N <input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
			NJs 4 Days? _____
			Rad Screen (uCi) _____
			Courier/Tracking #: _____
			SDWA Compliance <input checked="" type="checkbox"/>
			PWSID _____

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	LOGGED BY (signature):		Date	Time	Received By / Company Name	Date	Time	ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment <input type="checkbox"/> Other: _____
			DATE	TIME						
1. CWMPOOZW	4.19.22	1358					for [signature] ALS	4/19/22	1655	
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										

Project Comments:	Deliverables		Special Processing		State Samples Collected In	
	Standard	USACE	USACE	USACE	NY	NY
	CLP-like	Navy	Navy	Navy	NJ	NJ
	Reportable to PADEP?	Yes <input type="checkbox"/>	Sample Disposal	Lab <input checked="" type="checkbox"/>	Special <input type="checkbox"/>	PA <input checked="" type="checkbox"/>
	PWSID #					NC <input type="checkbox"/>
	EDDS: Format Type					



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

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

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 2ND QTR 2022 CWMP-FORM 19A
 Workorder 3238431
 Report ID 166945 on 5/4/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 20, 2022.

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

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

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

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

Recipient(s):

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

Susan Scherer

Susan Scherer
 Project Coordinator

(ALS Digital Signature)

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



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>
3238431001	CWMP016W	Ground Water	04/20/2022 12:57	04/20/2022 16:03	BGS	Analytical Laboratory Service
3238431002	CWMP009W	Ground Water	04/20/2022 13:48	04/20/2022 16:03	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)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.



Project Notations

Sample Notations

Lab ID **Sample ID**

Result Notations

Notation Ref.

- | | |
|---|---|
| 1 | The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Acetone. The % Recovery was reported as 181 and the control limits were 40 to 151. |
| 2 | The QC sample type LCS for method SW846 8260B was outside the control limits for the analyte Vinyl Acetate. The % Recovery was reported as 146 and the control limits were 58 to 136. |
| 3 | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L. |
| 4 | The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory. |
| 5 | The QC sample type MS for method SW846 8260B was outside the control limits for the analyte Acetone. The % Recovery was reported as 161 and the control limits were 40 to 151. |



Detected Results Summary

Client Sample ID	CWMP016W	Collected	04/20/2022 12:57
Lab Sample ID	3238431001	Lab Receipt	04/20/2022 16:03

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	8.25	Feet		Field	#
Dissolved Oxygen	9.60	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	311.97	Feet		Field	#
Flow Rate	2.17	gal/min		Field	#
Ground Water Elevation	303.72	ft/MSL		Field	#
Oxidation-Reduction Potential	318	mV		Field	#
pH, Field (SM4500B)	5.22	pH_Units		Field	#
Sample Depth	71.00	Feet		Field	#
Specific Conductance, Field	97	umhos/cm	1	Field	#
Temperature	12.37	Deg. C		Field	#
Total Well Depth	73.52	Feet		Field	#
Volume in Water Column	95.95	Gallons		Field	#
Water Level After Purge	19.01	Feet		Field	#
Well Volumes Purged	1.93	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.012	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.011	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	6.2	mg/L	0.11	SW846 6020A	#
Calcium, Total	5.6	mg/L	0.11	SW846 6020A	#
Cobalt, Total	0.0066	mg/L	0.0056	SW846 6020A	#
Iron, Total	0.067	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	1.6	mg/L	0.11	SW846 6020A	#
Magnesium, Total	1.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.0091	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.0084	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	0.55	mg/L	0.11	SW846 6020A	#
Potassium, Total	0.52	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	3.4	mg/L	0.11	SW846 6020A	#
Sodium, Total	3.4	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	8	mg/L	5	SM2320B-2011	#
Alkalinity, Total	8	mg/L	5	SM2320B-2011	#
Ammonia-N	0.527	mg/L	0.100	ASTM D6919-09	#
Chloride	2.7	mg/L	2.0	EPA 300.0	#
Nitrate-N	2.7	mg/L	1.0	EPA 300.0	#
pH	6.71	pH_Units		S4500HB-11	#
Specific Conductance	82	umhos/cm	1	SM2510B-2011	#
Sulfate	8.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	64	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.78	mg/L	0.50	SM5310B-2011	#
Turbidity	1.45	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	CWMP009W	Collected	04/20/2022 13:48
Lab Sample ID	3238431002	Lab Receipt	04/20/2022 16:03

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	8.84	Feet		Field	#
Dissolved Oxygen	0.09	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	404.20	Feet		Field	#
Flow Rate	1.41	gal/min		Field	#
Ground Water Elevation	395.36	ft/MSL		Field	#
Oxidation-Reduction Potential	-35	mV		Field	#
pH, Field (SM4500B)	6.17	pH_Units		Field	#
Sample Depth	16.00	Feet		Field	#
Specific Conductance, Field	3986	umhos/cm	1	Field	#
Temperature	11.51	Deg. C		Field	#
Total Well Depth	19.70	Feet		Field	#
Volume in Water Column	7.06	Gallons		Field	#
Water Level After Purge	9.22	Feet		Field	#
Well Volumes Purged	3.98	Vol		Field	#
METALS					
Arsenic, Dissolved	0.0040	mg/L	0.0030	SW846 6020A	#
Arsenic, Total	0.0039	mg/L	0.0033	SW846 6020A	#
Barium, Dissolved	0.85	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.81	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	163	mg/L	0.11	SW846 6020A	#
Calcium, Total	152	mg/L	0.11	SW846 6020A	#
Chromium, Total	0.0029	mg/L	0.0022	SW846 6020A	#
Cobalt, Total	0.059	mg/L	0.0056	SW846 6020A	#
Iron, Dissolved	36.2	mg/L	0.056	SW846 6020A	#
Iron, Total	34.5	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	86.9	mg/L	0.11	SW846 6020A	#
Magnesium, Total	85.8	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	13.0	mg/L	0.056	SW846 6020A	#
Manganese, Total	12.6	mg/L	0.056	SW846 6020A	#
Nickel, Total	0.088	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	34.0	mg/L	0.11	SW846 6020A	#
Potassium, Total	33.0	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	194	mg/L	1.1	SW846 6020A	#
Sodium, Total	195	mg/L	1.1	SW846 6020A	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.2	ug/L	1.0	SW846 8260B	#
1,2-Dichlorobenzene	2.2	ug/L	1.0	SW846 8260B	#
1,4-Dichlorobenzene	9.2	ug/L	1.0	SW846 8260B	#
Benzene	1.8	ug/L	1.0	SW846 8260B	#
Chlorobenzene	19.3	ug/L	1.0	SW846 8260B	#
Chloroethane	9.6	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	564	mg/L	50	SM2320B-2011	#
Alkalinity, Total	564	mg/L	50	SM2320B-2011	#
Ammonia-N	29.3	mg/L	0.100	ASTM D6919-09	#



Detected Results Summary

Sample - CWMP009W (cont.)

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
WET CHEMISTRY (cont.)					
Chemical Oxygen Demand (COD)	104	mg/L	15	EPA 410.4	#
Chloride	572	mg/L	10.0	EPA 300.0	#
pH	7.26	pH_Units		S4500HB-11	#
Specific Conductance	3150	umhos/cm	10	SM2510B-2011	#
Total Dissolved Solids	1550	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	35.6	mg/L	5.0	SM5310B-2011	#
Turbidity	15.9	NTU	0.10	SM2130B-2011	#



Results

Client Sample ID	CWMP016W	Collected	04/20/2022 12:57
Lab Sample ID	3238431001	Lab Receipt	04/20/2022 16:03

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	8.25		Feet		Field	1	04/20/2022 12:57	BGS	E
Dissolved Oxygen	9.60		mg/L	0.01	Field	1	04/20/2022 12:57	BGS	E
Elev Top MW Casing above MSL	311.97		Feet		Field	1	04/20/2022 12:57	BGS	E
Flow Rate	2.17		gal/min		Field	1	04/20/2022 12:57	BGS	E
Ground Water Elevation	303.72		ft/MSL		Field	1	04/20/2022 12:57	BGS	E
Oxidation-Reduction Potential	318		mV		Field	1	04/20/2022 12:57	BGS	E
pH, Field (SM4500B)	5.22		pH_Units		Field	1	04/20/2022 12:57	BGS	E
Sample Depth	71.00		Feet		Field	1	04/20/2022 12:57	BGS	E
Specific Conductance, Field	97		umhos/cm	1	Field	1	04/20/2022 12:57	BGS	E
Temperature	12.37		Deg. C		Field	1	04/20/2022 12:57	BGS	E
Total Well Depth	73.52		Feet		Field	1	04/20/2022 12:57	BGS	E
Turbidity, Field	ND	ND	NTU	1	Field	1	04/20/2022 12:57	BGS	E
Volume in Water Column	95.95		Gallons		Field	1	04/20/2022 12:57	BGS	E
Water Level After Purge	19.01		Feet		Field	1	04/20/2022 12:57	BGS	E
Well Volumes Purged	1.93		Vol		Field	1	04/20/2022 12:57	BGS	E

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	04/25/2022 21:35	DD	I

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:19	MO	D1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2022 18:25	MO	C1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/22/2022 14:19	MO	D1
Barium, Dissolved	0.012		mg/L	0.0056	SW846 6020A	1	04/25/2022 18:25	MO	C1
Barium, Total	0.011		mg/L	0.0056	SW846 6020A	1	04/22/2022 14:19	MO	D1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 14:19	MO	D1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 18:25	MO	C1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 14:19	MO	D1
Calcium, Dissolved	6.2		mg/L	0.11	SW846 6020A	1	04/25/2022 18:25	MO	C1
Calcium, Total	5.6		mg/L	0.11	SW846 6020A	1	04/22/2022 14:19	MO	D1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:25	MO	C1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:19	MO	D1
Cobalt, Total	0.0066		mg/L	0.0056	SW846 6020A	1	04/22/2022 14:19	MO	D1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:25	MO	C1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 14:19	MO	D1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2022 18:25	MO	C1
Iron, Total	0.067		mg/L	0.056	SW846 6020A	1	04/22/2022 14:19	MO	D1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:25	MO	C1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:19	MO	D1
Magnesium, Dissolved	1.6		mg/L	0.11	SW846 6020A	1	04/25/2022 18:25	MO	C1
Magnesium, Total	1.5		mg/L	0.11	SW846 6020A	1	04/22/2022 14:19	MO	D1
Manganese, Dissolved	0.0091		mg/L	0.0056	SW846 6020A	1	04/25/2022 18:25	MO	C1



Results

Client Sample ID	CWMP016W	Collected	04/20/2022 12:57
Lab Sample ID	3238431001	Lab Receipt	04/20/2022 16:03

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.0084		mg/L	0.0056	SW846 6020A	1	04/22/2022 14:19	MO	D1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:31	A1S	C
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/27/2022 12:32	A1S	D
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 14:19	MO	D1
Potassium, Dissolved	0.55		mg/L	0.11	SW846 6020A	1	04/25/2022 18:25	MO	C1
Potassium, Total	0.52		mg/L	0.11	SW846 6020A	1	04/22/2022 14:19	MO	D1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:25	MO	C1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 14:19	MO	D1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:25	MO	C1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:19	MO	D1
Sodium, Dissolved	3.4		mg/L	0.11	SW846 6020A	1	04/25/2022 18:25	MO	C1
Sodium, Total	3.4		mg/L	0.11	SW846 6020A	1	04/22/2022 14:19	MO	D1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 14:19	MO	D1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:19	MO	D1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:25	MO	C1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 14:19	MO	D1

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	04/25/2022 21:23	DPC	I
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Acetone	ND	ND,1	ug/L	10.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I



Results

Client Sample ID	CWMP016W	Collected	04/20/2022 12:57
Lab Sample ID	3238431001	Lab Receipt	04/20/2022 16:03

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	04/25/2022 21:23	DPC	I
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Vinyl Acetate	ND	ND,2	ug/L	5.0	SW846 8260B	1	04/25/2022 21:23	DPC	I
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:23	DPC	I

TICs by Library Search

Compound	CAS No	Result	Units	Qualifiers
Unknown	Unknown	27.2	ug/L	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.8%	62 – 133	04/25/2022 21:23	
4-Bromofluorobenzene	460-00-4	92.8%	79 – 114	04/25/2022 21:23	
Dibromofluoromethane	1868-53-7	94.4%	78 – 116	04/25/2022 21:23	
Toluene-d8	2037-26-5	85.2%	76 – 127	04/25/2022 21:23	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	8		mg/L	5	SM2320B-2011	1	04/22/2022 11:33	BXD	A
Alkalinity, Total	8	3	mg/L	5	SM2320B-2011	1	04/22/2022 11:33	BXD	A
Ammonia-N	0.527		mg/L	0.100	ASTM D6919-09	10	04/28/2022 14:03	ALK	B
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/27/2022 08:18	ALK	B
Chloride	2.7		mg/L	2.0	EPA 300.0	2	04/21/2022 20:21	M1D	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/21/2022 20:21	M1D	A



Results

Client Sample ID	CWMP016W	Collected	04/20/2022 12:57
Lab Sample ID	3238431001	Lab Receipt	04/20/2022 16:03

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Nitrate-N	2.7		mg/L	1.0	EPA 300.0	2	04/21/2022 20:21	M1D	A
pH	6.71	4	pH_Units		S4500HB-11	1	04/22/2022 11:33	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/29/2022 11:22	AKH	H
Specific Conductance	82		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	8.4		mg/L	2.0	EPA 300.0	2	04/21/2022 20:21	M1D	A
Total Dissolved Solids	64		mg/L	25	S2540C-11	1	04/22/2022 08:59	SMS	A
Total Organic Carbon (TOC)	0.78		mg/L	0.50	SM5310B-2011	1	04/22/2022 15:29	PAG	F
Turbidity	1.45		NTU	0.10	SM2130B-2011	1	04/21/2022 00:32	LXZ	A



Results

Client Sample ID	CWMP009W	Collected	04/20/2022 13:48
Lab Sample ID	3238431002	Lab Receipt	04/20/2022 16:03

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	8.84		Feet		Field	1	04/20/2022 13:48	BGS	E
Dissolved Oxygen	0.09		mg/L	0.01	Field	1	04/20/2022 13:48	BGS	E
Elev Top MW Casing above MSL	404.20		Feet		Field	1	04/20/2022 13:48	BGS	E
Flow Rate	1.41		gal/min		Field	1	04/20/2022 13:48	BGS	E
Ground Water Elevation	395.36		ft/MSL		Field	1	04/20/2022 13:48	BGS	E
Oxidation-Reduction Potential	-35		mV		Field	1	04/20/2022 13:48	BGS	E
pH, Field (SM4500B)	6.17		pH_Units		Field	1	04/20/2022 13:48	BGS	E
Sample Depth	16.00		Feet		Field	1	04/20/2022 13:48	BGS	E
Specific Conductance, Field	3986		umhos/cm	1	Field	1	04/20/2022 13:48	BGS	E
Temperature	11.51		Deg. C		Field	1	04/20/2022 13:48	BGS	E
Total Well Depth	19.70		Feet		Field	1	04/20/2022 13:48	BGS	E
Turbidity, Field	ND	ND	NTU	1	Field	1	04/20/2022 13:48	BGS	E
Volume in Water Column	7.06		Gallons		Field	1	04/20/2022 13:48	BGS	E
Water Level After Purge	9.22		Feet		Field	1	04/20/2022 13:48	BGS	E
Well Volumes Purged	3.98		Vol		Field	1	04/20/2022 13:48	BGS	E

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:21	MO	D1
Arsenic, Dissolved	0.0040		mg/L	0.0030	SW846 6020A	1	04/25/2022 18:27	MO	C1
Arsenic, Total	0.0039		mg/L	0.0033	SW846 6020A	1	04/22/2022 14:21	MO	D1
Barium, Dissolved	0.85		mg/L	0.0056	SW846 6020A	1	04/25/2022 18:27	MO	C1
Barium, Total	0.81		mg/L	0.0056	SW846 6020A	1	04/22/2022 14:21	MO	D1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 14:21	MO	D1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 18:27	MO	C1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 14:21	MO	D1
Calcium, Dissolved	163		mg/L	0.11	SW846 6020A	1	04/25/2022 18:27	MO	C1
Calcium, Total	152		mg/L	0.11	SW846 6020A	1	04/22/2022 14:21	MO	D1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:27	MO	C1
Chromium, Total	0.0029		mg/L	0.0022	SW846 6020A	1	04/22/2022 14:21	MO	D1
Cobalt, Total	0.059		mg/L	0.0056	SW846 6020A	1	04/22/2022 14:21	MO	D1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:27	MO	C1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 14:21	MO	D1
Iron, Dissolved	36.2		mg/L	0.056	SW846 6020A	1	04/25/2022 18:27	MO	C1
Iron, Total	34.5		mg/L	0.056	SW846 6020A	1	04/22/2022 14:21	MO	D1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:27	MO	C1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:21	MO	D1
Magnesium, Dissolved	86.9		mg/L	0.11	SW846 6020A	1	04/25/2022 18:27	MO	C1
Magnesium, Total	85.8		mg/L	0.11	SW846 6020A	1	04/22/2022 14:21	MO	D1
Manganese, Dissolved	13.0		mg/L	0.056	SW846 6020A	10	04/25/2022 19:17	MO	C1
Manganese, Total	12.6		mg/L	0.056	SW846 6020A	10	04/22/2022 16:13	MO	D1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:33	A1S	C
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/27/2022 12:34	A1S	D
Nickel, Total	0.088		mg/L	0.0056	SW846 6020A	1	04/22/2022 14:21	MO	D1
Potassium, Dissolved	34.0		mg/L	0.11	SW846 6020A	1	04/25/2022 18:27	MO	C1
Potassium, Total	33.0		mg/L	0.11	SW846 6020A	1	04/22/2022 14:21	MO	D1



Results

Client Sample ID	CWMP009W	Collected	04/20/2022 13:48
Lab Sample ID	3238431002	Lab Receipt	04/20/2022 16:03

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:27	MO	C1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 14:21	MO	D1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:27	MO	C1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:21	MO	D1
Sodium, Dissolved	194		mg/L	1.1	SW846 6020A	10	04/25/2022 19:17	MO	C1
Sodium, Total	195		mg/L	1.1	SW846 6020A	10	04/22/2022 16:13	MO	D1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/22/2022 14:21	MO	D1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/22/2022 14:21	MO	D1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:27	MO	C1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/22/2022 14:21	MO	D1

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	04/25/2022 21:46	DPC	I
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,1-Dichloroethane	1.2		ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,2-Dichlorobenzene	2.2		ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
1,4-Dichlorobenzene	9.2		ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Acetone	ND	ND,1,5	ug/L	10.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Benzene	1.8		ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Chlorobenzene	19.3		ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Chloroethane	9.6		ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I



Results

Client Sample ID	CWMP009W	Collected	04/20/2022 13:48
Lab Sample ID	3238431002	Lab Receipt	04/20/2022 16:03

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Vinyl Acetate	ND	ND,2	ug/L	5.0	SW846 8260B	1	04/25/2022 21:46	DPC	I
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/25/2022 21:46	DPC	I

TICs by Library Search

Compound	CAS No	Result	Units	Qualifiers
Isobutane	75-28-5	17.0	ug/L	J,N
Unknown	Unknown	296	ug/L	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.4%	62 – 133	04/25/2022 21:46	
4-Bromofluorobenzene	460-00-4	95.2%	79 – 114	04/25/2022 21:46	
Dibromofluoromethane	1868-53-7	94.1%	78 – 116	04/25/2022 21:46	
Toluene-d8	2037-26-5	87.8%	76 – 127	04/25/2022 21:46	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	564		mg/L	50	SM2320B-2011	10	04/26/2022 11:39	BXD	A
Alkalinity, Total	564	3	mg/L	50	SM2320B-2011	10	04/26/2022 11:39	BXD	A
Ammonia-N	29.3		mg/L	0.100	ASTM D6919-09	10	04/30/2022 07:21	ALK	B
Chemical Oxygen Demand (COD)	104		mg/L	15	EPA 410.4	1	04/27/2022 08:18	ALK	B
Chloride	572		mg/L	10.0	EPA 300.0	10	04/21/2022 20:11	M1D	A
Fluoride	ND	ND	mg/L	1.0	EPA 300.0	10	04/21/2022 20:11	M1D	A
Nitrate-N	ND	ND	mg/L	5.0	EPA 300.0	10	04/21/2022 20:11	M1D	A
pH	7.26	4	pH_Units		S4500HB-11	1	04/22/2022 11:45	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/29/2022 11:26	AKH	H
Specific Conductance	3150		umhos/cm	10	SM2510B-2011	10	04/25/2022 15:01	BXD	A
Sulfate	ND	ND	mg/L	10.0	EPA 300.0	10	04/21/2022 20:11	M1D	A



Results

Client Sample ID	CWMP009W	Collected	04/20/2022 13:48
Lab Sample ID	3238431002	Lab Receipt	04/20/2022 16:03

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	1550		mg/L	25	S2540C-11	1	04/22/2022 08:59	SMS	A
Total Organic Carbon (TOC)	35.6		mg/L	5.0	SM5310B-2011	10	04/22/2022 15:29	PAG	F
Turbidity	15.9		NTU	0.10	SM2130B-2011	1	04/21/2022 00:32	LXZ	A



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3238431001	CWMP016W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	
3238431002	CWMP009W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch	
3238431001	CWMP016W	N/A	N/A	N/A		Field	843038	
		SW846 3015	841331	04/21/2022 16:59	ANN	SW846 6020A	841459	
		SW846 3015	842228	04/25/2022 12:29	ANN	SW846 6020A	842302	
		SW846 7470A	841511	04/26/2022 14:00	A1S	SW846 7470A	842839	
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275	
		N/A	N/A	N/A		Lib Search VOC	842768	
		N/A	N/A	N/A		SW846 8260B	842200	
		N/A	N/A	N/A		ASTM D6919-09	842480	
		N/A	N/A	N/A		EPA 300.0	841352	
		N/A	N/A	N/A		EPA 410.4	842503	
		N/A	N/A	N/A		S2540C-11	841087	
		N/A	N/A	N/A		S4500HB-11	841442	
		N/A	N/A	N/A		SM2130B-2011	841072	
		N/A	N/A	N/A		SM2320B-2011	841442	
		N/A	N/A	N/A		SM2510B-2011	842235	
		N/A	N/A	N/A		SM5310B-2011	841485	
			420.4/9066	842799	04/28/2022 08:18	AKH	SW846 9066	842947
3238431002	CWMP009W	N/A	N/A	N/A		Field	843038	
		SW846 3015	841331	04/21/2022 16:59	ANN	SW846 6020A	841459	
		SW846 3015	842228	04/25/2022 12:29	ANN	SW846 6020A	842302	
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275	
		SW846 7470A	841511	04/26/2022 14:00	A1S	SW846 7470A	842839	
		N/A	N/A	N/A		SW846 8260B	842200	
		N/A	N/A	N/A		ASTM D6919-09	842534	
		N/A	N/A	N/A		EPA 300.0	841352	
		N/A	N/A	N/A		EPA 410.4	842503	
		N/A	N/A	N/A		S2540C-11	841087	
		N/A	N/A	N/A		S4500HB-11	841442	
		N/A	N/A	N/A		SM2130B-2011	841072	
		N/A	N/A	N/A		SM2320B-2011	842459	
		N/A	N/A	N/A		SM2510B-2011	842235	
		N/A	N/A	N/A		SM5310B-2011	841485	
			420.4/9066	842799	04/28/2022 08:18	AKH	SW846 9066	842947



34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5641 • Fax: 717-944-1430 • www.alsglobal.com

301 Filling Mill Rd • Middletown, PA 17057 • 717-944-5641 • 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#: Creswell/GWMP Form 19A
Bill To: Lancaster County Solid Waste MA

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

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix
1. CWMP016W	04/20/22	1257	G	GW
2. CWMP009W	04/20/22	1348	G	GW
3				
4				
5				
6				
7				
8				
9				
10				

Project Comments: _____
 LOGGED BY (signature): _____
 REVIEWED BY (signature): _____

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
ALS	4/20/22	16:03	AMRF/ALS	4/20/22	16:03

* G=Grab; C=Composite **Matrix - AI=Air; DW=Drinking Water; GW=Groundwater; OL=Oil; Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater
 ALS ENVIRONMENTAL SHIPPING ADDRESS: 34 DOGWOOD LANE, MIDDLETOWN, PA 17057

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

Generated by ALS

COC #: _____
ALS QI

3238431
 Logged By: AXF
 PH: SUB
 1 of 1

Container Type	AG	AN	CG	PL	PL	PL	PL
Container Size	40 ml	125 ml	40 ml	1 L	500 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	None	None	H2SO4	HNO3

Receipt Information (completed by receiving Lab)
 Cooler Temp: 2 Therm ID: 569
 No. of Coolers: Y N Initial
 Custody Seals Present? Y N
 (if present) Seals Intact? Y N
 Received on Ice? Y N
 COC/Labels Complete/Accurate? Y N

Temp Taken By: _____
 WO Temp (°C) _____
 Therm ID: _____
 Receipt Info Completed By: _____
 Cooler Custody Seal Intact: Y N
 Sample Custody Seal Intact: Y N
 Received on Ice: Y N
 Cooler & Samples Intact: Y N
 Correct Containers Provided: Y N
 Sample Label/COC Agree: Y N
 Adequate Sample Volumes: Y N
 VOA Headspace Present: Y N
 Voa Trip Blank: Y N
 NIS: 4 Days? Y N
 Rad Screen (uCi) _____
 Courier/Tracking #: _____
 SDWA Compliance: Y N
 PWSID: _____

ALS Field Services: Pickup Labor
 Composite_Sampling Rental_Equipment
 Other:

Special Processing	State Samples Collected In
USACE <input type="checkbox"/>	USACE <input type="checkbox"/>
Navy <input type="checkbox"/>	Navy <input type="checkbox"/>
USACE <input type="checkbox"/>	USACE <input type="checkbox"/>
USACE <input type="checkbox"/>	USACE <input type="checkbox"/>
Reportable to PADEP? Yes <input type="checkbox"/>	Reportable to PADEP? Yes <input type="checkbox"/>
PWSID # _____	PWSID # _____
EDDS: Format Type- _____	EDDS: Format Type- _____



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

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

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 2ND QTR 2022 CWMP-FORM 19A
Workorder 3238721
Report ID 166952 on 5/4/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 21, 2022.

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

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

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

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

Recipient(s):

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

Susan Scherer

Susan Scherer
Project Coordinator

(ALS Digital Signature)

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



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>
3238721001	CWMP008W	Ground Water	04/21/2022 10:30	04/21/2022 15:10	BGS	Analytical Laboratory Service
3238721002	CWMP010W	Ground Water	04/21/2022 11:06	04/21/2022 15:10	BGS	Analytical Laboratory Service
3238721003	CWMP003W	Ground Water	04/21/2022 12:43	04/21/2022 15:10	BGS	Analytical Laboratory Service
3238721004	CWMP004W	Ground Water	04/21/2022 12:58	04/21/2022 15:10	BGS	Analytical Laboratory Service



Reference

Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- 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)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.



Project Notations

Sample Notations

Lab ID **Sample ID**

Result Notations

Notation Ref.

- | | |
|---|---|
| 1 | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg 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. |



Detected Results Summary

Client Sample ID	CWMP008W	Collected	04/21/2022 10:30
Lab Sample ID	3238721001	Lab Receipt	04/21/2022 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	2.10	Feet		Field	#
Dissolved Oxygen	0.40	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	422.30	Feet		Field	#
Flow Rate	1.30	gal/min		Field	#
Ground Water Elevation	420.20	ft/MSL		Field	#
Oxidation-Reduction Potential	-6	mV		Field	#
pH, Field (SM4500B)	5.81	pH_Units		Field	#
Sample Depth	19.00	Feet		Field	#
Specific Conductance, Field	1066	umhos/cm	1	Field	#
Temperature	12.39	Deg. C		Field	#
Total Well Depth	22.80	Feet		Field	#
Volume in Water Column	3.31	Gallons		Field	#
Water Level After Purge	15.18	Feet		Field	#
Well Volumes Purged	7.88	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.13	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.13	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	61.0	mg/L	0.11	SW846 6020A	#
Calcium, Total	61.3	mg/L	0.11	SW846 6020A	#
Chromium, Dissolved	0.0024	mg/L	0.0022	SW846 6020A	#
Chromium, Total	0.0024	mg/L	0.0022	SW846 6020A	#
Cobalt, Total	0.030	mg/L	0.0056	SW846 6020A	#
Iron, Dissolved	22.6	mg/L	0.056	SW846 6020A	#
Iron, Total	22.2	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	30.0	mg/L	0.11	SW846 6020A	#
Magnesium, Total	29.6	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	15.6	mg/L	0.056	SW846 6020A	#
Manganese, Total	16.4	mg/L	0.056	SW846 6020A	#
Nickel, Total	0.018	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	7.6	mg/L	0.11	SW846 6020A	#
Potassium, Total	7.6	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	32.3	mg/L	0.11	SW846 6020A	#
Sodium, Total	31.7	mg/L	0.11	SW846 6020A	#
VOLATILE ORGANICS					
1,1-Dichloroethane	2.2	ug/L	1.0	SW846 8260B	#
1,2-Dichlorobenzene	1.2	ug/L	1.0	SW846 8260B	#
1,4-Dichlorobenzene	9.8	ug/L	1.0	SW846 8260B	#
Benzene	1.4	ug/L	1.0	SW846 8260B	#
Chlorobenzene	8.6	ug/L	1.0	SW846 8260B	#
Chloroethane	5.6	ug/L	1.0	SW846 8260B	#
Dichlorodifluoromethane	1.2	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					



Detected Results Summary

Sample - CWMP008W (cont.)

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY (cont.)					
Alkalinity, Bicarbonate	353	mg/L	5	SM2320B-2011	#
Alkalinity, Total	353	mg/L	5	SM2320B-2011	#
Ammonia-N	5.39	mg/L	0.100	ASTM D6919-09	#
Chemical Oxygen Demand (COD)	18	mg/L	15	EPA 410.4	#
Chloride	25.0	mg/L	2.0	EPA 300.0	#
pH	7.36	pH_Units		S4500HB-11	#
Specific Conductance	826	umhos/cm	1	SM2510B-2011	#
Sulfate	7.0	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	424	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	7.0	mg/L	0.50	SM5310B-2011	#
Turbidity	19.9	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	CWMP010W	Collected	04/21/2022 11:06
Lab Sample ID	3238721002	Lab Receipt	04/21/2022 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	8.56	Feet		Field	#
Dissolved Oxygen	5.33	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	360.90	Feet		Field	#
Flow Rate	0.85	gal/min		Field	#
Ground Water Elevation	352.34	ft/MSL		Field	#
Oxidation-Reduction Potential	109	mV		Field	#
pH, Field (SM4500B)	6.16	pH_Units		Field	#
Sample Depth	17.00	Feet		Field	#
Specific Conductance, Field	1303	umhos/cm	1	Field	#
Temperature	11.29	Deg. C		Field	#
Total Well Depth	19.60	Feet		Field	#
Turbidity, Field	21	NTU	1	Field	#
Volume in Water Column	7.18	Gallons		Field	#
Water Level After Purge	17.23	Feet		Field	#
Well Volumes Purged	1.66	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.034	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.038	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	33.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	32.2	mg/L	0.11	SW846 6020A	#
Chromium, Total	0.014	mg/L	0.0022	SW846 6020A	#
Copper, Total	0.012	mg/L	0.0056	SW846 6020A	#
Iron, Total	0.34	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	26.3	mg/L	0.11	SW846 6020A	#
Magnesium, Total	27.7	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.027	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.065	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0081	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	5.7	mg/L	0.11	SW846 6020A	#
Potassium, Total	5.8	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	76.4	mg/L	0.11	SW846 6020A	#
Sodium, Total	80.4	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	142	mg/L	5	SM2320B-2011	#
Alkalinity, Total	142	mg/L	5	SM2320B-2011	#
Ammonia-N	0.128	mg/L	0.100	ASTM D6919-09	#
Chloride	110	mg/L	2.0	EPA 300.0	#
Nitrate-N	14.5	mg/L	1.0	EPA 300.0	#
pH	7.90	pH_Units		S4500HB-11	#
Specific Conductance	837	umhos/cm	1	SM2510B-2011	#
Sulfate	18.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	432	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	2.8	mg/L	0.50	SM5310B-2011	#



Detected Results Summary

Sample - CWMP010W (cont.)

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>Method</u>	<u>Flag</u>
WET CHEMISTRY (cont.)					
Turbidity	8.82	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	CWMP003W	Collected	04/21/2022 12:43
Lab Sample ID	3238721003	Lab Receipt	04/21/2022 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	77.41	Feet		Field	#
Dissolved Oxygen	5.61	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	524.21	Feet		Field	#
Ground Water Elevation	446.80	ft/MSL		Field	#
Oxidation-Reduction Potential	197	mV		Field	#
pH, Field (SM4500B)	5.50	pH_Units		Field	#
Sample Depth	100.00	Feet		Field	#
Specific Conductance, Field	378	umhos/cm	1	Field	#
Temperature	15.00	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.023	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.021	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	18.0	mg/L	0.11	SW846 6020A	#
Calcium, Total	18.1	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	7.6	mg/L	0.11	SW846 6020A	#
Magnesium, Total	7.4	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.0075	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.0062	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0082	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.0	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.0	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	18.5	mg/L	0.11	SW846 6020A	#
Sodium, Total	18.0	mg/L	0.11	SW846 6020A	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.7	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	23	mg/L	5	SM2320B-2011	#
Alkalinity, Total	23	mg/L	5	SM2320B-2011	#
Ammonia-N	0.126	mg/L	0.100	ASTM D6919-09	#
Chloride	52.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	4.8	mg/L	1.0	EPA 300.0	#
pH	6.92	pH_Units		S4500HB-11	#
Specific Conductance	282	umhos/cm	1	SM2510B-2011	#
Sulfate	6.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	190	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.5	mg/L	0.50	SM5310B-2011	#
Turbidity	0.48	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	CWMP004W	Collected	04/21/2022 12:58
Lab Sample ID	3238721004	Lab Receipt	04/21/2022 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	100.24	Feet		Field	#
Dissolved Oxygen	7.27	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	529.53	Feet		Field	#
Ground Water Elevation	429.29	ft/MSL		Field	#
Oxidation-Reduction Potential	212	mV		Field	#
pH, Field (SM4500B)	5.76	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	393	umhos/cm	1	Field	#
Temperature	14.66	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
Turbidity, Field	7	NTU	1	Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.027	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.027	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	21.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	21.5	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	7.6	mg/L	0.11	SW846 6020A	#
Magnesium, Total	7.6	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.0098	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.0097	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.5	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	18.3	mg/L	0.11	SW846 6020A	#
Sodium, Total	17.9	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	31	mg/L	5	SM2320B-2011	#
Alkalinity, Total	31	mg/L	5	SM2320B-2011	#
Ammonia-N	0.212	mg/L	0.100	ASTM D6919-09	#
Chloride	50.5	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.5	mg/L	1.0	EPA 300.0	#
pH	7.13	pH_Units		S4500HB-11	#
Specific Conductance	296	umhos/cm	1	SM2510B-2011	#
Sulfate	6.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	192	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	0.94	mg/L	0.50	SM5310B-2011	#
Turbidity	0.15	NTU	0.10	SM2130B-2011	#



Results

Client Sample ID	CWMP008W	Collected	04/21/2022 10:30
Lab Sample ID	3238721001	Lab Receipt	04/21/2022 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	2.10		Feet		Field	1	04/21/2022 10:30	BGS	F
Dissolved Oxygen	0.40		mg/L	0.01	Field	1	04/21/2022 10:30	BGS	F
Elev Top MW Casing above MSL	422.30		Feet		Field	1	04/21/2022 10:30	BGS	F
Flow Rate	1.30		gal/min		Field	1	04/21/2022 10:30	BGS	F
Ground Water Elevation	420.20		ft/MSL		Field	1	04/21/2022 10:30	BGS	F
Oxidation-Reduction Potential	-6		mV		Field	1	04/21/2022 10:30	BGS	F
pH, Field (SM4500B)	5.81		pH_Units		Field	1	04/21/2022 10:30	BGS	F
Sample Depth	19.00		Feet		Field	1	04/21/2022 10:30	BGS	F
Specific Conductance, Field	1066		umhos/cm	1	Field	1	04/21/2022 10:30	BGS	F
Temperature	12.39		Deg. C		Field	1	04/21/2022 10:30	BGS	F
Total Well Depth	22.80		Feet		Field	1	04/21/2022 10:30	BGS	F
Turbidity, Field	ND	ND	NTU	1	Field	1	04/21/2022 10:30	BGS	F
Volume in Water Column	3.31		Gallons		Field	1	04/21/2022 10:30	BGS	F
Water Level After Purge	15.18		Feet		Field	1	04/21/2022 10:30	BGS	F
Well Volumes Purged	7.88		Vol		Field	1	04/21/2022 10:30	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	04/26/2022 15:13	DD	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	04/25/2022 14:14	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2022 18:29	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2022 14:14	MO	E1
Barium, Dissolved	0.13		mg/L	0.0056	SW846 6020A	1	04/25/2022 18:29	MO	D1
Barium, Total	0.13		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:14	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:14	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 18:29	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:14	MO	E1
Calcium, Dissolved	61.0		mg/L	0.11	SW846 6020A	1	04/25/2022 18:29	MO	D1
Calcium, Total	61.3		mg/L	0.11	SW846 6020A	1	04/25/2022 14:14	MO	E1
Chromium, Dissolved	0.0024		mg/L	0.0022	SW846 6020A	1	04/25/2022 18:29	MO	D1
Chromium, Total	0.0024		mg/L	0.0022	SW846 6020A	1	04/25/2022 14:14	MO	E1
Cobalt, Total	0.030		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:14	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:29	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:14	MO	E1
Iron, Dissolved	22.6		mg/L	0.056	SW846 6020A	1	04/25/2022 18:29	MO	D1
Iron, Total	22.2		mg/L	0.056	SW846 6020A	1	04/25/2022 14:14	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:29	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:14	MO	E1
Magnesium, Dissolved	30.0		mg/L	0.11	SW846 6020A	1	04/25/2022 18:29	MO	D1
Magnesium, Total	29.6		mg/L	0.11	SW846 6020A	1	04/25/2022 14:14	MO	E1
Manganese, Dissolved	15.6		mg/L	0.056	SW846 6020A	10	04/25/2022 19:19	MO	D1



Results

Client Sample ID	CWMP008W	Collected	04/21/2022 10:30
Lab Sample ID	3238721001	Lab Receipt	04/21/2022 15:10

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	16.4		mg/L	0.056	SW846 6020A	10	04/25/2022 14:48	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:36	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 13:59	A1S	E
Nickel, Total	0.018		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:14	MO	E1
Potassium, Dissolved	7.6		mg/L	0.11	SW846 6020A	1	04/25/2022 18:29	MO	D1
Potassium, Total	7.6		mg/L	0.11	SW846 6020A	1	04/25/2022 14:14	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:29	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:14	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:29	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:14	MO	E1
Sodium, Dissolved	32.3		mg/L	0.11	SW846 6020A	1	04/25/2022 18:29	MO	D1
Sodium, Total	31.7		mg/L	0.11	SW846 6020A	1	04/25/2022 14:14	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:14	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:14	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:29	MO	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:14	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	04/26/2022 15:13	DPC	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,1-Dichloroethane	2.2		ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,2-Dichlorobenzene	1.2		ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
1,4-Dichlorobenzene	9.8		ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Benzene	1.4		ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J



Results

Client Sample ID	CWMP008W	Collected	04/21/2022 10:30
Lab Sample ID	3238721001	Lab Receipt	04/21/2022 15:10

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	8.6		ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Chloroethane	5.6		ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Dichlorodifluoromethane	1.2		ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:13	DPC	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:13	DPC	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	04/26/2022 15:13	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	04/26/2022 15:13	
Dibromofluoromethane	1868-53-7	97.3%	78 – 116	04/26/2022 15:13	
Toluene-d8	2037-26-5	102%	76 – 127	04/26/2022 15:13	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	353		mg/L	5	SM2320B-2011	1	04/22/2022 22:16	BXD	A
Alkalinity, Total	353	1	mg/L	5	SM2320B-2011	1	04/22/2022 22:16	BXD	A
Ammonia-N	5.39		mg/L	0.100	ASTM D6919-09	10	04/29/2022 16:43	ALK	C
Chemical Oxygen Demand (COD)	18		mg/L	15	EPA 410.4	1	04/26/2022 15:41	ALK	C
Chloride	25.0		mg/L	2.0	EPA 300.0	2	04/22/2022 22:43	M1D	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2022 22:43	M1D	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	04/22/2022 22:43	M1D	A
pH	7.36	2	pH_Units		S4500HB-11	1	04/22/2022 22:16	BXD	A
Phenolics	ND	ND	mg/L	0.008	SW846 9066	2	04/29/2022 13:12	AKH	I
Specific Conductance	826		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	7.0		mg/L	2.0	EPA 300.0	2	04/22/2022 22:43	M1D	A



Results

Client Sample ID	CWMP008W	Collected	04/21/2022 10:30
Lab Sample ID	3238721001	Lab Receipt	04/21/2022 15:10

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	424		mg/L	25	S2540C-11	1	04/26/2022 08:53	SMS	A
Total Organic Carbon (TOC)	7.0		mg/L	0.50	SM5310B-2011	1	04/22/2022 18:37	PAG	G
Turbidity	19.9		NTU	0.10	SM2130B-2011	1	04/23/2022 01:21	LXZ	A



Results

Client Sample ID	CWMP010W	Collected	04/21/2022 11:06
Lab Sample ID	3238721002	Lab Receipt	04/21/2022 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	8.56		Feet		Field	1	04/21/2022 11:06	BGS	F
Dissolved Oxygen	5.33		mg/L	0.01	Field	1	04/21/2022 11:06	BGS	F
Elev Top MW Casing above MSL	360.90		Feet		Field	1	04/21/2022 11:06	BGS	F
Flow Rate	0.85		gal/min		Field	1	04/21/2022 11:06	BGS	F
Ground Water Elevation	352.34		ft/MSL		Field	1	04/21/2022 11:06	BGS	F
Oxidation-Reduction Potential	109		mV		Field	1	04/21/2022 11:06	BGS	F
pH, Field (SM4500B)	6.16		pH_Units		Field	1	04/21/2022 11:06	BGS	F
Sample Depth	17.00		Feet		Field	1	04/21/2022 11:06	BGS	F
Specific Conductance, Field	1303		umhos/cm	1	Field	1	04/21/2022 11:06	BGS	F
Temperature	11.29		Deg. C		Field	1	04/21/2022 11:06	BGS	F
Total Well Depth	19.60		Feet		Field	1	04/21/2022 11:06	BGS	F
Turbidity, Field	21		NTU	1	Field	1	04/21/2022 11:06	BGS	F
Volume in Water Column	7.18		Gallons		Field	1	04/21/2022 11:06	BGS	F
Water Level After Purge	17.23		Feet		Field	1	04/21/2022 11:06	BGS	F
Well Volumes Purged	1.66		Vol		Field	1	04/21/2022 11:06	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	04/26/2022 15:36	DD	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	04/25/2022 14:16	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2022 18:31	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2022 14:16	MO	E1
Barium, Dissolved	0.034		mg/L	0.0056	SW846 6020A	1	04/25/2022 18:31	MO	D1
Barium, Total	0.038		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:16	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:16	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 18:31	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:16	MO	E1
Calcium, Dissolved	33.6		mg/L	0.11	SW846 6020A	1	04/25/2022 18:31	MO	D1
Calcium, Total	32.2		mg/L	0.11	SW846 6020A	1	04/25/2022 14:16	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:31	MO	D1
Chromium, Total	0.014		mg/L	0.0022	SW846 6020A	1	04/25/2022 14:16	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:16	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:31	MO	D1
Copper, Total	0.012		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:16	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2022 18:31	MO	D1
Iron, Total	0.34		mg/L	0.056	SW846 6020A	1	04/25/2022 14:16	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:31	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:16	MO	E1
Magnesium, Dissolved	26.3		mg/L	0.11	SW846 6020A	1	04/25/2022 18:31	MO	D1
Magnesium, Total	27.7		mg/L	0.11	SW846 6020A	1	04/25/2022 14:16	MO	E1
Manganese, Dissolved	0.027		mg/L	0.0056	SW846 6020A	1	04/25/2022 18:31	MO	D1



Results

Client Sample ID	CWMP010W	Collected	04/21/2022 11:06
Lab Sample ID	3238721002	Lab Receipt	04/21/2022 15:10

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.065		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:16	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:40	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 14:00	A1S	E
Nickel, Total	0.0081		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:16	MO	E1
Potassium, Dissolved	5.7		mg/L	0.11	SW846 6020A	1	04/25/2022 18:31	MO	D1
Potassium, Total	5.8		mg/L	0.11	SW846 6020A	1	04/25/2022 14:16	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:31	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:16	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:31	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:16	MO	E1
Sodium, Dissolved	76.4		mg/L	0.11	SW846 6020A	1	04/25/2022 18:31	MO	D1
Sodium, Total	80.4		mg/L	0.11	SW846 6020A	1	04/25/2022 14:16	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:16	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:16	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:31	MO	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:16	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	04/26/2022 15:36	DPC	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J



Results

Client Sample ID	CWMP010W	Collected	04/21/2022 11:06
Lab Sample ID	3238721002	Lab Receipt	04/21/2022 15:10

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	04/26/2022 15:36	DPC	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:36	DPC	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:36	DPC	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	04/26/2022 15:36	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	04/26/2022 15:36	
Dibromofluoromethane	1868-53-7	98.5%	78 – 116	04/26/2022 15:36	
Toluene-d8	2037-26-5	100%	76 – 127	04/26/2022 15:36	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	142		mg/L	5	SM2320B-2011	1	04/22/2022 22:26	BXD	A
Alkalinity, Total	142	1	mg/L	5	SM2320B-2011	1	04/22/2022 22:26	BXD	A
Ammonia-N	0.128		mg/L	0.100	ASTM D6919-09	10	04/27/2022 07:50	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/26/2022 15:41	ALK	C
Chloride	110		mg/L	2.0	EPA 300.0	2	04/22/2022 22:54	M1D	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2022 22:54	M1D	A
Nitrate-N	14.5		mg/L	1.0	EPA 300.0	2	04/22/2022 22:54	M1D	A
pH	7.90	2	pH_Units		S4500HB-11	1	04/22/2022 22:26	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/29/2022 13:15	AKH	I
Specific Conductance	837		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	18.8		mg/L	2.0	EPA 300.0	2	04/22/2022 22:54	M1D	A



Results

Client Sample ID	CWMP010W	Collected	04/21/2022 11:06
Lab Sample ID	3238721002	Lab Receipt	04/21/2022 15:10

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	432		mg/L	25	S2540C-11	1	04/26/2022 08:53	SMS	A
Total Organic Carbon (TOC)	2.8		mg/L	0.50	SM5310B-2011	1	04/22/2022 18:37	PAG	G
Turbidity	8.82		NTU	0.10	SM2130B-2011	1	04/23/2022 01:21	LXZ	A



Results

Client Sample ID	CWMP003W	Collected	04/21/2022 12:43
Lab Sample ID	3238721003	Lab Receipt	04/21/2022 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	77.41		Feet		Field	1	04/21/2022 12:43	BGS	F
Dissolved Oxygen	5.61		mg/L	0.01	Field	1	04/21/2022 12:43	BGS	F
Elev Top MW Casing above MSL	524.21		Feet		Field	1	04/21/2022 12:43	BGS	F
Ground Water Elevation	446.80		ft/MSL		Field	1	04/21/2022 12:43	BGS	F
Oxidation-Reduction Potential	197		mV		Field	1	04/21/2022 12:43	BGS	F
pH, Field (SM4500B)	5.50		pH_Units		Field	1	04/21/2022 12:43	BGS	F
Sample Depth	100.00		Feet		Field	1	04/21/2022 12:43	BGS	F
Specific Conductance, Field	378		umhos/cm	1	Field	1	04/21/2022 12:43	BGS	F
Temperature	15.00		Deg. C		Field	1	04/21/2022 12:43	BGS	F
Total Well Depth	140.00		Feet		Field	1	04/21/2022 12:43	BGS	F
Turbidity, Field	1		NTU	1	Field	1	04/21/2022 12:43	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	04/26/2022 15:59	DD	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	04/25/2022 14:35	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2022 18:33	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2022 14:35	MO	E1
Barium, Dissolved	0.023		mg/L	0.0056	SW846 6020A	1	04/25/2022 18:33	MO	D1
Barium, Total	0.021		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:35	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:35	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 18:33	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:35	MO	E1
Calcium, Dissolved	18.0		mg/L	0.11	SW846 6020A	1	04/25/2022 18:33	MO	D1
Calcium, Total	18.1		mg/L	0.11	SW846 6020A	1	04/25/2022 14:35	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:33	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:35	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:35	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:33	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:35	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2022 18:33	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2022 14:35	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:33	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:35	MO	E1
Magnesium, Dissolved	7.6		mg/L	0.11	SW846 6020A	1	04/25/2022 18:33	MO	D1
Magnesium, Total	7.4		mg/L	0.11	SW846 6020A	1	04/25/2022 14:35	MO	E1
Manganese, Dissolved	0.0075		mg/L	0.0056	SW846 6020A	1	04/25/2022 18:33	MO	D1
Manganese, Total	0.0062		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:35	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:41	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 14:01	A1S	E
Nickel, Total	0.0082		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:35	MO	E1



Results

Client Sample ID	CWMP003W	Collected	04/21/2022 12:43
Lab Sample ID	3238721003	Lab Receipt	04/21/2022 15:10

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Potassium, Dissolved	2.0		mg/L	0.11	SW846 6020A	1	04/25/2022 18:33	MO	D1
Potassium, Total	2.0		mg/L	0.11	SW846 6020A	1	04/25/2022 14:35	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:33	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:35	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 18:33	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:35	MO	E1
Sodium, Dissolved	18.5		mg/L	0.11	SW846 6020A	1	04/25/2022 18:33	MO	D1
Sodium, Total	18.0		mg/L	0.11	SW846 6020A	1	04/25/2022 14:35	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:35	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:35	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 18:33	MO	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:35	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	04/26/2022 15:59	DPC	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,1-Dichloroethane	1.7		ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J



Results

Client Sample ID	CWMP003W	Collected	04/21/2022 12:43
Lab Sample ID	3238721003	Lab Receipt	04/21/2022 15:10

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 15:59	DPC	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 15:59	DPC	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	04/26/2022 15:59	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	04/26/2022 15:59	
Dibromofluoromethane	1868-53-7	99.9%	78 – 116	04/26/2022 15:59	
Toluene-d8	2037-26-5	101%	76 – 127	04/26/2022 15:59	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	23		mg/L	5	SM2320B-2011	1	04/22/2022 22:36	BXD	A
Alkalinity, Total	23	1	mg/L	5	SM2320B-2011	1	04/22/2022 22:36	BXD	A
Ammonia-N	0.126		mg/L	0.100	ASTM D6919-09	10	04/27/2022 06:42	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/26/2022 15:41	ALK	C
Chloride	52.9		mg/L	2.0	EPA 300.0	2	04/22/2022 23:46	M1D	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2022 23:46	M1D	A
Nitrate-N	4.8		mg/L	1.0	EPA 300.0	2	04/22/2022 23:46	M1D	A
pH	6.92	2	pH_Units		S4500HB-11	1	04/22/2022 22:36	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/29/2022 13:19	AKH	I
Specific Conductance	282		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	6.4		mg/L	2.0	EPA 300.0	2	04/22/2022 23:46	M1D	A
Total Dissolved Solids	190		mg/L	25	S2540C-11	1	04/26/2022 08:53	SMS	A
Total Organic Carbon (TOC)	1.5		mg/L	0.50	SM5310B-2011	1	04/22/2022 18:37	PAG	G
Turbidity	0.48		NTU	0.10	SM2130B-2011	1	04/23/2022 01:21	LXZ	A

Project 2ND QTR 2022 CWMP-FORM 19A

Workorder 3238721



Results

Client Sample ID	CWMP003W	Collected	04/21/2022 12:43
Lab Sample ID	3238721003	Lab Receipt	04/21/2022 15:10

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>
-----------------	---------------	-------------	--------------	------------	---------------	-----------------	---------------------------	-----------	-------------



Results

Client Sample ID	CWMP004W	Collected	04/21/2022 12:58
Lab Sample ID	3238721004	Lab Receipt	04/21/2022 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	100.24		Feet		Field	1	04/21/2022 12:58	BGS	F
Dissolved Oxygen	7.27		mg/L	0.01	Field	1	04/21/2022 12:58	BGS	F
Elev Top MW Casing above MSL	529.53		Feet		Field	1	04/21/2022 12:58	BGS	F
Ground Water Elevation	429.29		ft/MSL		Field	1	04/21/2022 12:58	BGS	F
Oxidation-Reduction Potential	212		mV		Field	1	04/21/2022 12:58	BGS	F
pH, Field (SM4500B)	5.76		pH_Units		Field	1	04/21/2022 12:58	BGS	F
Sample Depth	130.00		Feet		Field	1	04/21/2022 12:58	BGS	F
Specific Conductance, Field	393		umhos/cm	1	Field	1	04/21/2022 12:58	BGS	F
Temperature	14.66		Deg. C		Field	1	04/21/2022 12:58	BGS	F
Total Well Depth	140.00		Feet		Field	1	04/21/2022 12:58	BGS	F
Turbidity, Field	7		NTU	1	Field	1	04/21/2022 12:58	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	04/26/2022 16:21	DD	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	04/25/2022 14:37	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2022 19:15	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2022 14:37	MO	E1
Barium, Dissolved	0.027		mg/L	0.0056	SW846 6020A	1	04/25/2022 19:15	MO	D1
Barium, Total	0.027		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:37	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:37	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 19:15	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:37	MO	E1
Calcium, Dissolved	21.6		mg/L	0.11	SW846 6020A	1	04/25/2022 19:15	MO	D1
Calcium, Total	21.5		mg/L	0.11	SW846 6020A	1	04/25/2022 14:37	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 19:15	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:37	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:37	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 19:15	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:37	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2022 19:15	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2022 14:37	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 19:15	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:37	MO	E1
Magnesium, Dissolved	7.6		mg/L	0.11	SW846 6020A	1	04/25/2022 19:15	MO	D1
Magnesium, Total	7.6		mg/L	0.11	SW846 6020A	1	04/25/2022 14:37	MO	E1
Manganese, Dissolved	0.0098		mg/L	0.0056	SW846 6020A	1	04/25/2022 19:15	MO	D1
Manganese, Total	0.0097		mg/L	0.0056	SW846 6020A	1	04/25/2022 14:37	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:42	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/29/2022 14:02	A1S	E
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:37	MO	E1



Results

Client Sample ID CWMP004W Collected 04/21/2022 12:58
 Lab Sample ID 3238721004 Lab Receipt 04/21/2022 15:10

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Potassium, Dissolved	1.5		mg/L	0.11	SW846 6020A	1	04/25/2022 19:15	MO	D1
Potassium, Total	1.4		mg/L	0.11	SW846 6020A	1	04/25/2022 14:37	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 19:15	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:37	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 19:15	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:37	MO	E1
Sodium, Dissolved	18.3		mg/L	0.11	SW846 6020A	1	04/25/2022 19:15	MO	D1
Sodium, Total	17.9		mg/L	0.11	SW846 6020A	1	04/25/2022 14:37	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2022 14:37	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2022 14:37	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 19:15	MO	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2022 14:37	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	04/26/2022 16:21	DPC	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J



Results

Client Sample ID	CWMP004W	Collected	04/21/2022 12:58
Lab Sample ID	3238721004	Lab Receipt	04/21/2022 15:10

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/26/2022 16:21	DPC	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/26/2022 16:21	DPC	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	04/26/2022 16:21	
4-Bromofluorobenzene	460-00-4	107%	79 – 114	04/26/2022 16:21	
Dibromofluoromethane	1868-53-7	97.9%	78 – 116	04/26/2022 16:21	
Toluene-d8	2037-26-5	101%	76 – 127	04/26/2022 16:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	31		mg/L	5	SM2320B-2011	1	04/22/2022 22:45	BXD	A
Alkalinity, Total	31	1	mg/L	5	SM2320B-2011	1	04/22/2022 22:45	BXD	A
Ammonia-N	0.212		mg/L	0.100	ASTM D6919-09	10	04/27/2022 14:51	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/26/2022 15:41	ALK	C
Chloride	50.5		mg/L	2.0	EPA 300.0	2	04/22/2022 23:56	M1D	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2022 23:56	M1D	A
Nitrate-N	5.5		mg/L	1.0	EPA 300.0	2	04/22/2022 23:56	M1D	A
pH	7.13	2	pH_Units		S4500HB-11	1	04/22/2022 22:45	BXD	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/29/2022 13:22	AKH	I
Specific Conductance	296		umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	6.5		mg/L	2.0	EPA 300.0	2	04/22/2022 23:56	M1D	A
Total Dissolved Solids	192		mg/L	25	S2540C-11	1	04/26/2022 08:53	SMS	A
Total Organic Carbon (TOC)	0.94		mg/L	0.50	SM5310B-2011	1	04/22/2022 21:21	PAG	G
Turbidity	0.15		NTU	0.10	SM2130B-2011	1	04/23/2022 01:21	LXZ	A

Project 2ND QTR 2022 CWMP-FORM 19A

Workorder 3238721



Results

Client Sample ID	CWMP004W	Collected	04/21/2022 12:58
Lab Sample ID	3238721004	Lab Receipt	04/21/2022 15:10

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>
-----------------	---------------	-------------	--------------	------------	---------------	-----------------	---------------------------	-----------	-------------



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3238721001	CWMP008W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	
3238721002	CWMP010W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	
3238721003	CWMP003W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	



Project 2ND QTR 2022 CWMP-FORM 19A
Workorder 3238721

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3238721004	CWMP004W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3238721001	CWMP008W	N/A	N/A	N/A		Field	843038
		SW846 3015	842228	04/25/2022 12:29	ANN	SW846 6020A	842302
		SW846 3015	841463	04/22/2022 13:08	ANN	SW846 6020A	842250
		SW846 7470A	841513	04/26/2022 14:00	A1S	SW846 7470A	843271
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275
		N/A	N/A	N/A		Lib Search VOC	842768
		N/A	N/A	N/A		SW846 8260B	842405
		N/A	N/A	N/A		ASTM D6919-09	842933
		N/A	N/A	N/A		EPA 300.0	841577
		N/A	N/A	N/A		EPA 410.4	841509
		N/A	N/A	N/A		S2540C-11	842188
		N/A	N/A	N/A		S4500HB-11	841442
		N/A	N/A	N/A		SM2130B-2011	841386
		N/A	N/A	N/A		SM2320B-2011	841442
		N/A	N/A	N/A		SM2510B-2011	842235
		N/A	N/A	N/A		SM5310B-2011	841485
		420.4/9066	842800	04/28/2022 08:19	AKH	SW846 9066	842947
3238721002	CWMP010W	N/A	N/A	N/A		Field	843038
		SW846 3015	841463	04/22/2022 13:08	ANN	SW846 6020A	842250
		SW846 3015	842228	04/25/2022 12:29	ANN	SW846 6020A	842302
		SW846 7470A	841513	04/26/2022 14:00	A1S	SW846 7470A	843271
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275
		N/A	N/A	N/A		Lib Search VOC	842768
		N/A	N/A	N/A		SW846 8260B	842405
		N/A	N/A	N/A		ASTM D6919-09	841503
		N/A	N/A	N/A		EPA 300.0	841577
		N/A	N/A	N/A		EPA 410.4	841509
		N/A	N/A	N/A		S2540C-11	842188
		N/A	N/A	N/A		S4500HB-11	841442
		N/A	N/A	N/A		SM2130B-2011	841386
		N/A	N/A	N/A		SM2320B-2011	841442
		N/A	N/A	N/A		SM2510B-2011	842235
		N/A	N/A	N/A		SM5310B-2011	841485
		420.4/9066	842800	04/28/2022 08:19	AKH	SW846 9066	842947
3238721003	CWMP003W	N/A	N/A	N/A		Field	843038
		SW846 3015	842228	04/25/2022 12:29	ANN	SW846 6020A	842302
		SW846 3015	841463	04/22/2022 13:08	ANN	SW846 6020A	842250
		SW846 7470A	841513	04/26/2022 14:00	A1S	SW846 7470A	843271
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275
		N/A	N/A	N/A		Lib Search VOC	842768
		N/A	N/A	N/A		SW846 8260B	842405
		N/A	N/A	N/A		ASTM D6919-09	841503
		N/A	N/A	N/A		EPA 300.0	841577
		N/A	N/A	N/A		EPA 410.4	841509
		N/A	N/A	N/A		S2540C-11	842188
		N/A	N/A	N/A		S4500HB-11	841442
		N/A	N/A	N/A		SM2130B-2011	841386
		N/A	N/A	N/A		SM2320B-2011	841442
		N/A	N/A	N/A		SM2510B-2011	842235
		N/A	N/A	N/A		SM5310B-2011	841485
		420.4/9066	842800	04/28/2022 08:19	AKH	SW846 9066	842947



Project 2ND QTR 2022 CWMP-FORM 19A

Workorder 3238721

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3238721004	CWMP004W	N/A	N/A	N/A		Field	843038
		SW846 3015	842228	04/25/2022 12:29	ANN	SW846 6020A	842302
		SW846 3015	841463	04/22/2022 13:08	ANN	SW846 6020A	842250
		SW846 7470A	841513	04/26/2022 14:00	A1S	SW846 7470A	843271
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275
		N/A	N/A	N/A		Lib Search VOC	842768
		N/A	N/A	N/A		SW846 8260B	842405
		N/A	N/A	N/A		ASTM D6919-09	841512
		N/A	N/A	N/A		EPA 300.0	841577
		N/A	N/A	N/A		EPA 410.4	841509
		N/A	N/A	N/A		S2540C-11	842188
		N/A	N/A	N/A		S4500HB-11	841442
		N/A	N/A	N/A		SM2130B-2011	841386
		N/A	N/A	N/A		SM2320B-2011	841442
		N/A	N/A	N/A		SM2510B-2011	842235
		N/A	N/A	N/A		SM5310B-2011	841486
		420.4/9066	842800	04/28/2022 08:19	AKH	SW846 9066	842947



34 Logwood Lane • Middletown, PA 17057 • Phone: 717.944.5541 • Fax: 717.944.1430 • www.alslab.com

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#: Creswell/GWMP Form 19A
 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: -Y mreider@LCSWMA.org Approved By:
 Email? -Y No.: (717) 397-9973
 Fax? -Y No.: (717) 397-9973

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time
1. CWMP008W	04/21/22	1030
2. CWMP010W	04/21/22	1106
3. CWMP003W	04/21/22	1243
4. CWMP004W	04/21/22	1258
5		
6		
7		
8		
9		
10		

Project Comments:
 Relinquished By / Company Name: ALS
 Date: 4/22/22 Time: 1510
 Received By / Company Name: [Signature]
 Date: 4.21.22 Time: 1510

Container Type	AG	AN	CG	PL	PL	PL	PL
Container Size	40 ml	125 ml	40 ml	1 L	500 ml	500 ml	500 ml
Preservative	HCl	H2SO4	HCl	None	None	H2SO4	HNO3

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

Generated by ALS

COC
ALS

3238721
 Logged By: KSB
 PM: SJB
 1 of 1

Receipt Information (www.alslab.com/Wing Lab)
 Cooler Temp: 1 Therm ID: 570 Initial

Temp Taken By: KSB
 WO Temp (°C): 1
 Therm ID: 570
 Receipt Info Completed By: AMRF
 Cooler Custody Seal Intact: Y N MA
 Sample Custody Seal Intact: Y N MA
 Received on Ice: Y N MA
 Cooler & Samples Intact: Y N
 Correct Containers Provided: Y N
 Sample Label/COC Agree: Y N
 Adequate Sample Volumes: Y N MA
 VOA Headspace Present: Y N MA
 Voa Trip Blank: Y N MA
 NJS 4 Days?: Y N MA
 Rad Screen (uCi): Y N
 Courier/Tracking #: Y N

SDWA Compliance PWSID: Y N

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

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

Matrix	TOC	O-H	8260 VOCs - Form 19A + Subtitle D + TICs	pH, Cl, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, HCO3	*FM	Sample Depth for AUX Data	NH3-N, COD	Diss Metals Form 19A (Field Filled)	Total Metals Form 19A + Subtitle D
G	2	1	2	1	1	X	X	1	1	1
GW	2	1	2	1	1	X	X	1	1	1
G	2	1	2	1	1	X	X	1	1	1
GW	2	1	2	1	1	X	X	1	1	1
G	2	1	2	1	1	X	X	1	1	1
GW	2	1	2	1	1	X	X	1	1	1

Standard CLP-like USACE
 Data Deliverables: USACE Navy
 Reportable to PADEP? Yes No
 PWSID #
 EDDS: Format Type:

State Samples Collected In: NY NJ PA NC
 Special Processing: USACE Navy
 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 2022 CWMP-FORM 19A
 Workorder 3238926
 Report ID 169619 on 5/18/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 22, 2022.

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

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

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

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

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

Susan Scherer

Susan Scherer
 Project Coordinator

(ALS Digital Signature)

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



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>
3238926001	CWMP017S	Ground Water	04/22/2022 09:57	04/22/2022 12:41		Lancaster County Solid Waste Authority
3238926002	CWMP018S	Ground Water	04/22/2022 08:30	04/22/2022 12:41		Lancaster County Solid Waste Authority



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



Project Notations

Sample Notations

Lab ID	Sample ID		
3238926001	CWMP017S	S1	Sample temperature upon receipt at lab was greater than 6 °C.
3238926002	CWMP018S	S2	Sample temperature upon receipt at lab was greater than 6 °C.

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
3	The QC sample type MB for method EPA 300.0 was outside the control limits for the analyte Sulfate. The concentration was reported at 0.75 mg/L and the control limit is less than 0.7mg/L.



Detected Results Summary

Client Sample ID	CWMP017S	Collected	04/22/2022 09:57
Lab Sample ID	3238926001	Lab Receipt	04/22/2022 12:41

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	9.83	mg/L	0.01	Field	#
pH, Field (SM4500B)	7.78	pH_Units		Field	#
Specific Conductance, Field	3567	umhos/cm	1	Field	#
Temperature	16.24	Deg. C		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.031	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.032	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	67.0	mg/L	0.11	SW846 6020A	#
Calcium, Total	65.1	mg/L	0.11	SW846 6020A	#
Copper, Dissolved	0.011	mg/L	0.0056	SW846 6020A	#
Copper, Total	0.011	mg/L	0.0056	SW846 6020A	#
Iron, Dissolved	0.14	mg/L	0.056	SW846 6020A	#
Iron, Total	0.58	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	91.0	mg/L	0.11	SW846 6020A	#
Magnesium, Total	84.6	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.082	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.097	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0092	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	13.4	mg/L	0.11	SW846 6020A	#
Potassium, Total	12.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	373	mg/L	11.0	SW846 6020A	#
Sodium, Total	353	mg/L	1.1	SW846 6020A	#
Zinc, Dissolved	0.24	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.28	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Ammonia-N	0.791	mg/L	0.100	ASTM D6919-09	#
Chloride	560	mg/L	10.0	EPA 300.0	#
Nitrate-N	12.7	mg/L	1.0	EPA 300.0	#
pH	8.30	pH_Units		S4500HB-11	#
Specific Conductance	2890	umhos/cm	10	SM2510B-2011	#
Sulfate	31.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	1320	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	3.7	mg/L	0.50	SM5310B-2011	#
Turbidity	5.19	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	CWMP018S	Collected	04/22/2022 08:30
Lab Sample ID	3238926002	Lab Receipt	04/22/2022 12:41

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	8.85	mg/L	0.01	Field	#
pH, Field (SM4500B)	7.84	pH_Units		Field	#
Specific Conductance, Field	1972	umhos/cm	1	Field	#
Temperature	10.70	Deg. C		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected				Lib Search VOC	#
METALS					
Barium, Dissolved	0.039	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.038	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	63.0	mg/L	0.11	SW846 6020A	#
Calcium, Total	63.2	mg/L	0.11	SW846 6020A	#
Copper, Dissolved	0.0063	mg/L	0.0056	SW846 6020A	#
Copper, Total	0.0066	mg/L	0.0056	SW846 6020A	#
Iron, Total	0.060	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	50.9	mg/L	0.11	SW846 6020A	#
Magnesium, Total	51.1	mg/L	0.11	SW846 6020A	#
Manganese, Total	0.0063	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.014	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	15.1	mg/L	0.11	SW846 6020A	#
Potassium, Total	15.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	217	mg/L	1.1	SW846 6020A	#
Sodium, Total	224	mg/L	1.1	SW846 6020A	#
Zinc, Dissolved	0.045	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.046	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	216	mg/L	5	SM2320B-2011	#
Alkalinity, Total	255	mg/L	5	SM2320B-2011	#
Ammonia-N	0.781	mg/L	0.100	ASTM D6919-09	#
Chemical Oxygen Demand (COD)	19	mg/L	15	EPA 410.4	#
Chloride	346	mg/L	10.0	EPA 300.0	#
Nitrate-N	11.7	mg/L	1.0	EPA 300.0	#
pH	8.82	pH_Units		S4500HB-11	#
Specific Conductance	1850	umhos/cm	1	SM2510B-2011	#
Sulfate	38.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	918	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	6.8	mg/L	0.50	SM5310B-2011	#
Turbidity	0.68	NTU	0.10	SM2130B-2011	#



Results

Client Sample ID	CWMP017S	Collected	04/22/2022 09:57
Lab Sample ID	3238926001	Lab Receipt	04/22/2022 12:41

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	9.83	S1	mg/L	0.01	Field	1	04/22/2022 09:57	BGS	F
pH, Field (SM4500B)	7.78	S1	pH_Units		Field	1	04/22/2022 09:57	BGS	F
Specific Conductance, Field	3567	S1	umhos/cm	1	Field	1	04/22/2022 09:57	BGS	F
Temperature	16.24	S1	Deg. C		Field	1	04/22/2022 09:57	BGS	F

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.	S1			Lib Search VOC	1	04/26/2022 15:06	CHS	J

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	04/27/2022 14:14	MO	E1
Arsenic, Dissolved	ND	ND,S1	mg/L	0.0030	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Arsenic, Total	ND	ND,S1	mg/L	0.0033	SW846 6020A	1	04/27/2022 14:14	MO	E1
Barium, Dissolved	0.031	S1	mg/L	0.0056	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Barium, Total	0.032	S1	mg/L	0.0056	SW846 6020A	1	04/27/2022 14:14	MO	E1
Beryllium, Total	ND	ND,S1	mg/L	0.0011	SW846 6020A	1	04/27/2022 14:14	MO	E1
Cadmium, Dissolved	ND	ND,S1	mg/L	0.0011	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Cadmium, Total	ND	ND,S1	mg/L	0.0011	SW846 6020A	1	04/27/2022 14:14	MO	E1
Calcium, Dissolved	67.0	S1	mg/L	0.11	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Calcium, Total	65.1	S1	mg/L	0.11	SW846 6020A	1	04/27/2022 14:14	MO	E1
Chromium, Dissolved	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Chromium, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	04/27/2022 17:54	MO	E1
Cobalt, Total	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	04/27/2022 14:14	MO	E1
Copper, Dissolved	0.011	S1	mg/L	0.0056	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Copper, Total	0.011	S1	mg/L	0.0056	SW846 6020A	1	04/27/2022 14:14	MO	E1
Iron, Dissolved	0.14	S1	mg/L	0.056	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Iron, Total	0.58	S1	mg/L	0.056	SW846 6020A	1	04/27/2022 14:14	MO	E1
Lead, Dissolved	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Lead, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	04/27/2022 14:14	MO	E1
Magnesium, Dissolved	91.0	S1	mg/L	0.11	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Magnesium, Total	84.6	S1	mg/L	0.11	SW846 6020A	1	04/27/2022 14:14	MO	E1
Manganese, Dissolved	0.082	S1	mg/L	0.0056	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Manganese, Total	0.097	S1	mg/L	0.0056	SW846 6020A	1	04/27/2022 14:14	MO	E1
Mercury, Dissolved	ND	ND,S1	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:54	A1S	D
Mercury, Total	ND	ND,S1	mg/L	0.00050	SW846 7470A	1	04/29/2022 17:06	A1S	E
Nickel, Total	0.0092	S1	mg/L	0.0056	SW846 6020A	1	04/27/2022 14:14	MO	E1
Potassium, Dissolved	13.4	S1	mg/L	0.11	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Potassium, Total	12.4	S1	mg/L	0.11	SW846 6020A	1	04/27/2022 14:14	MO	E1
Selenium, Dissolved	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Selenium, Total	ND	ND,S1	mg/L	0.0056	SW846 6020A	1	04/27/2022 14:14	MO	E1
Silver, Dissolved	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Silver, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	04/27/2022 14:14	MO	E1
Sodium, Dissolved	373	S1	mg/L	11.0	SW846 6020A	100	04/29/2022 19:28	RMD	D2



Results

Client Sample ID	CWMP017S	Collected	04/22/2022 09:57
Lab Sample ID	3238926001	Lab Receipt	04/22/2022 12:41

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Sodium, Total	353	S1	mg/L	1.1	SW846 6020A	10	04/28/2022 12:26	MO	E1
Thallium, Total	ND	ND,S1	mg/L	0.0011	SW846 6020A	1	04/27/2022 14:14	MO	E1
Vanadium, Total	ND	ND,S1	mg/L	0.0022	SW846 6020A	1	04/27/2022 14:14	MO	E1
Zinc, Dissolved	0.24	S1	mg/L	0.0056	SW846 6020A	1	04/29/2022 18:26	RMD	D2
Zinc, Total	0.28	S1	mg/L	0.0056	SW846 6020A	1	04/27/2022 14:14	MO	E1

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	04/26/2022 15:06	DPC	J
1,1,1-Trichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,1,2,2-Tetrachloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,1,2-Trichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,1-Dichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,1-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,2,3-Trichloropropane	ND	ND,S1	ug/L	2.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,2-Dibromo-3-chloropropane	ND	ND,S1	ug/L	7.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,2-Dibromoethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,2-Dichlorobenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,2-Dichloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,2-Dichloropropane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,3-Dichlorobenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
1,4-Dichlorobenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
2-Butanone	ND	ND,S1	ug/L	10.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
2-Hexanone	ND	ND,S1	ug/L	5.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
3-Chloro-1-propene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
4-Methyl-2-Pentanone(MIBK)	ND	ND,S1	ug/L	5.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Acetone	ND	ND,S1	ug/L	10.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Acrylonitrile	ND	ND,S1	ug/L	5.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Benzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Bromochloromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Bromodichloromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Bromoform	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Bromomethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Carbon Disulfide	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Carbon Tetrachloride	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Chlorobenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Chlorodibromomethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Chloroethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Chloroform	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Chloromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
cis-1,2-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
cis-1,3-Dichloropropene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Dibromomethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Dichlorodifluoromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Ethylbenzene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Iodomethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J



Results

Client Sample ID	CWMP017S	Collected	04/22/2022 09:57
Lab Sample ID	3238926001	Lab Receipt	04/22/2022 12:41

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Methylene Chloride	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Styrene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Tetrachloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Toluene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Total Xylenes	ND	ND,S1	ug/L	3.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
trans-1,2-Dichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
trans-1,3-Dichloropropene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
trans-1,4-Dichloro-2-butene	ND	ND,S1	ug/L	3.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Trichloroethene	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Trichlorofluoromethane	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Vinyl Acetate	ND	ND,S1	ug/L	5.0	SW846 8260B	1	04/26/2022 15:06	DPC	J
Vinyl Chloride	ND	ND,S1	ug/L	1.0	SW846 8260B	1	04/26/2022 15:06	DPC	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	115%	62 – 133	04/26/2022 15:06	
4-Bromofluorobenzene	460-00-4	108%	79 – 114	04/26/2022 15:06	
Dibromofluoromethane	1868-53-7	103%	78 – 116	04/26/2022 15:06	
Toluene-d8	2037-26-5	118%	76 – 127	04/26/2022 15:06	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND,S1	mg/L	5	SM2320B-2011	1	04/26/2022 18:08	BXD	A
Alkalinity, Total	ND	ND,1,S1	mg/L	5	SM2320B-2011	1	04/26/2022 18:08	BXD	A
Ammonia-N	0.791	S1	mg/L	0.100	ASTM D6919-09	10	04/30/2022 09:25	ALK	C
Chemical Oxygen Demand (COD)	ND	ND,S1	mg/L	15	EPA 410.4	1	04/27/2022 08:18	ALK	C
Chloride	560	S1	mg/L	10.0	EPA 300.0	10	04/30/2022 09:28	MSA	A
Fluoride	ND	ND,S1	mg/L	0.20	EPA 300.0	2	04/23/2022 19:06	M1D	A
Nitrate-N	12.7	S1	mg/L	1.0	EPA 300.0	2	04/23/2022 19:06	M1D	A
pH	8.30	2,S1	pH_Units		S4500HB-11	1	04/26/2022 18:08	BXD	A
Phenolics	ND	ND,S1	mg/L	0.004	SW846 9066	1	04/29/2022 14:59	AKH	I
Specific Conductance	2890	S1	umhos/cm	10	SM2510B-2011	10	04/25/2022 15:01	BXD	A
Sulfate	31.2	3,S1	mg/L	2.0	EPA 300.0	2	04/23/2022 19:06	M1D	A
Total Dissolved Solids	1320	S1	mg/L	25	S2540C-11	1	04/27/2022 08:27	SMS	A
Total Organic Carbon (TOC)	3.7	S1	mg/L	0.50	SM5310B-2011	1	04/26/2022 01:25	PAG	G
Turbidity	5.19	S1	NTU	0.10	SM2130B-2011	1	04/23/2022 01:13	LXZ	A



Results

Client Sample ID	CWMP018S	Collected	04/22/2022 08:30
Lab Sample ID	3238926002	Lab Receipt	04/22/2022 12:41

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	8.85	S2	mg/L	0.01	Field	1	04/22/2022 08:30	BGS	F
pH, Field (SM4500B)	7.84	S2	pH_Units		Field	1	04/22/2022 08:30	BGS	F
Specific Conductance, Field	1972	S2	umhos/cm	1	Field	1	04/22/2022 08:30	BGS	F
Temperature	10.70	S2	Deg. C		Field	1	04/22/2022 08:30	BGS	F

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.	S2			Lib Search VOC	1	04/26/2022 15:29	CHS	J

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND,S2	mg/L	0.0022	SW846 6020A	1	04/27/2022 18:13	MO	E1
Arsenic, Dissolved	ND	ND,S2	mg/L	0.0030	SW846 6020A	1	04/27/2022 17:12	MO	D1
Arsenic, Total	ND	ND,S2	mg/L	0.0033	SW846 6020A	1	04/27/2022 18:13	MO	E1
Barium, Dissolved	0.039	S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 17:12	MO	D1
Barium, Total	0.038	S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 18:13	MO	E1
Beryllium, Total	ND	ND,S2	mg/L	0.0011	SW846 6020A	1	04/27/2022 18:13	MO	E1
Cadmium, Dissolved	ND	ND,S2	mg/L	0.0011	SW846 6020A	1	04/27/2022 17:12	MO	D1
Cadmium, Total	ND	ND,S2	mg/L	0.0011	SW846 6020A	1	04/27/2022 18:13	MO	E1
Calcium, Dissolved	63.0	S2	mg/L	0.11	SW846 6020A	1	04/27/2022 17:12	MO	D1
Calcium, Total	63.2	S2	mg/L	0.11	SW846 6020A	1	04/27/2022 18:13	MO	E1
Chromium, Dissolved	ND	ND,S2	mg/L	0.0022	SW846 6020A	1	04/27/2022 17:12	MO	D1
Chromium, Total	ND	ND,S2	mg/L	0.0022	SW846 6020A	1	04/27/2022 18:13	MO	E1
Cobalt, Total	ND	ND,S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 18:13	MO	E1
Copper, Dissolved	0.0063	S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 17:12	MO	D1
Copper, Total	0.0066	S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 18:13	MO	E1
Iron, Dissolved	ND	ND,S2	mg/L	0.056	SW846 6020A	1	04/27/2022 17:12	MO	D1
Iron, Total	0.060	S2	mg/L	0.056	SW846 6020A	1	04/27/2022 18:13	MO	E1
Lead, Dissolved	ND	ND,S2	mg/L	0.0022	SW846 6020A	1	04/27/2022 17:12	MO	D1
Lead, Total	ND	ND,S2	mg/L	0.0022	SW846 6020A	1	04/27/2022 18:13	MO	E1
Magnesium, Dissolved	50.9	S2	mg/L	0.11	SW846 6020A	1	04/27/2022 17:12	MO	D1
Magnesium, Total	51.1	S2	mg/L	0.11	SW846 6020A	1	04/27/2022 18:13	MO	E1
Manganese, Dissolved	ND	ND,S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 17:12	MO	D1
Manganese, Total	0.0063	S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 18:13	MO	E1
Mercury, Dissolved	ND	ND,S2	mg/L	0.00050	SW846 7470A	1	04/29/2022 16:58	A1S	D
Mercury, Total	ND	ND,S2	mg/L	0.00050	SW846 7470A	1	04/29/2022 17:07	A1S	E
Nickel, Total	0.014	S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 18:13	MO	E1
Potassium, Dissolved	15.1	S2	mg/L	0.11	SW846 6020A	1	04/27/2022 17:12	MO	D1
Potassium, Total	15.4	S2	mg/L	0.11	SW846 6020A	1	04/27/2022 18:13	MO	E1
Selenium, Dissolved	ND	ND,S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 17:12	MO	D1
Selenium, Total	ND	ND,S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 18:13	MO	E1
Silver, Dissolved	ND	ND,S2	mg/L	0.0022	SW846 6020A	1	04/27/2022 17:12	MO	D1
Silver, Total	ND	ND,S2	mg/L	0.0022	SW846 6020A	1	04/27/2022 18:13	MO	E1
Sodium, Dissolved	217	S2	mg/L	1.1	SW846 6020A	10	04/27/2022 17:18	MO	D1



Results

Client Sample ID	CWMP018S	Collected	04/22/2022 08:30
Lab Sample ID	3238926002	Lab Receipt	04/22/2022 12:41

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Sodium, Total	224	S2	mg/L	1.1	SW846 6020A	10	04/28/2022 12:28	MO	E1
Thallium, Total	ND	ND,S2	mg/L	0.0011	SW846 6020A	1	04/27/2022 18:13	MO	E1
Vanadium, Total	ND	ND,S2	mg/L	0.0022	SW846 6020A	1	04/27/2022 18:13	MO	E1
Zinc, Dissolved	0.045	S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 17:12	MO	D1
Zinc, Total	0.046	S2	mg/L	0.0056	SW846 6020A	1	04/27/2022 18:13	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,1,1-Trichloroethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,1,2,2-Tetrachloroethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,1,2-Trichloroethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,1-Dichloroethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,1-Dichloroethene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,2,3-Trichloropropane	ND	ND,S2	ug/L	2.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,2-Dibromo-3-chloropropane	ND	ND,S2	ug/L	7.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,2-Dibromoethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,2-Dichlorobenzene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,2-Dichloroethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,2-Dichloropropane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,3-Dichlorobenzene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
1,4-Dichlorobenzene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
2-Butanone	ND	ND,S2	ug/L	10.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
2-Hexanone	ND	ND,S2	ug/L	5.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
3-Chloro-1-propene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
4-Methyl-2-Pentanone(MIBK)	ND	ND,S2	ug/L	5.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Acetone	ND	ND,S2	ug/L	10.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Acrylonitrile	ND	ND,S2	ug/L	5.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Benzene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Bromochloromethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Bromodichloromethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Bromoform	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Bromomethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Carbon Disulfide	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Carbon Tetrachloride	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Chlorobenzene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Chlorodibromomethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Chloroethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Chloroform	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Chloromethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
cis-1,2-Dichloroethene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
cis-1,3-Dichloropropene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Dibromomethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Dichlorodifluoromethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Ethylbenzene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Iodomethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J



Results

Client Sample ID	CWMP018S	Collected	04/22/2022 08:30
Lab Sample ID	3238926002	Lab Receipt	04/22/2022 12:41

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Methylene Chloride	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Styrene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Tetrachloroethene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Toluene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Total Xylenes	ND	ND,S2	ug/L	3.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
trans-1,2-Dichloroethene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
trans-1,3-Dichloropropene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
trans-1,4-Dichloro-2-butene	ND	ND,S2	ug/L	3.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Trichloroethene	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Trichlorofluoromethane	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Vinyl Acetate	ND	ND,S2	ug/L	5.0	SW846 8260B	1	04/26/2022 15:29	DPC	J
Vinyl Chloride	ND	ND,S2	ug/L	1.0	SW846 8260B	1	04/26/2022 15:29	DPC	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	117%	62 – 133	04/26/2022 15:29	
4-Bromofluorobenzene	460-00-4	107%	79 – 114	04/26/2022 15:29	
Dibromofluoromethane	1868-53-7	112%	78 – 116	04/26/2022 15:29	
Toluene-d8	2037-26-5	115%	76 – 127	04/26/2022 15:29	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	216	S2	mg/L	5	SM2320B-2011	1	04/26/2022 18:22	BXD	A
Alkalinity, Total	255	1,S2	mg/L	5	SM2320B-2011	1	04/26/2022 18:22	BXD	A
Ammonia-N	0.781	S2	mg/L	0.100	ASTM D6919-09	10	04/30/2022 08:30	ALK	C
Chemical Oxygen Demand (COD)	19	S2	mg/L	15	EPA 410.4	1	04/27/2022 08:18	ALK	C
Chloride	346	S2	mg/L	10.0	EPA 300.0	10	04/30/2022 09:38	MSA	A
Fluoride	ND	ND,S2	mg/L	0.20	EPA 300.0	2	04/23/2022 19:17	M1D	A
Nitrate-N	11.7	S2	mg/L	1.0	EPA 300.0	2	04/23/2022 19:17	M1D	A
pH	8.82	2,S2	pH_Units		S4500HB-11	1	04/26/2022 18:22	BXD	A
Phenolics	ND	ND,S2	mg/L	0.004	SW846 9066	1	04/29/2022 15:02	AKH	I
Specific Conductance	1850	S2	umhos/cm	1	SM2510B-2011	1	04/25/2022 15:01	BXD	A
Sulfate	38.2	3,S2	mg/L	2.0	EPA 300.0	2	04/23/2022 19:17	M1D	A
Total Dissolved Solids	918	S2	mg/L	25	S2540C-11	1	04/27/2022 08:27	SMS	A
Total Organic Carbon (TOC)	6.8	S2	mg/L	0.50	SM5310B-2011	1	04/26/2022 01:25	PAG	G
Turbidity	0.68	S2	NTU	0.10	SM2130B-2011	1	04/23/2022 01:13	LXZ	A



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method		
3238926001	CWMP017S	Field	N/A			
		SW846 6020A	SW846 3015			
		SW846 6020A	SW846 3015			
		SW846 7470A	SW846 7470A			
		SW846 7470A	SW846 7470A			
		Lib Search VOC	N/A			
		SW846 8260B	N/A			
		ASTM D6919-09	N/A			
		EPA 300.0	N/A			
		EPA 300.0	N/A			
		EPA 410.4	N/A			
		S2540C-11	N/A			
		S4500HB-11	N/A			
		SM2130B-2011	N/A			
		SM2320B-2011	N/A			
		SM2510B-2011	N/A			
		SM5310B-2011	N/A			
		SW846 9066	420.4/9066			
		3238926002	CWMP018S	Field	N/A	
				SW846 6020A	SW846 3015	
SW846 6020A	SW846 3015					
SW846 7470A	SW846 7470A					
SW846 7470A	SW846 7470A					
Lib Search VOC	N/A					
SW846 8260B	N/A					
ASTM D6919-09	N/A					
EPA 300.0	N/A					
EPA 300.0	N/A					
EPA 410.4	N/A					
S2540C-11	N/A					
S4500HB-11	N/A					
SM2130B-2011	N/A					
SM2320B-2011	N/A					
SM2510B-2011	N/A					
SM5310B-2011	N/A					
SW846 9066	420.4/9066					



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch	
3238926001	CWMP017S	N/A	N/A	N/A		Field	848404	
		SW846 3015	842462	04/26/2022 11:32	ANN	SW846 6020A	842846	
		SW846 3015	842462	04/26/2022 11:32	ANN	SW846 6020A	843007	
		SW846 3015	843147	04/29/2022 13:53	JSE	SW846 6020A	843295	
		SW846 3015	842462	04/26/2022 11:32	ANN	SW846 6020A	842750	
		SW846 7470A	842593	04/29/2022 11:20	A1S	SW846 7470A	843276	
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275	
		N/A	N/A	N/A		Lib Search VOC	842768	
		N/A	N/A	N/A		SW846 8260B	842407	
		N/A	N/A	N/A		ASTM D6919-09	842534	
		N/A	N/A	N/A		EPA 300.0	843163	
		N/A	N/A	N/A		EPA 300.0	842096	
		N/A	N/A	N/A		EPA 410.4	842503	
		N/A	N/A	N/A		S2540C-11	842352	
		N/A	N/A	N/A		S4500HB-11	842459	
		N/A	N/A	N/A		SM2130B-2011	841673	
		N/A	N/A	N/A		SM2320B-2011	842459	
		N/A	N/A	N/A		SM2510B-2011	842235	
		N/A	N/A	N/A		SM5310B-2011	842290	
			420.4/9066	842801	04/28/2022 08:20	AKH	SW846 9066	842947
3238926002	CWMP018S	N/A	N/A	N/A		Field	848404	
		SW846 3015	842462	04/26/2022 11:32	ANN	SW846 6020A	843007	
		SW846 3015	842759	04/27/2022 14:05	ANN	SW846 6020A	842840	
		SW846 3015	842462	04/26/2022 11:32	ANN	SW846 6020A	842846	
		SW846 7470A	842593	04/29/2022 11:20	A1S	SW846 7470A	843276	
		SW846 7470A	842590	04/29/2022 11:20	A1S	SW846 7470A	843275	
		N/A	N/A	N/A		Lib Search VOC	842768	
		N/A	N/A	N/A		SW846 8260B	842407	
		N/A	N/A	N/A		ASTM D6919-09	842534	
		N/A	N/A	N/A		EPA 300.0	842096	
		N/A	N/A	N/A		EPA 300.0	843163	
		N/A	N/A	N/A		EPA 410.4	842503	
		N/A	N/A	N/A		S2540C-11	842352	
		N/A	N/A	N/A		S4500HB-11	842459	
		N/A	N/A	N/A		SM2130B-2011	841673	
		N/A	N/A	N/A		SM2320B-2011	842459	
		N/A	N/A	N/A		SM2510B-2011	842235	
		N/A	N/A	N/A		SM5310B-2011	842290	
			420.4/9066	842801	04/28/2022 08:20	AKH	SW846 9066	842947



301 Fulling Mill Rd
 Middletown, PA 17057
 P. 717-944-5541
 F. 717-944-1430

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

COI
 ALS

3238926

Logged By: KSB
 PH: SJB

of

Client Name: Lancaster County Solid Waste Management Authority
Address: 1299 Harrisburg Pike
 Lancaster, PA 17603
Contact: Mr. Dan Brown
Phone#: (717) 553-5864
Project Name#: Creswell/GWMP Form 19A
Bill To: LCSWMA

Container Type: AG
Container Size: 40 mL
Preservative: HCl
ANALYSES/METHOD REQUESTED

Container Type	AG	AN	CG	PL	PL	PL	PL	PL
Container Size	40 mL	125 mL	40 mL	1L	250 mL	250 mL	125 mL	125 mL
Preservative	HCl	H2SO4	HCl	None	H2SO4	None	HNO3	HNO3

Sample Description/Location (as it will appear on the lab report)	Date Collected		Time	
	mm/dd/yy	hh:mm	hh:mm	mm:ss
1 CWMP017S	4/22/22	9:57		
2 CWMP018S	4/22/22	8:30		
3				
4				
5				
6				
7				
8				
9				
10				

Enter Number of Containers Per Sample or Field Results Below.										
TOC	O-H	8260 VOCs - Form 19A + Subtitle D	PH, Cl, SPC, F, SO4, NO3, TB, TDS	Alkalinity, HCO3	NH3-N, COD	Filtered)	Disolved Metals Form 19A (Field	Total Metals Form 19A + Subtitle D		
2	1	2	1	1	1	1	1	1	1	1
2	1	2	1	1	1	1	1	1	1	1

Sampler Comments:
 Jordan Gallagher
 Relinquished By / Company Name
 Jordan Gallagher / LCSWMA
 Date
 4/22/22 17:41
 Received By / Company Name
 SAJALS
 Date
 4/22/22 12:11

Standard	Special Processing	State Samples Collected In
<input type="checkbox"/> CLP-like	USACE <input type="checkbox"/>	NY <input type="checkbox"/>
<input type="checkbox"/> USACE/DOD	Navy <input type="checkbox"/>	NJ <input type="checkbox"/>
<input type="checkbox"/>		PA <input type="checkbox"/>
<input type="checkbox"/>		NC <input type="checkbox"/>
<input type="checkbox"/>		other <input type="checkbox"/>

(completed by receiving Lab)
W.O. Temp: 14 **Therm ID:** 575
Courier/Tracking #:
Purchase Order #:

Project Comments:
 Temp Taken By: SA
 WO Temp (°C): N
 Therm ID: 575
 Receipt Info Completed By: AMF
 Cooler Custody Seal Intact: Y N MA
 Sample Custody Seal Intact: Y N MA
 Received on Ice: Y N MA
 Cooler & Samples Intact: Y N
 Correct Containers Provided: Y N
 Sample Label/COC Agree: Y N
 Adequate Sample Volumes: Y N
 VOA Headspace Present: Y N MA
 Voa Trip Blank: Y N
 MIs 4 Days?: Y N
 Rad Screen (uCi): Y N
 Courier/Tracking #: Y N
 SDWA Compliance: Y N
 PWSID: Y N

Deliverables	Reportable to PADEP?	Sample Disposal
<input type="checkbox"/> Standard	Yes <input type="checkbox"/> No <input type="checkbox"/>	Lab <input type="checkbox"/>
<input type="checkbox"/> CLP-like		Special <input type="checkbox"/>
<input type="checkbox"/> USACE/DOD		
<input type="checkbox"/>		

EDDS: Format Type:
 SO=Soil, WP=Wipe, WW=Wastewater

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



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 2022 CWMP-FORM 19A
Workorder 3241423
Report ID 170257 on 5/20/2022

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on May 06, 2022.

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

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

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

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

Recipient(s):

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

Susan Scherer

Susan Scherer
Project Coordinator

(ALS Digital Signature)

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



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>
3241423001	CWMP012W	Ground Water	05/06/2022 12:42	05/06/2022 17:05	BGS	Analytical Laboratory Service
3241423002	Field Blank	Water	05/06/2022 14:40	05/06/2022 17:05	BGS	Analytical Laboratory Service
3241423003	Trip Blank	Water	05/06/2022 14:40	05/06/2022 17:05	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)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.



Project Notations

Sample Notations

Lab ID **Sample ID**

Result Notations

Notation Ref.

- | | |
|---|---|
| 1 | The Total Alkalinity is titrated to a pH of 4.5 and reported as mg 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. |



Detected Results Summary

Client Sample ID	CWMP012W	Collected	05/06/2022 12:42
Lab Sample ID	3241423001	Lab Receipt	05/06/2022 17:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	64.82	Feet		Field	#
pH, Field (SM4500B)	5.74	pH_Units		Field	#
Specific Conductance, Field	319	umhos/cm	1	Field	#
Temperature	14.20	Deg. C		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.082	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.11	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	30.3	mg/L	0.11	SW846 6020A	#
Calcium, Total	30.8	mg/L	0.11	SW846 6020A	#
Iron, Total	39.0	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	8.9	mg/L	0.11	SW846 6020A	#
Magnesium, Total	9.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.28	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.40	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.013	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	14.5	mg/L	0.11	SW846 6020A	#
Sodium, Total	15.5	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0062	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0084	mg/L	0.0056	SW846 6020A	#
VOLATILE ORGANICS					
Acetone	10.0	ug/L	10.0	SW846 8260B	#
WET CHEMISTRY					
Ammonia-N	0.298	mg/L	0.250	ASTM D6919-09	#
Chloride	31.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	7.2	mg/L	1.0	EPA 300.0	#
pH	5.69	pH_Units		S4500HB-11	#
Phenolics	0.07	mg/L	0.04	SW846 9066	#
Specific Conductance	326	umhos/cm	1	SM2510B-2011	#
Sulfate	4.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	182	mg/L	25	S2540C-11	#
Total Organic Carbon (TOC)	1.5	mg/L	0.50	SM5310B-2011	#
Turbidity	83.3	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	Field Blank	Collected	05/06/2022 14:40
Lab Sample ID	3241423002	Lab Receipt	05/06/2022 17:05

Compound	Result	Units	RDL	Method	Flag
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
VOLATILE ORGANICS					
Acetone	58.2	ug/L	10.0	SW846 8260B	#
Chloroform	7.2	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	74	mg/L	5	SM2320B-2011	#
Alkalinity, Total	74	mg/L	5	SM2320B-2011	#
pH	7.14	pH_Units		S4500HB-11	#
Phenolics	0.005	mg/L	0.004	SW846 9066	#
Specific Conductance	1	umhos/cm	1	SM2510B-2011	#
Turbidity	0.12	NTU	0.10	SM2130B-2011	#



Detected Results Summary

Client Sample ID	Trip Blank	Collected	05/06/2022 14:40
Lab Sample ID	3241423003	Lab Receipt	05/06/2022 17:05

<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	CWMP012W	Collected	05/06/2022 12:42
Lab Sample ID	3241423001	Lab Receipt	05/06/2022 17:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	64.82		Feet		Field	1	05/06/2022 12:42	BGS	F
pH, Field (SM4500B)	5.74		pH_Units		Field	1	05/06/2022 12:42	BGS	F
Specific Conductance, Field	319		umhos/cm	1	Field	1	05/06/2022 12:42	BGS	F
Temperature	14.20		Deg. C		Field	1	05/06/2022 12:42	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	05/12/2022 02:50	CHS	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	05/13/2022 15:04	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/13/2022 14:22	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/13/2022 15:04	MO	E1
Barium, Dissolved	0.082		mg/L	0.0056	SW846 6020A	1	05/13/2022 14:22	MO	D1
Barium, Total	0.11		mg/L	0.0056	SW846 6020A	1	05/13/2022 15:04	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/13/2022 15:04	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/13/2022 14:22	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/13/2022 15:04	MO	E1
Calcium, Dissolved	30.3		mg/L	0.11	SW846 6020A	1	05/13/2022 14:22	MO	D1
Calcium, Total	30.8		mg/L	0.11	SW846 6020A	1	05/13/2022 15:04	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 14:22	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 15:04	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:04	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 14:22	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:04	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/13/2022 14:22	MO	D1
Iron, Total	39.0		mg/L	0.056	SW846 6020A	1	05/13/2022 15:04	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 14:22	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 15:04	MO	E1
Magnesium, Dissolved	8.9		mg/L	0.11	SW846 6020A	1	05/13/2022 14:22	MO	D1
Magnesium, Total	9.3		mg/L	0.11	SW846 6020A	1	05/13/2022 15:04	MO	E1
Manganese, Dissolved	0.28		mg/L	0.0056	SW846 6020A	1	05/13/2022 14:22	MO	D1
Manganese, Total	0.40		mg/L	0.0056	SW846 6020A	1	05/13/2022 15:04	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/16/2022 12:18	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/12/2022 18:17	A1S	E
Nickel, Total	0.013		mg/L	0.0056	SW846 6020A	1	05/13/2022 15:04	MO	E1
Potassium, Dissolved	1.3		mg/L	0.11	SW846 6020A	1	05/13/2022 14:22	MO	D1
Potassium, Total	1.4		mg/L	0.11	SW846 6020A	1	05/13/2022 15:04	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 14:22	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:04	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 14:22	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 15:04	MO	E1
Sodium, Dissolved	14.5		mg/L	0.11	SW846 6020A	1	05/13/2022 14:22	MO	D1



Results

Client Sample ID	CWMP012W	Collected	05/06/2022 12:42
Lab Sample ID	3241423001	Lab Receipt	05/06/2022 17:05

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Sodium, Total	15.5		mg/L	0.11	SW846 6020A	1	05/13/2022 15:04	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/13/2022 15:04	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 15:04	MO	E1
Zinc, Dissolved	0.0062		mg/L	0.0056	SW846 6020A	1	05/13/2022 14:22	MO	D1
Zinc, Total	0.0084		mg/L	0.0056	SW846 6020A	1	05/13/2022 15:04	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	05/12/2022 02:50	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Acetone	10.0		ug/L	10.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J



Results

Client Sample ID	CWMP012W	Collected	05/06/2022 12:42
Lab Sample ID	3241423001	Lab Receipt	05/06/2022 17:05

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/12/2022 02:50	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:50	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.5%	62 – 133	05/12/2022 02:50	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	05/12/2022 02:50	
Dibromofluoromethane	1868-53-7	95.3%	78 – 116	05/12/2022 02:50	
Toluene-d8	2037-26-5	99.8%	76 – 127	05/12/2022 02:50	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	05/12/2022 23:43	BXD	A
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	05/12/2022 23:43	BXD	A
Ammonia-N	0.298		mg/L	0.250	ASTM D6919-09	25	05/12/2022 17:20	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	05/19/2022 11:20	ALK	C
Chloride	31.9		mg/L	2.0	EPA 300.0	2	05/07/2022 08:04	MSA	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/07/2022 08:04	MSA	A
Nitrate-N	7.2		mg/L	1.0	EPA 300.0	2	05/07/2022 08:04	MSA	A
pH	5.69	2	pH_Units		S4500HB-11	1	05/12/2022 23:43	BXD	A
Phenolics	0.07		mg/L	0.04	SW846 9066	10	05/17/2022 18:35	AKH	I
Specific Conductance	326		umhos/cm	1	SM2510B-2011	1	05/09/2022 15:43	BXD	A
Sulfate	4.5		mg/L	2.0	EPA 300.0	2	05/07/2022 08:04	MSA	A
Total Dissolved Solids	182		mg/L	25	S2540C-11	1	05/10/2022 08:54	SMS	A
Total Organic Carbon (TOC)	1.5		mg/L	0.50	SM5310B-2011	1	05/09/2022 17:21	PAG	G
Turbidity	83.3		NTU	0.10	SM2130B-2011	1	05/07/2022 07:11	LXZ	A



Results

Client Sample ID	Field Blank	Collected	05/06/2022 14:40
Lab Sample ID	3241423002	Lab Receipt	05/06/2022 17:05

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected					Lib Search VOC	1	05/12/2022 02:28	CHS	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	05/13/2022 15:06	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/13/2022 14:24	MO	D1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/13/2022 15:06	MO	E1
Barium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 14:24	MO	D1
Barium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:06	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/13/2022 15:06	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/13/2022 14:24	MO	D1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/13/2022 15:06	MO	E1
Calcium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/13/2022 14:24	MO	D1
Calcium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/13/2022 15:06	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 14:24	MO	D1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 15:06	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:06	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 14:24	MO	D1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:06	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/13/2022 14:24	MO	D1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/13/2022 15:06	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 14:24	MO	D1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 15:06	MO	E1
Magnesium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/13/2022 14:24	MO	D1
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/13/2022 15:06	MO	E1
Manganese, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 14:24	MO	D1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:06	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	05/16/2022 12:20	A1S	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	05/12/2022 18:19	A1S	E
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:06	MO	E1
Potassium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/13/2022 14:24	MO	D1
Potassium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/13/2022 15:06	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 14:24	MO	D1
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:06	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 14:24	MO	D1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 15:06	MO	E1
Sodium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/13/2022 14:24	MO	D1
Sodium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/13/2022 15:06	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/13/2022 15:06	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/13/2022 15:06	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 14:24	MO	D1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/13/2022 15:06	MO	E1



Results

Client Sample ID	Field Blank	Collected	05/06/2022 14:40
Lab Sample ID	3241423002	Lab Receipt	05/06/2022 17:05

METALS (cont.)

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

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	05/12/2022 02:28	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Acetone	58.2		ug/L	10.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Chloroform	7.2		ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/12/2022 02:28	PDK	J



Results

Client Sample ID	Field Blank	Collected	05/06/2022 14:40
Lab Sample ID	3241423002	Lab Receipt	05/06/2022 17:05

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	05/12/2022 02:28	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/12/2022 02:28	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/12/2022 02:28	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.5%	62 – 133	05/12/2022 02:28	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	05/12/2022 02:28	
Dibromofluoromethane	1868-53-7	95.6%	78 – 116	05/12/2022 02:28	
Toluene-d8	2037-26-5	99.2%	76 – 127	05/12/2022 02:28	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	74		mg/L	5	SM2320B-2011	1	05/12/2022 23:53	BXD	A
Alkalinity, Total	74	1	mg/L	5	SM2320B-2011	1	05/12/2022 23:53	BXD	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-09	1	05/13/2022 22:10	ALK	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	05/11/2022 17:39	ALK	C
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	05/07/2022 07:54	MSA	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	05/07/2022 07:54	MSA	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	05/07/2022 07:54	MSA	A
pH	7.14	2	pH_Units		S4500HB-11	1	05/12/2022 23:53	BXD	A
Phenolics	0.005		mg/L	0.004	SW846 9066	1	05/17/2022 15:38	AKH	I
Specific Conductance	1		umhos/cm	1	SM2510B-2011	1	05/09/2022 15:43	BXD	A
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	05/07/2022 07:54	MSA	A
Total Dissolved Solids	ND	ND	mg/L	25	S2540C-11	1	05/10/2022 08:54	SMS	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-2011	1	05/09/2022 17:21	PAG	G
Turbidity	0.12		NTU	0.10	SM2130B-2011	1	05/07/2022 07:11	LXZ	A



Results

Client Sample ID	Trip Blank	Collected	05/06/2022 14:40
Lab Sample ID	3241423003	Lab Receipt	05/06/2022 17:05

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected					Lib Search VOC	1	05/10/2022 23:08	CHS	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	05/10/2022 23:08	VLM	A
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A



Results

Client Sample ID	Trip Blank	Collected	05/06/2022 14:40
Lab Sample ID	3241423003	Lab Receipt	05/06/2022 17:05

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	05/10/2022 23:08	VLM	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/10/2022 23:08	VLM	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/10/2022 23:08	VLM	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	05/10/2022 23:08	
4-Bromofluorobenzene	460-00-4	112%	79 – 114	05/10/2022 23:08	
Dibromofluoromethane	1868-53-7	107%	78 – 116	05/10/2022 23:08	
Toluene-d8	2037-26-5	111%	76 – 127	05/10/2022 23:08	



Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3241423001	CWMP012W	Field	N/A	
		SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
SW846 9066	420.4/9066			
3241423002	Field Blank	SW846 6020A	SW846 3015	
		SW846 6020A	SW846 3015	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-09	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S2540C-11	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM5310B-2011	N/A	
		SW846 9066	420.4/9066	
3241423003	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	
3241423001	CWMP012W	N/A	N/A	N/A		Field	847946	
		SW846 3015	846000	05/08/2022 21:33	ANN	SW846 6020A	847582	
		SW846 3015	846016	05/09/2022 00:41	ANN	SW846 6020A	847581	
		SW846 7470A	846424	05/12/2022 12:00	A1S	SW846 7470A	847449	
		SW846 7470A	847688	05/14/2022 12:35	AHI	SW846 7470A	847911	
		N/A	N/A	N/A		Lib Search VOC	847486	
		N/A	N/A	N/A		SW846 8260B	846973	
		N/A	N/A	N/A		ASTM D6919-09	846555	
		N/A	N/A	N/A		EPA 300.0	845771	
		N/A	N/A	N/A		EPA 410.4	848089	
		N/A	N/A	N/A		S2540C-11	846022	
		N/A	N/A	N/A		S4500HB-11	847214	
		N/A	N/A	N/A		SM2130B-2011	845875	
		N/A	N/A	N/A		SM2320B-2011	847214	
		N/A	N/A	N/A		SM2510B-2011	846096	
		N/A	N/A	N/A		SM5310B-2011	846125	
			420.4/9066	847930	05/17/2022 08:09	AKH	SW846 9066	848039
3241423002	Field Blank	SW846 3015	846000	05/08/2022 21:33	ANN	SW846 6020A	847582	
		SW846 3015	846016	05/09/2022 00:41	ANN	SW846 6020A	847581	
		SW846 7470A	846424	05/12/2022 12:00	A1S	SW846 7470A	847449	
		SW846 7470A	847688	05/14/2022 12:35	AHI	SW846 7470A	847911	
		N/A	N/A	N/A		Lib Search VOC	847486	
		N/A	N/A	N/A		SW846 8260B	846973	
		N/A	N/A	N/A		ASTM D6919-09	846565	
		N/A	N/A	N/A		EPA 300.0	845771	
		N/A	N/A	N/A		EPA 410.4	846548	
		N/A	N/A	N/A		S2540C-11	846022	
		N/A	N/A	N/A		S4500HB-11	847214	
		N/A	N/A	N/A		SM2130B-2011	845875	
		N/A	N/A	N/A		SM2320B-2011	847214	
		N/A	N/A	N/A		SM2510B-2011	846096	
		N/A	N/A	N/A		SM5310B-2011	846125	
			420.4/9066	847926	05/17/2022 08:07	AKH	SW846 9066	848039
		3241423003	Trip Blank	N/A	N/A	N/A		Lib Search VOC
N/A	N/A			N/A		SW846 8260B	846444	

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

Generated by ALS

COC #:
ALS QUC

3241423
 Logged By: KSB
 PH: SJB

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#: Cresswell/GWMP Form 19A
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 **mreider@LCSWMA.org**
Fax? Y N **No.:** (717) 397-9973

Container Type	AG	AN	CG	PL	PL	PL	PL	ANALYSES/METHOD REQUESTED		COC
								Container Size	Preservative	
40 ml	40 ml	125 ml	40 ml	1 L	500 ml	500 ml	500 ml	H2SO4	HNO3	HNO3
HCl	HCl	H2SO4	HCl	None	None	H2SO4	HNO3			
TOC										
O-H										
8260 VOCs - Form 19A + Subtitle D										
pH, Cl, Spc, F, SO4, NO3, Tb, TDS										
Alkalinity, HCO3										
FM										
Sample Depth for AUX Data										
NH3-N, COD										
Diss Metals Form 19A (Field Filtered)										
Total Metals Form 19A + Subtitle D										

Receipt Information (completed by receiving Lab)
Cooler Temp: 1 **Therm ID:** 570
No. of Coolers: Y N Initial
 Custody Seals Present? (if present) Seals Intact? Received on Ice? COC Labels Complete/Accurate? Cont. in Good Cond.?
 Temp Taken By: WO Temp (°C) Therm ID: Receipt Info Completed By: Cooler Custody Seal Intact Sample Custody Seal Intact Received on Ice Cooler & Samples Intact Correct Containers Provided Sample Label/COC Agree Adequate Sample Volumes VOA Headspace Present VOA Trip Blank NUS 4 Days? Rad Screen (uCi) Courier/Tracking #: SDWA Compliance PWSID

Project Comments	LOGGED BY (signature):		REVIEWED BY (signature):		Received By / Company Name	
	DATE	TIME	DATE	TIME	DATE	TIME
1. CWMP012W	05/06/22	1242	05/06/22	1440	5-6-22	1705
2. Field Blank	05/06/22	1440				
3. Trip Blank	05/06/22	1705				
4.						
5.						
6.						
7.						
8.						
9.						
10.						

ALS Field Services: Pickup Labor Rental_Equipment
 Composite_Sampling Other:
Special Processing: USACE Navy
State Samples Collected In: NY NJ PA NC
Sample Disposal: Lab Special
Reportable to PADEP? Yes No
PWSID #
EDDS: Format Type: