2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 6.67 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.50 ft — Elevation of Water Level: 446.73 ft./MSL

Sampling Depth: 33 ft — Volume of Water Column: 43.81 gal

Total Well Depth: 36.5 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/17/2023 — Sample Collection Time: 11:43

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3298334001 — Final Lab Analysis CompletionDate: 4/27/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP007W
Sample Date	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	ASTM D6919-09
BICARBONATE	11	SM20 2321
CALCIUM, TOTAL	19.7	SW846 6010C
CALCIUM, DISSOLVED	19.8	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	74.8	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	10.3	SW846 6010C
MAGNESIUM, DISSOLVED	10.3	SW846 6010C
MANGANESE, TOTAL (ug/l)	7.4	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	7.4	SW846 6010C
NITRATE-NITROGEN	9.6	EPA 300
pH-FIELD (SU)	5.36	FIELD
pH-LAB (SU)	6.72	SM4500B
POTASSIUM, TOTAL	2.2	SW846 6010C
POTASSIUM, DISSOLVED	2.3	6SW846 010C
SODIUM, TOTAL	34.7	SW846 6010C
SODIUM, DISSOLVED	35.1	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	299	FIELD
SPEC. COND., LAB (umhos/cm)	413	EPA 120.1
SULFATE	16.6	EPA 300
ALKALINITY	11	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	250	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20 5310B
TOTAL PHENOLICS (ug/l)	50	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP007W
Sample Date	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	55	SW846 6010C
BARIUM, DISSOLVED	55	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	6.8	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP007W
Sample Date	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/17/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	6.5	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.	CWMP007W
Sample Date	4/17/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

X 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: 28.68 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.23 ft — Elevation of Water Level: 486.45 ft./MSL

Sampling Depth: 57 ft — Volume of Water Column: 55.25 gal

Total Well Depth: 66.3 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 2.2

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/17/2023 — Sample Collection Time: 11:58

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3298334002 — Final Lab Analysis CompletionDate: 4/27/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP001W
Sample Date	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	ASTM D6919-09
BICARBONATE	7	SM20 2321
CALCIUM, TOTAL	15.2	SW846 6010C
CALCIUM, DISSOLVED	14.6	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	26.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	900	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	10.3	SW846 6010C
MAGNESIUM, DISSOLVED	10.1	SW846 6010C
MANGANESE, TOTAL (ug/l)	60	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	47	SW846 6010C
NITRATE-NITROGEN	17.1	EPA 300
pH-FIELD (SU)	5.37	FIELD
pH-LAB (SU)	6.65	SM4500B
POTASSIUM, TOTAL	2.2	SW846 6010C
POTASSIUM, DISSOLVED	2.2	6SW846 010C
SODIUM, TOTAL	13.6	SW846 6010C
SODIUM, DISSOLVED	13.6	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	201	FIELD
SPEC. COND., LAB (umhos/cm)	270	EPA 120.1
SULFATE	2.6	EPA 300
ALKALINITY	7	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	180	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20 5310B
TOTAL PHENOLICS (ug/l)	30	SW846 9066
TURBIDITY (N.T.U.)	55	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	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	81	SW846 6010C
BARIUM, DISSOLVED	76	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	6.7	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	17	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP001W
Sample Date	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/17/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	6.8	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.	CWMP001W
Sample Date	4/17/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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General Reference: Section 273.284
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Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

X 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: 43.33 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -0.37 ft — Elevation of Water Level: 470.1 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 141.97 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/17/2023 — Sample Collection Time: 13:38

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3298334003 — Final Lab Analysis CompletionDate: 4/27/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.127	ASTM D6919-09
BICARBONATE	14	SM20 2321
CALCIUM, TOTAL	14.4	SW846 6010C
CALCIUM, DISSOLVED	14.7	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	63.8	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	7.5	SW846 6010C
MAGNESIUM, DISSOLVED	7.6	SW846 6010C
MANGANESE, TOTAL (ug/l)	40	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	41	SW846 6010C
NITRATE-NITROGEN	7.6	EPA 300
pH-FIELD (SU)	5.76	FIELD
pH-LAB (SU)	6.96	SM4500B
POTASSIUM, TOTAL	2.1	SW846 6010C
POTASSIUM, DISSOLVED	2.1	6SW846 010C
SODIUM, TOTAL	32.4	SW846 6010C
SODIUM, DISSOLVED	32.2	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	251	FIELD
SPEC. COND., LAB (umhos/cm)	335	EPA 120.1
SULFATE	4.9	EPA 300
ALKALINITY	14	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	210	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20 5310B
TOTAL PHENOLICS (ug/l)	20	SW846 9066
TURBIDITY (N.T.U.)	0.4	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	46	SW846 6010C
BARIUM, DISSOLVED	47	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	8.6	SW846 6010C
ZINC, DISSOLVED	8.7	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	4/17/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/17/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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.

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	4/17/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 10.06 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.53 ft — Elevation of Water Level: 301.91 ft./MSL

Sampling Depth: 71 ft — Volume of Water Column: ___ gal

Total Well Depth: 78.03 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/19/2023 — Sample Collection Time: 12:18

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3298830001 — Final Lab Analysis CompletionDate: 5/1/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP016W
Sample Date	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.147	ASTM D6919-09
BICARBONATE	7	SM20 2321
CALCIUM, TOTAL	5.1	SW846 6010C
CALCIUM, DISSOLVED	5.1	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	39	EPA 410.4
CHLORIDE	2.5	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	160	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	1.3	SW846 6010C
MAGNESIUM, DISSOLVED	1.3	SW846 6010C
MANGANESE, TOTAL (ug/l)	9	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	7.1	SW846 6010C
NITRATE-NITROGEN	1.5	EPA 300
pH-FIELD (SU)	5.66	FIELD
pH-LAB (SU)	7.14	SM4500B
POTASSIUM, TOTAL	0.5	SW846 6010C
POTASSIUM, DISSOLVED	0.5	6SW846 010C
SODIUM, TOTAL	3.3	SW846 6010C
SODIUM, DISSOLVED	3.3	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	39	FIELD
SPEC. COND., LAB (umhos/cm)	64	EPA 120.1
SULFATE	9.5	EPA 300
ALKALINITY	7	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	56	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.2	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP016W
Sample Date	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	10	SW846 6010C
BARIUM, DISSOLVED	10	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	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/19/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	7	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	4/19/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 9.12 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.70 ft — Elevation of Water Level: 395.08 ft./MSL

Sampling Depth: 16 ft — Volume of Water Column: 6.91 gal

Total Well Depth: 19.7 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 4.1

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/19/2023 — Sample Collection Time: 13:10

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3298830002 — Final Lab Analysis CompletionDate: 5/1/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP009W
Sample Date	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	35	ASTM D6919-09
BICARBONATE	523	SM20 2321
CALCIUM, TOTAL	173	SW846 6010C
CALCIUM, DISSOLVED	170	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	130	EPA 410.4
CHLORIDE	651	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	38300	SW846 6010C
IRON, DISSOLVED (ug/l)	38900	SW846 6010C
MAGNESIUM, TOTAL	85.9	SW846 6010C
MAGNESIUM, DISSOLVED	87.1	SW846 6010C
MANGANESE, TOTAL (ug/l)	13500	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	12600	SW846 6010C
NITRATE-NITROGEN	2.5 ND	EPA 300
pH-FIELD (SU)	6.15	FIELD
pH-LAB (SU)	7.58	SM4500B
POTASSIUM, TOTAL	35.1	SW846 6010C
POTASSIUM, DISSOLVED	7.1	6SW846 010C
SODIUM, TOTAL	205	SW846 6010C
SODIUM, DISSOLVED	41.6	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	1906	FIELD
SPEC. COND., LAB (umhos/cm)	3220	EPA 120.1
SULFATE	6.8	EPA 300
ALKALINITY	523	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	1760	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	35.6	SM20 5310B
TOTAL PHENOLICS (ug/l)	20 ND	SW846 9066
TURBIDITY (N.T.U.)	20	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	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	2	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1.1	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	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	17 ND	SW846 6010C
ARSENIC, DISSOLVED	15 ND	SW846 6010C
BARIUM, TOTAL	810	SW846 6010C
BARIUM, DISSOLVED	810	SW846 6010C
CADMIUM, TOTAL	5.5 ND	SW846 6010C
CADMIUM, DISSOLVED	5.5 ND	SW846 6010C
CHROMIUM, TOTAL	11 ND	SW846 6010C
CHROMIUM, DISSOLVED	11 ND	SW846 6010C
COPPER, TOTAL	28 ND	SW846 6010C
COPPER, DISSOLVED	28 ND	SW846 6010C
LEAD-FLAMELESS, TOTAL	11 ND	SW846 6010C
LEAD, DISSOLVED	11 ND	SW846 6010C
MERCURY, TOTAL		SW846 7470A
MERCURY, DISSOLVED	0.5 ND	SW846 7470A
SELENIUM, TOTAL	28 ND	SW846 6010C
SELENIUM, DISSOLVED	28 ND	SW846 6010C
SILVER, TOTAL	11 ND	SW846 6010C
SILVER, DISSOLVED	11 ND	SW846 6010C
ZINC, TOTAL	28 ND	SW846 6010C
ZINC, DISSOLVED	28 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP009W
Sample Date	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	18.4	SW846 8260B
CHLOROETHANE	8.3	SW846 8260B
DIBROMOCHLOROMETHANE (CHLORODIBROMOMET	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROBENZENE	2	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	9.4	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	4/19/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	11 ND	EPA 200.8
BERYLLIUM	5.5 ND	EPA 200.8
COBALT	68	SW846 6010C
NICKEL	100	SW846 6010C
THALLIUM	5.5 ND	EPA 200.8
VANADIUM	11 ND	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP009W
Sample Date	4/19/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 8.53 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.10 ft — Elevation of Water Level: 352.37 ft./MSL

Sampling Depth: 17 ft — Volume of Water Column: 7.23 gal

Total Well Depth: 19.6 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 2.4

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/19/2023 — Sample Collection Time: 13:47

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3298830003 — Final Lab Analysis CompletionDate: 5/1/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP010W
Sample Date	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	ASTM D6919-09
BICARBONATE	144	SM20 2321
CALCIUM, TOTAL	39	SW846 6010C
CALCIUM, DISSOLVED	39.8	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	53	EPA 410.4
CHLORIDE	226	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	170	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	37.5	SW846 6010C
MAGNESIUM, DISSOLVED	37.3	SW846 6010C
MANGANESE, TOTAL (ug/l)	69	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	26	SW846 6010C
NITRATE-NITROGEN	12.8	EPA 300
pH-FIELD (SU)	6.66	FIELD
pH-LAB (SU)	8.07	SM4500B
POTASSIUM, TOTAL	7.3	SW846 6010C
POTASSIUM, DISSOLVED	7.3	6SW846 010C
SODIUM, TOTAL	124	SW846 6010C
SODIUM, DISSOLVED	122	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	768	FIELD
SPEC. COND., LAB (umhos/cm)	1120	EPA 120.1
SULFATE	25.8	EPA 300
ALKALINITY	144	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	618	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	2.8	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	3.1	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP010W
Sample Date	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	44	SW846 6010C
BARIUM, DISSOLVED	41	SW846 6010C
CADMIUM, TOTAL	1.1 ND	SW846 6010C
CADMIUM, DISSOLVED	1.1 ND	SW846 6010C
CHROMIUM, TOTAL	5.2	SW846 6010C
CHROMIUM, DISSOLVED	2.3	SW846 6010C
COPPER, TOTAL	6.2	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	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/19/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	10	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	4/19/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 3.32 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.80 ft — Elevation of Water Level: 418.98 ft./MSL

Sampling Depth: 19 ft — Volume of Water Column: 3.18 gal

Total Well Depth: 22.8 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

Well Purged: X Yes ___ No — Well Volumes Purged: 5.9

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/19/2023 — Sample Collection Time: 14:28

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3298830004 — Final Lab Analysis CompletionDate: 5/1/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP008W
Sample Date	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	6.75	ASTM D6919-09
BICARBONATE	341	SM20 2321
CALCIUM, TOTAL	61.6	SW846 6010C
CALCIUM, DISSOLVED	62.9	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	45	EPA 410.4
CHLORIDE	29.7	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	23200	SW846 6010C
IRON, DISSOLVED (ug/l)	22800	SW846 6010C
MAGNESIUM, TOTAL	30.3	SW846 6010C
MAGNESIUM, DISSOLVED	31.4	SW846 6010C
MANGANESE, TOTAL (ug/l)	16300	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	15400	SW846 6010C
NITRATE-NITROGEN	1 ND	EPA 300
pH-FIELD (SU)	6.2	FIELD
pH-LAB (SU)	7.4	SM4500B
POTASSIUM, TOTAL	7.8	SW846 6010C
POTASSIUM, DISSOLVED	7.7	6SW846 010C
SODIUM, TOTAL	36.6	SW846 6010C
SODIUM, DISSOLVED	36.1	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	519	FIELD
SPEC. COND., LAB (umhos/cm)	804	EPA 120.1
SULFATE	5.9	EPA 300
ALKALINITY	341	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	446	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	7.8	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	4.2	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP008W
Sample Date	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1.4	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	2.1	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	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 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	3.7	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		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	4/19/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	8.6	SW846 8260B
CHLOROETHANE	4.6	SW846 8260B
DIBROMOCHLOROMETHANE (CHLORODIBROMOMET	1 ND	SW846 8260B
CHLOROMETHANE	1 ND	SW846 8260B
3-CHLORO-1-PROPENE	1 ND	SW846 8260B
1,2-DICHLOROBENZENE	1.1	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	9	SW846 8260B
DICHLORODIFLUOROMETHANE	1.5	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	4/19/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	21	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.	CWMP008W
Sample Date	4/19/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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 X 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: X Pumped ___ Bailed ___ Grab

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/20/2023 — Sample Collection Time: 10:59

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3299051001 — Final Lab Analysis CompletionDate: 5/4/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP018S
Sample Date	4/20/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN		ASTM D6919-09
BICARBONATE	319	SM20 2321
CALCIUM, TOTAL	72.8	SW846 6010C
CALCIUM, DISSOLVED	73.3	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	57	EPA 410.4
CHLORIDE	515	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	67	SW846 6010C
IRON, DISSOLVED (ug/l)	56 ND	SW846 6010C
MAGNESIUM, TOTAL	78	SW846 6010C
MAGNESIUM, DISSOLVED	76.6	SW846 6010C
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	5.6 ND	SW846 6010C
NITRATE-NITROGEN	24.9	EPA 300
pH-FIELD (SU)	8.4	FIELD
pH-LAB (SU)	8.62	SM4500B
POTASSIUM, TOTAL	19.4	SW846 6010C
POTASSIUM, DISSOLVED	19.1	6SW846 010C
SODIUM, TOTAL	332	SW846 6010C
SODIUM, DISSOLVED	320	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	1573	FIELD
SPEC. COND., LAB (umhos/cm)	2660	EPA 120.1
SULFATE	17.9	EPA 300
ALKALINITY	362	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	1420	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	7.7	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.1	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP018S
Sample Date	4/20/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/20/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	40	SW846 6010C
BARIUM, DISSOLVED	40	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	7.3	SW846 6010C
COPPER, DISSOLVED	21	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	190	SW846 6010C
ZINC, DISSOLVED	190	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP018S
Sample Date	4/20/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/20/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	17	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	4/20/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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 X 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: X Pumped ___ Bailed ___ Grab

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/20/2023 — Sample Collection Time: 11:50

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3299051002 — Final Lab Analysis CompletionDate: 5/4/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP017S
Sample Date	4/20/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	ASTM D6919-09
BICARBONATE	559	SM20 2321
CALCIUM, TOTAL	80.1	SW846 6010C
CALCIUM, DISSOLVED	80.6	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	44	EPA 410.4
CHLORIDE	732	EPA 300
FLUORIDE	0.5 ND	EPA 300
IRON, TOTAL (ug/l)	280	SW846 6010C
IRON, DISSOLVED (ug/l)	130	SW846 6010C
MAGNESIUM, TOTAL	109	SW846 6010C
MAGNESIUM, DISSOLVED	110	SW846 6010C
MANGANESE, TOTAL (ug/l)	57	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	50	SW846 6010C
NITRATE-NITROGEN	34.2	EPA 300
pH-FIELD (SU)	7.95	FIELD
pH-LAB (SU)	8.57	SM4500B
POTASSIUM, TOTAL	19.2	SW846 6010C
POTASSIUM, DISSOLVED	19.6	6SW846 010C
SODIUM, TOTAL	479	SW846 6010C
SODIUM, DISSOLVED	488	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	2328	FIELD
SPEC. COND., LAB (umhos/cm)	3810	EPA 120.1
SULFATE	16.4	EPA 300
ALKALINITY	559	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	2020	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	4.3	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.4	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP017S
Sample Date	4/20/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/20/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	26	SW846 6010C
BARIUM, DISSOLVED	26	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	12	SW846 6010C
COPPER, DISSOLVED	12	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	180	SW846 6010C
ZINC, DISSOLVED	160	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP017S
Sample Date	4/20/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/20/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	9.3	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.	CWMP017S
Sample Date	4/20/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 66.25 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.90 ft — Elevation of Water Level: 316.45 ft./MSL

Sampling Depth: 0 ft — Volume of Water Column: 52.36 gal

Total Well Depth: 101.9 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/21/2023 — Sample Collection Time: 10:35

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3299270001 — Final Lab Analysis CompletionDate: 5/8/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP012W
Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.126	ASTM D6919-09
BICARBONATE	73	SM20 2321
CALCIUM, TOTAL	31	SW846 6010C
CALCIUM, DISSOLVED	31.2	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	30.3	EPA 300
FLUORIDE	0.2 ND	EPA 300
IRON, TOTAL (ug/l)	41400	SW846 6010C
IRON, DISSOLVED (ug/l)	560	SW846 6010C
MAGNESIUM, TOTAL	8.8	SW846 6010C
MAGNESIUM, DISSOLVED	8.7	SW846 6010C
MANGANESE, TOTAL (ug/l)	740	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	370	SW846 6010C
NITRATE-NITROGEN	6.3	EPA 300
pH-FIELD (SU)	6.02	FIELD
pH-LAB (SU)	6.62	SM4500B
POTASSIUM, TOTAL	1.4	SW846 6010C
POTASSIUM, DISSOLVED	1.4	6SW846 010C
SODIUM, TOTAL	14	SW846 6010C
SODIUM, DISSOLVED	13.7	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	233	FIELD
SPEC. COND., LAB (umhos/cm)	320	EPA 120.1
SULFATE	4.6	EPA 300
ALKALINITY	73	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	224	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	2.6	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	160	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	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	91	SW846 6010C
BARIUM, DISSOLVED	79	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	8.8	SW846 6010C
ZINC, DISSOLVED	6.1	SW846 6010C

T Please indicate detection limit if analyte is not detected.

I.D. No	100008
Monitoring Point No.	CWMP012W
Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/21/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	5.7	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	4/21/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 65.75 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -1.19 ft — Elevation of Water Level: 460.06 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 50.30 gal

Total Well Depth: 100 ft — Sampling Method: X Pumped ___ Bailed ___ Grab

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/21/2023 — Sample Collection Time: 12:27

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3299270002 — Final Lab Analysis CompletionDate: 5/4/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP002W
Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.124	ASTM D6919-09
BICARBONATE	49	SM20 2321
CALCIUM, TOTAL	32.3	SW846 6010C
CALCIUM, DISSOLVED	32.4	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	53	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	11.2	SW846 6010C
MAGNESIUM, DISSOLVED	11.5	SW846 6010C
MANGANESE, TOTAL (ug/l)	160	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	160	SW846 6010C
NITRATE-NITROGEN	5.9	EPA 300
pH-FIELD (SU)	5.79	FIELD
pH-LAB (SU)	6.63	SM4500B
POTASSIUM, TOTAL	2.2	SW846 6010C
POTASSIUM, DISSOLVED	2.3	6SW846 010C
SODIUM, TOTAL	19.6	SW846 6010C
SODIUM, DISSOLVED	20.1	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	254	FIELD
SPEC. COND., LAB (umhos/cm)	409	EPA 120.1
SULFATE	13.3	EPA 300
ALKALINITY	49	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	262	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	1.1	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.45	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP002W
Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	2.4	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	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	28	SW846 6010C
BARIUM, DISSOLVED	28	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.	CWMP002W
Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/21/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	15	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	4/21/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 98.64 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -1.29 ft — Elevation of Water Level: 425.57 ft./MSL

Sampling Depth: 100 ft — Volume of Water Column: -34.72 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/21/2023 — Sample Collection Time: 12:42

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3299270003 — Final Lab Analysis CompletionDate: 5/4/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP003W
Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.117	ASTM D6919-09
BICARBONATE	20	SM20 2321
CALCIUM, TOTAL	22.7	SW846 6010C
CALCIUM, DISSOLVED	22.5	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	62.3	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	8.3	SW846 6010C
MAGNESIUM, DISSOLVED	8.3	SW846 6010C
MANGANESE, TOTAL (ug/l)	13	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	12	SW846 6010C
NITRATE-NITROGEN	6.5	EPA 300
pH-FIELD (SU)	5.53	FIELD
pH-LAB (SU)	6.38	SM4500B
POTASSIUM, TOTAL	1.7	SW846 6010C
POTASSIUM, DISSOLVED	1.7	6SW846 010C
SODIUM, TOTAL	20.1	SW846 6010C
SODIUM, DISSOLVED	20.4	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	210	FIELD
SPEC. COND., LAB (umhos/cm)	324	EPA 120.1
SULFATE	5.2	EPA 300
ALKALINITY	20	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	266	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.5	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3	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.	CWMP003W
Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ARSENIC, TOTAL	3.3 ND	SW846 6010C
ARSENIC, DISSOLVED	3 ND	SW846 6010C
BARIUM, TOTAL	20	SW846 6010C
BARIUM, DISSOLVED	19	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	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BROMOFORM	1 ND	SW846 8260B
BROMOMETHANE	1 ND	SW846 8260B
CARBON TETRACHLORIDE	1 ND	SW846 8260B
CHLOROBENZENE	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-DICHLOROBENZENE	1 ND	SW846 8260B
1,3-DICHLOROBENZENE	1 ND	SW846 8260B
1,4-DICHLOROBENZENE	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	4/21/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
ACETONE	10 ND	SW846 8260B
ACRYLONITRILE	5 ND	SW846 8260B
BROMOCHLOROMETHANE) CHLOROBROMOMETHAN	1 ND	SW846 8260B
BROMODICHLOROMETHANE	1 ND	SW846 8260B
CARBON DISULFIDE	1 ND	SW846 8260B
CHLOROFORM	1 ND	SW846 8260B
1,2-DIBROMO-3-CHLOROPROPANE (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	11	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	4/21/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
06/08/2023
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity 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 — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X 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: 100.47 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -1.37 ft — Elevation of Water Level: 429.06 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 58.06 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 4/21/2023 — Sample Collection Time: 12:58

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3299270004 — Final Lab Analysis CompletionDate: 5/4/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP004W
Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.123	ASTM D6919-09
BICARBONATE	24	SM20 2321
CALCIUM, TOTAL	21	SW846 6010C
CALCIUM, DISSOLVED	21	SW846 6010C
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	56.2	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	7.5	SW846 6010C
MANGANESE, TOTAL (ug/l)	10	SW846 6010C
MANGANESE, DISSOLVED (ug/l)	10	SW846 6010C
NITRATE-NITROGEN	5.3	EPA 300
pH-FIELD (SU)	5.78	FIELD
pH-LAB (SU)	6.55	SM4500B
POTASSIUM, TOTAL	1.4	SW846 6010C
POTASSIUM, DISSOLVED	1.4	6SW846 010C
SODIUM, TOTAL	19.1	SW846 6010C
SODIUM, DISSOLVED	19.3	SW 846 6010C
SPEC. COND., FIELD (umhos/cm)	226	FIELD
SPEC. COND., LAB (umhos/cm)	305	EPA 120.1
SULFATE	5.7	EPA 300
ALKALINITY	24	SM20 2320B
TDS (TOTAL DISSOLVED SOLIDS)	250	SM20 2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM20 5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.3 ND	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	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1 ND	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
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cis 1,2-DICHLOROETHENE	1 ND	SW846 8260B
trans 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
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TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
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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	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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BARIUM, DISSOLVED	28	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
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SILVER, DISSOLVED	2.2 ND	SW846 6010C
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I.D. No	100008
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Sample Date	4/21/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
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1,3-DICHLOROBENZENE	1 ND	SW846 8260B
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cis 1,3-DICHLOROPROPENE	1 ND	SW846 8260B
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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	4/21/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

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

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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.

I.D. No	100008
Monitoring Point No.	CWMP004W
Sample Date	4/21/2023

FORM 19

ANNUAL WATER QUALITY ANALYSES

Qualitatively Identified Organic Compounds

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

Constituent	CAS Number

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

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

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

Project 2ND QTR 2023 CWMP-FORM 19A
Workorder 3298334
Report ID 241130 on 5/2/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 17, 2023.

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

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

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

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3298334001	CWMP007W	Ground Water	04/17/2023 11:43	04/17/2023 15:45	BGS	Analytical Laboratory Service
3298334002	CWMP001W	Ground Water	04/17/2023 11:58	04/17/2023 15:45	BGS	Analytical Laboratory Service
3298334003	CWMP005W	Ground Water	04/17/2023 13:38	04/17/2023 15:45	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
3	The QC type LLICV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 21.6 and the control limits were 0 to 20.
4	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Nitrate-N. The % Recovery was reported as 122 and the control limits were 80 to 120.

Detected Results Summary

Client Sample ID	CWMP007W	Collected	04/17/2023 11:43
Lab Sample ID	3298334001	Lab Receipt	04/17/2023 15:45

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	6.67	Feet		Field	#
Dissolved Oxygen	5.28	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	453.40	Feet		Field	#
Flow Rate	1.27	gal/min		Field	#
Ground Water Elevation	446.73	ft/MSL		Field	#
Oxidation-Reduction Potential	324	mV		Field	#
pH, Field (SM4500B)	5.36	pH_Units		Field	#
Sample Depth	33.00	Feet		Field	#
Specific Conductance, Field	299	umhos/cm	1	Field	#
Temperature	12.77	Deg. C		Field	#
Total Well Depth	36.50	Feet		Field	#
Volume in Water Column	43.85	Gallons		Field	#
Water Level After Purge	7.73	Feet		Field	#
Well Volumes Purged	1.70	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.055	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.055	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	19.8	mg/L	0.11	SW846 6020A	#
Calcium, Total	19.7	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	10.3	mg/L	0.11	SW846 6020A	#
Magnesium, Total	10.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.0074	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.0074	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0065	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.2	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	35.1	mg/L	0.11	SW846 6020A	#
Sodium, Total	34.7	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0068	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0068	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	11	mg/L	5	SM2320B-2011	#
Alkalinity, Total	11	mg/L	5	SM2320B-2011	#
Chloride	74.8	mg/L	2.0	EPA 300.0	#
Nitrate-N	9.6	mg/L	1.0	EPA 300.0	#
pH	6.72	pH_Units		S4500HB-11	#
Phenolics	0.05	mg/L	0.004	SW846 9066	#
Specific Conductance	413	umhos/cm	5	SM2510B-2011	#
Sulfate	16.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	250	mg/L	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	CWMP001W	Collected	04/17/2023 11:58
Lab Sample ID	3298334002	Lab Receipt	04/17/2023 15:45

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	28.68	Feet		Field	#
Dissolved Oxygen	8.67	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	515.13	Feet		Field	#
Flow Rate	1.90	gal/min		Field	#
Ground Water Elevation	486.45	ft/MSL		Field	#
Oxidation-Reduction Potential	294	mV		Field	#
pH, Field (SM4500B)	5.37	pH_Units		Field	#
Sample Depth	57.00	Feet		Field	#
Specific Conductance, Field	201	umhos/cm	1	Field	#
Temperature	13.92	Deg. C		Field	#
Total Well Depth	66.30	Feet		Field	#
Turbidity, Field	48	NTU	1	Field	#
Volume in Water Column	55.30	Gallons		Field	#
Water Level After Purge	54.41	Feet		Field	#
Well Volumes Purged	2.20	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.076	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.081	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	14.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	15.2	mg/L	0.11	SW846 6020A	#
Iron, Total	0.90	mg/L	0.056	SW846 6020A	#
Lead, Total	0.0067	mg/L	0.0022	SW846 6020A	#
Magnesium, Dissolved	10.1	mg/L	0.11	SW846 6020A	#
Magnesium, Total	10.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.047	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.060	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0068	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.2	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.2	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	13.6	mg/L	0.11	SW846 6020A	#
Sodium, Total	13.6	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.017	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.020	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	7	mg/L	5	SM2320B-2011	#
Alkalinity, Total	7	mg/L	5	SM2320B-2011	#
Chloride	26.5	mg/L	2.0	EPA 300.0	#
Nitrate-N	17.1	mg/L	1.0	EPA 300.0	#
pH	6.65	pH_Units		S4500HB-11	#
Phenolics	0.03	mg/L	0.004	SW846 9066	#
Specific Conductance	270	umhos/cm	5	SM2510B-2011	#
Sulfate	2.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	180	mg/L	25	SM2540C-15	#

Detected Results Summary

Sample - CWMP001W (cont.)

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY (cont.)					
Turbidity	55	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP005W	Collected	04/17/2023 13:38
Lab Sample ID	3298334003	Lab Receipt	04/17/2023 15:45

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	43.33	Feet		Field	#
Dissolved Oxygen	6.65	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	513.43	Feet		Field	#
Flow Rate	2.32	gal/min		Field	#
Ground Water Elevation	470.10	ft/MSL		Field	#
Oxidation-Reduction Potential	273	mV		Field	#
pH, Field (SM4500B)	5.76	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	251	umhos/cm	1	Field	#
Temperature	13.13	Deg. C		Field	#
Total Well Depth	138.92	Feet		Field	#
Volume in Water Column	140.52	Gallons		Field	#
Water Level After Purge	45.93	Feet		Field	#
Well Volumes Purged	1.10	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.047	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.046	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	14.7	mg/L	0.11	SW846 6020A	#
Calcium, Total	14.4	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	7.6	mg/L	0.11	SW846 6020A	#
Magnesium, Total	7.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.041	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.040	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	32.2	mg/L	0.11	SW846 6020A	#
Sodium, Total	32.4	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0087	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0086	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	14	mg/L	5	SM2320B-2011	#
Alkalinity, Total	14	mg/L	5	SM2320B-2011	#
Ammonia-N	0.127	mg/L	0.100	ASTM D6919-17	#
Chloride	63.8	mg/L	2.0	EPA 300.0	#
Nitrate-N	7.6	mg/L	1.0	EPA 300.0	#
pH	6.96	pH_Units		S4500HB-11	#
Phenolics	0.02	mg/L	0.004	SW846 9066	#
Specific Conductance	335	umhos/cm	5	SM2510B-2011	#
Sulfate	4.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	210	mg/L	25	SM2540C-15	#
Turbidity	0.40	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP007W	Collected	04/17/2023 11:43
Lab Sample ID	3298334001	Lab Receipt	04/17/2023 15:45

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	6.67		Feet		Field	1	04/17/2023 11:43	BGS	E
Dissolved Oxygen	5.28		mg/L	0.01	Field	1	04/17/2023 11:43	BGS	E
Elev Top MW Casing above MSL	453.40		Feet		Field	1	04/17/2023 11:43	BGS	E
Flow Rate	1.27		gal/min		Field	1	04/17/2023 11:43	BGS	E
Ground Water Elevation	446.73		ft/MSL		Field	1	04/17/2023 11:43	BGS	E
Oxidation-Reduction Potential	324		mV		Field	1	04/17/2023 11:43	BGS	E
pH, Field (SM4500B)	5.36		pH_Units		Field	1	04/17/2023 11:43	BGS	E
Sample Depth	33.00		Feet		Field	1	04/17/2023 11:43	BGS	E
Specific Conductance, Field	299		umhos/cm	1	Field	1	04/17/2023 11:43	BGS	E
Temperature	12.77		Deg. C		Field	1	04/17/2023 11:43	BGS	E
Total Well Depth	36.50		Feet		Field	1	04/17/2023 11:43	BGS	E
Turbidity, Field	ND	ND	NTU	1	Field	1	04/17/2023 11:43	BGS	E
Volume in Water Column	43.85		Gallons		Field	1	04/17/2023 11:43	BGS	E
Water Level After Purge	7.73		Feet		Field	1	04/17/2023 11:43	BGS	E
Well Volumes Purged	1.70		Vol		Field	1	04/17/2023 11:43	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	04/27/2023 01:25	PDK	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	04/25/2023 18:38	RMD	D1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Barium, Dissolved	0.055		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Barium, Total	0.055		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Calcium, Dissolved	19.8		mg/L	0.11	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Calcium, Total	19.7		mg/L	0.11	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Magnesium, Dissolved	10.3		mg/L	0.11	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Magnesium, Total	10.3		mg/L	0.11	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Manganese, Dissolved	0.0074		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:03	RMD	C1

Results

Client Sample ID	CWMP007W	Collected	04/17/2023 11:43
Lab Sample ID	3298334001	Lab Receipt	04/17/2023 15:45

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	04/25/2023 18:38	RMD	D1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2023 12:53	WDA	C
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/19/2023 13:25	WDA	D
Nickel, Total	0.0065		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Potassium, Dissolved	2.3		mg/L	0.11	SW846 6020A	1	04/27/2023 11:14	MO	C1
Potassium, Total	2.2		mg/L	0.11	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Selenium, Dissolved	ND	ND,3	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Selenium, Total	ND	ND,3	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Sodium, Dissolved	35.1		mg/L	0.11	SW846 6020A	1	04/27/2023 11:14	MO	C1
Sodium, Total	34.7		mg/L	0.11	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:38	RMD	D1
Zinc, Dissolved	0.0068		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:03	RMD	C1
Zinc, Total	0.0068		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:38	RMD	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	04/27/2023 01:25	PDK	I
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I

Results

Client Sample ID	CWMP007W	Collected	04/17/2023 11:43
Lab Sample ID	3298334001	Lab Receipt	04/17/2023 15:45

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	04/27/2023 01:25	PDK	I
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 01:25	PDK	I
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:25	PDK	I

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	04/27/2023 01:25	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	04/27/2023 01:25	
Dibromofluoromethane	1868-53-7	101%	78 – 116	04/27/2023 01:25	
Toluene-d8	2037-26-5	101%	76 – 127	04/27/2023 01:25	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	11		mg/L	5	SM2320B-2011	1	04/25/2023 19:14	NML	A
Alkalinity, Total	11	1	mg/L	5	SM2320B-2011	1	04/25/2023 19:14	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	04/24/2023 22:27	NML	B
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/21/2023 12:37	KMS	B
Chloride	74.8		mg/L	2.0	EPA 300.0	2	04/18/2023 11:21	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/18/2023 11:21	J1W	A
Nitrate-N	9.6		mg/L	1.0	EPA 300.0	2	04/18/2023 11:21	J1W	A
pH	6.72	2	pH_Units		S4500HB-11	1	04/25/2023 19:14	NML	A
Phenolics	0.05		mg/L	0.004	SW846 9066	1	04/20/2023 17:16	AKH	H
Specific Conductance	413		umhos/cm	5	SM2510B-2011	1	04/19/2023 10:20	JXL	A
Sulfate	16.6		mg/L	2.0	EPA 300.0	2	04/18/2023 11:21	J1W	A

Results

Client Sample ID	CWMP007W	Collected	04/17/2023 11:43
Lab Sample ID	3298334001	Lab Receipt	04/17/2023 15:45

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	250		mg/L	25	SM2540C-15	1	04/21/2023 18:29	GJB	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	04/20/2023 05:22	PAG	F
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	04/17/2023 23:46	NRB	A

Results

Client Sample ID	CWMP001W	Collected	04/17/2023 11:58
Lab Sample ID	3298334002	Lab Receipt	04/17/2023 15:45

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	28.68		Feet		Field	1	04/17/2023 11:58	BGS	E
Dissolved Oxygen	8.67		mg/L	0.01	Field	1	04/17/2023 11:58	BGS	E
Elev Top MW Casing above MSL	515.13		Feet		Field	1	04/17/2023 11:58	BGS	E
Flow Rate	1.90		gal/min		Field	1	04/17/2023 11:58	BGS	E
Ground Water Elevation	486.45		ft/MSL		Field	1	04/17/2023 11:58	BGS	E
Oxidation-Reduction Potential	294		mV		Field	1	04/17/2023 11:58	BGS	E
pH, Field (SM4500B)	5.37		pH_Units		Field	1	04/17/2023 11:58	BGS	E
Sample Depth	57.00		Feet		Field	1	04/17/2023 11:58	BGS	E
Specific Conductance, Field	201		umhos/cm	1	Field	1	04/17/2023 11:58	BGS	E
Temperature	13.92		Deg. C		Field	1	04/17/2023 11:58	BGS	E
Total Well Depth	66.30		Feet		Field	1	04/17/2023 11:58	BGS	E
Turbidity, Field	48		NTU	1	Field	1	04/17/2023 11:58	BGS	E
Volume in Water Column	55.30		Gallons		Field	1	04/17/2023 11:58	BGS	E
Water Level After Purge	54.41		Feet		Field	1	04/17/2023 11:58	BGS	E
Well Volumes Purged	2.20		Vol		Field	1	04/17/2023 11:58	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	04/27/2023 01:48	PDK	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	04/25/2023 18:40	RMD	D1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Barium, Dissolved	0.076		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Barium, Total	0.081		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Calcium, Dissolved	14.6		mg/L	0.11	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Calcium, Total	15.2		mg/L	0.11	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Iron, Total	0.90		mg/L	0.056	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Lead, Total	0.0067		mg/L	0.0022	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Magnesium, Dissolved	10.1		mg/L	0.11	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Magnesium, Total	10.3		mg/L	0.11	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Manganese, Dissolved	0.047		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:05	RMD	C1

Results

Client Sample ID	CWMP001W	Collected	04/17/2023 11:58
Lab Sample ID	3298334002	Lab Receipt	04/17/2023 15:45

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.060		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2023 12:54	WDA	C
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/19/2023 13:26	WDA	D
Nickel, Total	0.0068		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Potassium, Dissolved	2.2		mg/L	0.11	SW846 6020A	1	04/27/2023 11:16	MO	C1
Potassium, Total	2.2		mg/L	0.11	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Selenium, Dissolved	ND	ND,3	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Selenium, Total	ND	ND,3	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Sodium, Dissolved	13.6		mg/L	0.11	SW846 6020A	1	04/27/2023 11:16	MO	C1
Sodium, Total	13.6		mg/L	0.11	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:40	RMD	D1
Zinc, Dissolved	0.017		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:05	RMD	C1
Zinc, Total	0.020		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:40	RMD	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	04/27/2023 01:48	PDK	I
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I

Results

Client Sample ID	CWMP001W	Collected	04/17/2023 11:58
Lab Sample ID	3298334002	Lab Receipt	04/17/2023 15:45

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	04/27/2023 01:48	PDK	I
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 01:48	PDK	I
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 01:48	PDK	I

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	04/27/2023 01:48	
4-Bromofluorobenzene	460-00-4	107%	79 – 114	04/27/2023 01:48	
Dibromofluoromethane	1868-53-7	99.6%	78 – 116	04/27/2023 01:48	
Toluene-d8	2037-26-5	102%	76 – 127	04/27/2023 01:48	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	7		mg/L	5	SM2320B-2011	1	04/25/2023 20:04	NML	A
Alkalinity, Total	7	1	mg/L	5	SM2320B-2011	1	04/25/2023 20:04	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	04/24/2023 22:55	NML	B
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/21/2023 12:37	KMS	B
Chloride	26.5		mg/L	2.0	EPA 300.0	2	04/18/2023 11:32	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/18/2023 11:32	J1W	A
Nitrate-N	17.1		mg/L	1.0	EPA 300.0	2	04/18/2023 11:32	J1W	A
pH	6.65	2	pH_Units		S4500HB-11	1	04/25/2023 20:04	NML	A
Phenolics	0.03		mg/L	0.004	SW846 9066	1	04/20/2023 17:20	AKH	H
Specific Conductance	270		umhos/cm	5	SM2510B-2011	1	04/19/2023 10:20	JXL	A
Sulfate	2.6		mg/L	2.0	EPA 300.0	2	04/18/2023 11:32	J1W	A

Results

Client Sample ID	CWMP001W	Collected	04/17/2023 11:58
Lab Sample ID	3298334002	Lab Receipt	04/17/2023 15:45

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	180		mg/L	25	SM2540C-15	1	04/21/2023 18:29	GJB	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	04/20/2023 05:22	PAG	F
Turbidity	55		NTU	0.30	SM2130B-2011	1	04/17/2023 23:46	NRB	A

Results

Client Sample ID	CWMP005W	Collected	04/17/2023 13:38
Lab Sample ID	3298334003	Lab Receipt	04/17/2023 15:45

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	43.33		Feet		Field	1	04/17/2023 13:38	BGS	E
Dissolved Oxygen	6.65		mg/L	0.01	Field	1	04/17/2023 13:38	BGS	E
Elev Top MW Casing above MSL	513.43		Feet		Field	1	04/17/2023 13:38	BGS	E
Flow Rate	2.32		gal/min		Field	1	04/17/2023 13:38	BGS	E
Ground Water Elevation	470.10		ft/MSL		Field	1	04/17/2023 13:38	BGS	E
Oxidation-Reduction Potential	273		mV		Field	1	04/17/2023 13:38	BGS	E
pH, Field (SM4500B)	5.76		pH_Units		Field	1	04/17/2023 13:38	BGS	E
Sample Depth	130.00		Feet		Field	1	04/17/2023 13:38	BGS	E
Specific Conductance, Field	251		umhos/cm	1	Field	1	04/17/2023 13:38	BGS	E
Temperature	13.13		Deg. C		Field	1	04/17/2023 13:38	BGS	E
Total Well Depth	138.92		Feet		Field	1	04/17/2023 13:38	BGS	E
Turbidity, Field	ND	ND	NTU	1	Field	1	04/17/2023 13:38	BGS	E
Volume in Water Column	140.52		Gallons		Field	1	04/17/2023 13:38	BGS	E
Water Level After Purge	45.93		Feet		Field	1	04/17/2023 13:38	BGS	E
Well Volumes Purged	1.10		Vol		Field	1	04/17/2023 13:38	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	04/27/2023 02:11	PDK	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	04/25/2023 18:42	RMD	D1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Barium, Dissolved	0.047		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Barium, Total	0.046		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Calcium, Dissolved	14.7		mg/L	0.11	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Calcium, Total	14.4		mg/L	0.11	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Magnesium, Dissolved	7.6		mg/L	0.11	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Magnesium, Total	7.5		mg/L	0.11	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Manganese, Dissolved	0.041		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:11	RMD	C1

Results

Client Sample ID	CWMP005W	Collected	04/17/2023 13:38
Lab Sample ID	3298334003	Lab Receipt	04/17/2023 15:45

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.040		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2023 12:58	WDA	C
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/19/2023 13:27	WDA	D
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Potassium, Dissolved	2.1		mg/L	0.11	SW846 6020A	1	04/27/2023 11:22	MO	C1
Potassium, Total	2.1		mg/L	0.11	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Selenium, Dissolved	ND	ND,3	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Selenium, Total	ND	ND,3	mg/L	0.0056	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Sodium, Dissolved	32.2		mg/L	0.11	SW846 6020A	1	04/27/2023 11:22	MO	C1
Sodium, Total	32.4		mg/L	0.11	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 18:42	RMD	D1
Zinc, Dissolved	0.0087		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:11	RMD	C1
Zinc, Total	0.0086		mg/L	0.0056	SW846 6020A	1	04/25/2023 18:42	RMD	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	04/27/2023 02:11	PDK	I
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I

Results

Client Sample ID	CWMP005W	Collected	04/17/2023 13:38
Lab Sample ID	3298334003	Lab Receipt	04/17/2023 15:45

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	04/27/2023 02:11	PDK	I
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	04/27/2023 02:11	PDK	I
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	04/27/2023 02:11	PDK	I

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	04/27/2023 02:11	
4-Bromofluorobenzene	460-00-4	107%	79 – 114	04/27/2023 02:11	
Dibromofluoromethane	1868-53-7	100%	78 – 116	04/27/2023 02:11	
Toluene-d8	2037-26-5	101%	76 – 127	04/27/2023 02:11	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	14		mg/L	5	SM2320B-2011	1	04/25/2023 20:17	NML	A
Alkalinity, Total	14	1	mg/L	5	SM2320B-2011	1	04/25/2023 20:17	NML	A
Ammonia-N	0.127		mg/L	0.100	ASTM D6919-17	10	04/24/2023 22:41	NML	B
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/21/2023 12:37	KMS	B
Chloride	63.8		mg/L	2.0	EPA 300.0	2	04/18/2023 11:44	J1W	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/18/2023 11:44	J1W	A
Nitrate-N	7.6	4	mg/L	1.0	EPA 300.0	2	04/18/2023 11:44	J1W	A
pH	6.96	2	pH_Units		S4500HB-11	1	04/25/2023 20:17	NML	A
Phenolics	0.02		mg/L	0.004	SW846 9066	1	04/20/2023 17:23	AKH	H
Specific Conductance	335		umhos/cm	5	SM2510B-2011	1	04/19/2023 10:20	JXL	A
Sulfate	4.9		mg/L	2.0	EPA 300.0	2	04/18/2023 11:44	J1W	A

Results

Client Sample ID	CWMP005W	Collected	04/17/2023 13:38
Lab Sample ID	3298334003	Lab Receipt	04/17/2023 15:45

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	210		mg/L	25	SM2540C-15	1	04/21/2023 18:29	GJB	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	04/20/2023 05:22	PAG	F
Turbidity	0.40		NTU	0.30	SM2130B-2011	1	04/17/2023 23:46	NRB	A

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3298334001	CWMP007W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3298334002	CWMP001W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3298334003	CWMP005W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3298334001	CWMP007W	N/A	N/A	N/A		Field	980677
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	980588
		SW846 3015A	975474	04/19/2023 21:16	ANN	SW846 6020A	979063
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	979066
		SW846 7470A	975755	04/19/2023 07:35	WDA	SW846 7470A	975862
		SW846 7470A	976355	04/20/2023 08:10	WDA	SW846 7470A	976485
		N/A	N/A	N/A		Lib Search VOC	984652
		N/A	N/A	N/A		SW846 8260B	980254
		N/A	N/A	N/A		ASTM D6919-17	978563
		N/A	N/A	N/A		EPA 300.0	975296
		N/A	N/A	N/A		EPA 410.4	976886
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	975270
		N/A	N/A	N/A		SM2320B-2011	978475
		N/A	N/A	N/A		SM2510B-2011	975406
		N/A	N/A	N/A		SM2540C-15	976539
		N/A	N/A	N/A		SM5310B-14	975915
		SW846 9066	975370	04/20/2023 07:14	AKH	SW846 9066	976367
3298334002	CWMP001W	N/A	N/A	N/A		Field	980677
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	980588
		SW846 3015A	975474	04/19/2023 21:16	ANN	SW846 6020A	979063
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	979066
		SW846 7470A	975755	04/19/2023 07:35	WDA	SW846 7470A	975862
		SW846 7470A	976355	04/20/2023 08:10	WDA	SW846 7470A	976485
		N/A	N/A	N/A		Lib Search VOC	984652
		N/A	N/A	N/A		SW846 8260B	980254
		N/A	N/A	N/A		ASTM D6919-17	978563
		N/A	N/A	N/A		EPA 300.0	975296
		N/A	N/A	N/A		EPA 410.4	976886
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	975270
		N/A	N/A	N/A		SM2320B-2011	978475
		N/A	N/A	N/A		SM2510B-2011	975406
		N/A	N/A	N/A		SM2540C-15	976539
		N/A	N/A	N/A		SM5310B-14	975915
		SW846 9066	975370	04/20/2023 07:14	AKH	SW846 9066	976367
3298334003	CWMP005W	N/A	N/A	N/A		Field	980677
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	980588
		SW846 3015A	975474	04/19/2023 21:16	ANN	SW846 6020A	979063
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	979066
		SW846 7470A	975755	04/19/2023 07:35	WDA	SW846 7470A	975862
		SW846 7470A	976355	04/20/2023 08:10	WDA	SW846 7470A	976485
		N/A	N/A	N/A		Lib Search VOC	984652
		N/A	N/A	N/A		SW846 8260B	980254
		N/A	N/A	N/A		ASTM D6919-17	978563
		N/A	N/A	N/A		EPA 300.0	975296
		N/A	N/A	N/A		EPA 410.4	976886
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	975270
		N/A	N/A	N/A		SM2320B-2011	978475
		N/A	N/A	N/A		SM2510B-2011	975406
		N/A	N/A	N/A		SM2540C-15	976539
		N/A	N/A	N/A		SM5310B-14	975915
		SW846 9066	975370	04/20/2023 07:14	AKH	SW846 9066	976367

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALS Environmental

Generated by ALS

COC

ALS

3298334

Logged By: SLS

PM: SJB

1 of 1

5/2/2023 1:33 PM

ALS Environmental • Middletown, PA 17057 • Phone: 717.944.5541 • Fax: 717.944.1430 • www.alsglobal.com

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

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

Client Name: Lancaster County Solid Waste MA

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

Contact: Dan Brown

Phone#: (717) 735-0193

Project Name/#: Creswell/GWMP Form 19A

Bill To: Lancaster County Solid Waste MA

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

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

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

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

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	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 Filered)	Total Metals Form 19A + Subtitle D
Container Type					AG	AN	CG	PL	PL	---	---	PL	PL	PL
Container Size					40 ml	125 ml	40 ml	1 L	500 ml	---	---	500 ml	500 ml	500 ml
Preservative					HCl	H2SO4	HCl	None	None	---	---	H2SO4	HNO3	HNO3
					ANALYSES/METHOD REQUESTED									
					Enter Number of Containers Per Sample or Field Results Below.									
1. CWMP007W	04/17/23	1143	G	GW	2	1	2	1	1	X	X	1	2	2
2. CWMP001W	04/17/23	1158	G	GW	2	1	2	1	1	X	X	1	2	2
3. CWMP005W	04/17/23	1338	G	GW	2	1	2	1	1	X	X	1	2	2
4														
5														
6														
7														
8														
9														
10														

DDP 4/17/23

Cooler Temp: 3° Therm ID: 525

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 By: DD | WO Temp (°C): 3c | Therm ID: 525

Receipt Info Completed By: RAW

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

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

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 [illegible] ALS	4-17-23	1545	2 DD/ALS	4/17/23	1545
3			4		
5			6		
7			8		
			10		

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

Special Processing: USACE ☐ Navy ☐ ☐

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

Reportable to PADEP? Yes ☐ PWSID #

Sample Disposal: Lab [X] Special ☐

EDDS: Format Type-

* G=Grab; C=Composite

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

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

Rev 8/04

23 of 23

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

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

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

Project 2ND QTR 2023 CWMP-FORM 19A
Workorder 3298830
Report ID 244937 on 5/17/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 19, 2023.

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

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

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

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3298830001	CWMP016W	Ground Water	04/19/2023 12:18	04/19/2023 16:17	BGS	Analytical Laboratory Service
3298830002	CWMP009W	Ground Water	04/19/2023 13:10	04/19/2023 16:17	BGS	Analytical Laboratory Service
3298830003	CWMP010W	Ground Water	04/19/2023 13:47	04/19/2023 16:17	BGS	Analytical Laboratory Service
3298830004	CWMP008W	Ground Water	04/19/2023 14:28	04/19/2023 16:17	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The QC type LLICV for method SW846 6020A was outside the control limits for the analyte Se. The % RSD was reported as 21.6 and the control limits were 0 to 20.
2	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
3	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
4	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Nitrate-N. The % Recovery was reported as 67.7 and the control limits were 80 to 120.

Detected Results Summary

Client Sample ID	CWMP016W	Collected	04/19/2023 12:18
Lab Sample ID	3298830001	Lab Receipt	04/19/2023 16:17

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	10.06	Feet		Field	#
Dissolved Oxygen	9.25	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	311.97	Feet		Field	#
Flow Rate	2.26	gal/min		Field	#
Ground Water Elevation	301.91	ft/MSL		Field	#
Oxidation-Reduction Potential	267	mV		Field	#
pH, Field (SM4500B)	5.66	pH_Units		Field	#
Sample Depth	71.00	Feet		Field	#
Specific Conductance, Field	39	umhos/cm	1	Field	#
Temperature	12.42	Deg. C		Field	#
Total Well Depth	73.52	Feet		Field	#
Volume in Water Column	93.29	Gallons		Field	#
Water Level After Purge	19.42	Feet		Field	#
Well Volumes Purged	1.50	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.010	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.010	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	5.1	mg/L	0.11	SW846 6020A	#
Calcium, Total	5.1	mg/L	0.11	SW846 6020A	#
Cobalt, Total	0.0070	mg/L	0.0056	SW846 6020A	#
Iron, Total	0.16	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	1.3	mg/L	0.11	SW846 6020A	#
Magnesium, Total	1.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.0071	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.0090	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	0.50	mg/L	0.11	SW846 6020A	#
Potassium, Total	0.50	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	3.3	mg/L	0.11	SW846 6020A	#
Sodium, Total	3.3	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	7	mg/L	5	SM2320B-2011	#
Alkalinity, Total	7	mg/L	5	SM2320B-2011	#
Ammonia-N	0.147	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	39	mg/L	15	EPA 410.4	#
Chloride	2.5	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.5	mg/L	1.0	EPA 300.0	#
pH	7.14	pH_Units		S4500HB-11	#
Specific Conductance	64	umhos/cm	5	SM2510B-2011	#
Sulfate	9.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	56	mg/L	25	SM2540C-15	#
Turbidity	1.2	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP009W	Collected	04/19/2023 13:10
Lab Sample ID	3298830002	Lab Receipt	04/19/2023 16:17

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	9.12	Feet		Field	#
Dissolved Oxygen	0.17	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	395.08	ft/MSL		Field	#
Oxidation-Reduction Potential	-61	mV		Field	#
pH, Field (SM4500B)	6.15	pH_Units		Field	#
Sample Depth	16.00	Feet		Field	#
Specific Conductance, Field	1906	umhos/cm	1	Field	#
Temperature	11.65	Deg. C		Field	#
Total Well Depth	19.70	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
Volume in Water Column	6.88	Gallons		Field	#
Water Level After Purge	9.42	Feet		Field	#
Well Volumes Purged	4.10	Vol		Field	#
METALS					
Barium, Dissolved	0.81	mg/L	0.028	SW846 6020A	#
Barium, Total	0.81	mg/L	0.028	SW846 6020A	#
Calcium, Dissolved	170	mg/L	0.55	SW846 6020A	#
Calcium, Total	173	mg/L	0.55	SW846 6020A	#
Cobalt, Total	0.068	mg/L	0.028	SW846 6020A	#
Iron, Dissolved	38.9	mg/L	0.28	SW846 6020A	#
Iron, Total	38.3	mg/L	0.28	SW846 6020A	#
Magnesium, Dissolved	87.1	mg/L	0.55	SW846 6020A	#
Magnesium, Total	85.9	mg/L	0.55	SW846 6020A	#
Manganese, Dissolved	12.6	mg/L	0.028	SW846 6020A	#
Manganese, Total	13.5	mg/L	0.028	SW846 6020A	#
Nickel, Total	0.10	mg/L	0.028	SW846 6020A	#
Potassium, Dissolved	7.1	mg/L	0.11	SW846 6020A	#
Potassium, Total	35.1	mg/L	0.55	SW846 6020A	#
Sodium, Dissolved	41.6	mg/L	0.11	SW846 6020A	#
Sodium, Total	205	mg/L	0.55	SW846 6020A	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.1	ug/L	1.0	SW846 8260B	#
1,2-Dichlorobenzene	2.0	ug/L	1.0	SW846 8260B	#
1,4-Dichlorobenzene	9.4	ug/L	1.0	SW846 8260B	#
Benzene	2.0	ug/L	1.0	SW846 8260B	#
Chlorobenzene	18.4	ug/L	1.0	SW846 8260B	#
Chloroethane	8.3	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	523	mg/L	50	SM2320B-2011	#
Alkalinity, Total	523	mg/L	50	SM2320B-2011	#
Ammonia-N	35.0	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	130	mg/L	15	EPA 410.4	#
Chloride	651	mg/L	10.0	EPA 300.0	#

Detected Results Summary

Sample - CWMP009W (cont.)

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY (cont.)					
pH	7.58	pH_Units		S4500HB-11	#
Specific Conductance	3220	umhos/cm	50	SM2510B-2011	#
Sulfate	6.8	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1760	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	35.6	mg/L	2.5	SM5310B-14	#
Turbidity	20	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP010W	Collected	04/19/2023 13:47
Lab Sample ID	3298830003	Lab Receipt	04/19/2023 16:17

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	8.53	Feet		Field	#
Dissolved Oxygen	5.87	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	360.90	Feet		Field	#
Flow Rate	0.86	gal/min		Field	#
Ground Water Elevation	352.37	ft/MSL		Field	#
Oxidation-Reduction Potential	110	mV		Field	#
pH, Field (SM4500B)	6.66	pH_Units		Field	#
Sample Depth	17.00	Feet		Field	#
Specific Conductance, Field	768	umhos/cm	1	Field	#
Temperature	12.90	Deg. C		Field	#
Total Well Depth	19.60	Feet		Field	#
Turbidity, Field	2	NTU	1	Field	#
Volume in Water Column	7.20	Gallons		Field	#
Water Level After Purge	15.23	Feet		Field	#
Well Volumes Purged	2.40	Vol		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.041	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.044	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	39.8	mg/L	0.11	SW846 6020A	#
Calcium, Total	39.0	mg/L	0.11	SW846 6020A	#
Chromium, Dissolved	0.0023	mg/L	0.0022	SW846 6020A	#
Chromium, Total	0.0052	mg/L	0.0022	SW846 6020A	#
Copper, Total	0.0062	mg/L	0.0056	SW846 6020A	#
Iron, Total	0.17	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	37.3	mg/L	0.11	SW846 6020A	#
Magnesium, Total	37.5	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.026	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.069	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.010	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	7.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	7.3	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	122	mg/L	0.11	SW846 6020A	#
Sodium, Total	124	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	144	mg/L	5	SM2320B-2011	#
Alkalinity, Total	144	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	53	mg/L	15	EPA 410.4	#
Chloride	226	mg/L	5.0	EPA 300.0	#
Nitrate-N	12.8	mg/L	1.0	EPA 300.0	#
pH	8.07	pH_Units		S4500HB-11	#
Specific Conductance	1120	umhos/cm	5	SM2510B-2011	#
Sulfate	25.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	618	mg/L	25	SM2540C-15	#

Detected Results Summary

Sample - CWMP010W (cont.)

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY (cont.)					
Total Organic Carbon (TOC)	2.8	mg/L	0.50	SM5310B-14	#
Turbidity	3.1	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP008W	Collected	04/19/2023 14:28
Lab Sample ID	3298830004	Lab Receipt	04/19/2023 16:17

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	3.32	Feet		Field	#
Elev Top MW Casing above MSL	422.30	Feet		Field	#
Flow Rate	0.92	gal/min		Field	#
Ground Water Elevation	418.98	ft/MSL		Field	#
Oxidation-Reduction Potential	-42	mV		Field	#
pH, Field (SM4500B)	6.20	pH_Units		Field	#
Sample Depth	19.00	Feet		Field	#
Specific Conductance, Field	519	umhos/cm	1	Field	#
Temperature	13.76	Deg. C		Field	#
Total Well Depth	22.80	Feet		Field	#
Turbidity, Field	2	NTU	1	Field	#
Volume in Water Column	3.12	Gallons		Field	#
Water Level After Purge	11.71	Feet		Field	#
Well Volumes Purged	5.90	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	62.9	mg/L	0.11	SW846 6020A	#
Calcium, Total	61.6	mg/L	0.11	SW846 6020A	#
Chromium, Total	0.0037	mg/L	0.0022	SW846 6020A	#
Cobalt, Total	0.030	mg/L	0.0056	SW846 6020A	#
Iron, Dissolved	22.8	mg/L	0.056	SW846 6020A	#
Iron, Total	23.2	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	31.4	mg/L	0.11	SW846 6020A	#
Magnesium, Total	30.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	15.4	mg/L	0.0056	SW846 6020A	#
Manganese, Total	16.3	mg/L	0.056	SW846 6020A	#
Nickel, Total	0.021	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	7.7	mg/L	0.11	SW846 6020A	#
Potassium, Total	7.8	mg/L	1.1	SW846 6020A	#
Sodium, Dissolved	36.1	mg/L	0.11	SW846 6020A	#
Sodium, Total	36.6	mg/L	1.1	SW846 6020A	#
VOLATILE ORGANICS					
1,1-Dichloroethane	2.1	ug/L	1.0	SW846 8260B	#
1,2-Dichlorobenzene	1.1	ug/L	1.0	SW846 8260B	#
1,4-Dichlorobenzene	9.0	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	4.6	ug/L	1.0	SW846 8260B	#
Dichlorodifluoromethane	1.5	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	341	mg/L	5	SM2320B-2011	#

Detected Results Summary

Sample - CWMP008W (cont.)

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY (cont.)					
Alkalinity, Total	341	mg/L	5	SM2320B-2011	#
Ammonia-N	6.75	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	45	mg/L	15	EPA 410.4	#
Chloride	29.7	mg/L	2.0	EPA 300.0	#
pH	7.40	pH_Units		S4500HB-11	#
Specific Conductance	804	umhos/cm	5	SM2510B-2011	#
Sulfate	5.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	446	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	7.8	mg/L	0.50	SM5310B-14	#
Turbidity	4.2	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP016W	Collected	04/19/2023 12:18
Lab Sample ID	3298830001	Lab Receipt	04/19/2023 16:17

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	10.06		Feet		Field	1	04/19/2023 12:18	BGS	D
Dissolved Oxygen	9.25		mg/L	0.01	Field	1	04/19/2023 12:18	BGS	D
Elev Top MW Casing above MSL	311.97		Feet		Field	1	04/19/2023 12:18	BGS	D
Flow Rate	2.26		gal/min		Field	1	04/19/2023 12:18	BGS	D
Ground Water Elevation	301.91		ft/MSL		Field	1	04/19/2023 12:18	BGS	D
Oxidation-Reduction Potential	267		mV		Field	1	04/19/2023 12:18	BGS	D
pH, Field (SM4500B)	5.66		pH_Units		Field	1	04/19/2023 12:18	BGS	D
Sample Depth	71.00		Feet		Field	1	04/19/2023 12:18	BGS	D
Specific Conductance, Field	39		umhos/cm	1	Field	1	04/19/2023 12:18	BGS	D
Temperature	12.42		Deg. C		Field	1	04/19/2023 12:18	BGS	D
Total Well Depth	73.52		Feet		Field	1	04/19/2023 12:18	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	04/19/2023 12:18	BGS	D
Volume in Water Column	93.29		Gallons		Field	1	04/19/2023 12:18	BGS	D
Water Level After Purge	19.42		Feet		Field	1	04/19/2023 12:18	BGS	D
Well Volumes Purged	1.50		Vol		Field	1	04/19/2023 12:18	BGS	D

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/01/2023 00:22	VLM	H

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Barium, Dissolved	0.010		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Barium, Total	0.010		mg/L	0.0056	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Calcium, Dissolved	5.1		mg/L	0.11	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Calcium, Total	5.1		mg/L	0.11	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Cobalt, Total	0.0070		mg/L	0.0056	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Iron, Total	0.16		mg/L	0.056	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Magnesium, Dissolved	1.3		mg/L	0.11	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Magnesium, Total	1.3		mg/L	0.11	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Manganese, Dissolved	0.0071		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:34	RMD	M1

Results

Client Sample ID	CWMP016W	Collected	04/19/2023 12:18
Lab Sample ID	3298830001	Lab Receipt	04/19/2023 16:17

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.0090		mg/L	0.0056	SW846 6020A	1	04/27/2023 12:32	MO	L1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2023 13:08	WDA	K
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 09:42	WDA	J
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Potassium, Dissolved	0.50		mg/L	0.11	SW846 6020A	1	04/27/2023 11:45	MO	M1
Potassium, Total	0.50		mg/L	0.11	SW846 6020A	1	04/27/2023 12:32	MO	L1
Selenium, Dissolved	ND	ND,1	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Selenium, Total	ND	ND,1	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Sodium, Dissolved	3.3		mg/L	0.11	SW846 6020A	1	04/27/2023 11:45	MO	M1
Sodium, Total	3.3		mg/L	0.11	SW846 6020A	1	04/27/2023 12:32	MO	L1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:24	RMD	L1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:34	RMD	M1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:24	RMD	L1

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	05/01/2023 00:22	PDK	H
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H

Results

Client Sample ID	CWMP016W	Collected	04/19/2023 12:18
Lab Sample ID	3298830001	Lab Receipt	04/19/2023 16:17

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 00:22	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:22	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.6%	62 – 133	05/01/2023 00:22	
4-Bromofluorobenzene	460-00-4	108%	79 – 114	05/01/2023 00:22	
Dibromofluoromethane	1868-53-7	102%	78 – 116	05/01/2023 00:22	
Toluene-d8	2037-26-5	102%	76 – 127	05/01/2023 00:22	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	7		mg/L	5	SM2320B-2011	1	04/26/2023 03:38	NML	B
Alkalinity, Total	7	2	mg/L	5	SM2320B-2011	1	04/26/2023 03:38	NML	B
Ammonia-N	0.147		mg/L	0.100	ASTM D6919-17	10	04/26/2023 13:28	NML	A
Chemical Oxygen Demand (COD)	39		mg/L	15	EPA 410.4	1	04/25/2023 14:41	KMS	A
Chloride	2.5		mg/L	2.0	EPA 300.0	2	04/20/2023 16:33	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/20/2023 16:33	J1W	B
Nitrate-N	1.5		mg/L	1.0	EPA 300.0	2	04/20/2023 16:33	J1W	B
pH	7.14	3	pH_Units		S4500HB-11	1	04/26/2023 03:38	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 14:31	AKH	G
Specific Conductance	64		umhos/cm	5	SM2510B-2011	1	04/21/2023 09:05	JXL	B
Sulfate	9.5		mg/L	2.0	EPA 300.0	2	04/20/2023 16:33	J1W	B

Results

Client Sample ID	CWMP016W	Collected	04/19/2023 12:18
Lab Sample ID	3298830001	Lab Receipt	04/19/2023 16:17

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	56		mg/L	25	SM2540C-15	1	04/25/2023 18:31	GJB	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	04/25/2023 06:07	PAG	E
Turbidity	1.2		NTU	0.30	SM2130B-2011	1	04/20/2023 00:40	NRB	B

Results

Client Sample ID	CWMP009W	Collected	04/19/2023 13:10
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FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	9.12		Feet		Field	1	04/19/2023 13:10	BGS	D
Dissolved Oxygen	0.17		mg/L	0.01	Field	1	04/19/2023 13:10	BGS	D
Elev Top MW Casing above MSL	404.20		Feet		Field	1	04/19/2023 13:10	BGS	D
Flow Rate	1.41		gal/min		Field	1	04/19/2023 13:10	BGS	D
Ground Water Elevation	395.08		ft/MSL		Field	1	04/19/2023 13:10	BGS	D
Oxidation-Reduction Potential	-61		mV		Field	1	04/19/2023 13:10	BGS	D
pH, Field (SM4500B)	6.15		pH_Units		Field	1	04/19/2023 13:10	BGS	D
Sample Depth	16.00		Feet		Field	1	04/19/2023 13:10	BGS	D
Specific Conductance, Field	1906		umhos/cm	1	Field	1	04/19/2023 13:10	BGS	D
Temperature	11.65		Deg. C		Field	1	04/19/2023 13:10	BGS	D
Total Well Depth	19.70		Feet		Field	1	04/19/2023 13:10	BGS	D
Turbidity, Field	1		NTU	1	Field	1	04/19/2023 13:10	BGS	D
Volume in Water Column	6.88		Gallons		Field	1	04/19/2023 13:10	BGS	D
Water Level After Purge	9.42		Feet		Field	1	04/19/2023 13:10	BGS	D
Well Volumes Purged	4.10		Vol		Field	1	04/19/2023 13:10	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.011	SW846 6020A	5	04/25/2023 21:27	RMD	J
Arsenic, Dissolved	ND	ND	mg/L	0.015	SW846 6020A	5	04/25/2023 20:36	RMD	K
Arsenic, Total	ND	ND	mg/L	0.017	SW846 6020A	5	04/25/2023 21:27	RMD	J
Barium, Dissolved	0.81		mg/L	0.028	SW846 6020A	5	04/25/2023 20:36	RMD	K
Barium, Total	0.81		mg/L	0.028	SW846 6020A	5	04/25/2023 21:27	RMD	J
Beryllium, Total	ND	ND	mg/L	0.0055	SW846 6020A	5	04/25/2023 21:27	RMD	J
Cadmium, Dissolved	ND	ND	mg/L	0.0055	SW846 6020A	5	04/25/2023 20:36	RMD	K
Cadmium, Total	ND	ND	mg/L	0.0055	SW846 6020A	5	04/25/2023 21:27	RMD	J
Calcium, Dissolved	170		mg/L	0.55	SW846 6020A	5	04/25/2023 20:36	RMD	K
Calcium, Total	173		mg/L	0.55	SW846 6020A	5	04/25/2023 21:27	RMD	J
Chromium, Dissolved	ND	ND	mg/L	0.011	SW846 6020A	5	04/25/2023 20:36	RMD	K
Chromium, Total	ND	ND	mg/L	0.011	SW846 6020A	5	04/25/2023 21:27	RMD	J
Cobalt, Total	0.068		mg/L	0.028	SW846 6020A	5	04/25/2023 21:27	RMD	J
Copper, Dissolved	ND	ND	mg/L	0.028	SW846 6020A	5	04/25/2023 20:36	RMD	K
Copper, Total	ND	ND	mg/L	0.028	SW846 6020A	5	04/25/2023 21:27	RMD	J
Iron, Dissolved	38.9		mg/L	0.28	SW846 6020A	5	04/25/2023 20:36	RMD	K
Iron, Total	38.3		mg/L	0.28	SW846 6020A	5	04/25/2023 21:27	RMD	J
Lead, Dissolved	ND	ND	mg/L	0.011	SW846 6020A	5	04/25/2023 20:36	RMD	K
Lead, Total	ND	ND	mg/L	0.011	SW846 6020A	5	04/25/2023 21:27	RMD	J
Magnesium, Dissolved	87.1		mg/L	0.55	SW846 6020A	5	04/25/2023 20:36	RMD	K
Magnesium, Total	85.9		mg/L	0.55	SW846 6020A	5	04/25/2023 21:27	RMD	J
Manganese, Dissolved	12.6		mg/L	0.028	SW846 6020A	5	04/25/2023 20:36	RMD	K
Manganese, Total	13.5		mg/L	0.028	SW846 6020A	5	04/27/2023 12:34	MO	J
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2023 13:09	WDA	K
Nickel, Total	0.10		mg/L	0.028	SW846 6020A	5	04/25/2023 21:27	RMD	J
Potassium, Dissolved	7.1		mg/L	0.11	SW846 6020A	1	04/27/2023 11:47	MO	K
Potassium, Total	35.1		mg/L	0.55	SW846 6020A	5	04/27/2023 12:34	MO	J
Selenium, Dissolved	ND	ND,1	mg/L	0.028	SW846 6020A	5	04/25/2023 20:36	RMD	K

Results

Client Sample ID	CWMP009W	Collected	04/19/2023 13:10
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METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Selenium, Total	ND	ND,1	mg/L	0.028	SW846 6020A	5	04/25/2023 21:27	RMD	J
Silver, Dissolved	ND	ND	mg/L	0.011	SW846 6020A	5	04/25/2023 20:36	RMD	K
Silver, Total	ND	ND	mg/L	0.011	SW846 6020A	5	04/25/2023 21:27	RMD	J
Sodium, Dissolved	41.6		mg/L	0.11	SW846 6020A	1	04/27/2023 11:47	MO	K
Sodium, Total	205		mg/L	0.55	SW846 6020A	5	04/27/2023 12:34	MO	J
Thallium, Total	ND	ND	mg/L	0.0055	SW846 6020A	5	04/25/2023 21:27	RMD	J
Vanadium, Total	ND	ND	mg/L	0.011	SW846 6020A	5	04/25/2023 21:27	RMD	J
Zinc, Dissolved	ND	ND	mg/L	0.028	SW846 6020A	5	04/25/2023 20:36	RMD	K
Zinc, Total	ND	ND	mg/L	0.028	SW846 6020A	5	04/25/2023 21:27	RMD	J

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	05/01/2023 00:45	PDK	H
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,1-Dichloroethane	1.1		ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,2-Dichlorobenzene	2.0		ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
1,4-Dichlorobenzene	9.4		ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Benzene	2.0		ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Chlorobenzene	18.4		ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Chloroethane	8.3		ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H

Results

Client Sample ID	CWMP009W	Collected	04/19/2023 13:10
Lab Sample ID	3298830002	Lab Receipt	04/19/2023 16:17

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 00:45	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 00:45	PDK	H

TICs by Library Search

Compound	CAS No	Result	Units	Qualifiers
Unknown	Unknown	16.8	ug/L	J
Unknown	Unknown	11.7	ug/L	J
Unknown	Unknown	0.0	ug/L	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.6%	62 – 133	05/01/2023 00:45	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	05/01/2023 00:45	
Dibromofluoromethane	1868-53-7	95.7%	78 – 116	05/01/2023 00:45	
Toluene-d8	2037-26-5	96.3%	76 – 127	05/01/2023 00:45	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	523		mg/L	50	SM2320B-2011	10	04/27/2023 18:46	NML	B
Alkalinity, Total	523	2	mg/L	50	SM2320B-2011	10	04/27/2023 18:46	NML	B
Ammonia-N	35.0		mg/L	0.100	ASTM D6919-17	10	04/26/2023 15:32	NML	A
Chemical Oxygen Demand (COD)	130		mg/L	15	EPA 410.4	1	04/25/2023 14:41	KMS	A
Chloride	651		mg/L	10.0	EPA 300.0	10	04/24/2023 18:23	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	04/20/2023 16:45	J1W	B
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	04/20/2023 16:45	J1W	B
pH	7.58	3	pH_Units		S4500HB-11	1	04/26/2023 03:50	NML	B
Phenolics	ND	ND	mg/L	0.02	SW846 9066	5	04/26/2023 11:29	AKH	G
Specific Conductance	3220		umhos/cm	50	SM2510B-2011	10	04/21/2023 09:05	JXL	B
Sulfate	6.8		mg/L	5.0	EPA 300.0	5	04/20/2023 16:45	J1W	B

Results

Client Sample ID	CWMP009W	Collected	04/19/2023 13:10
Lab Sample ID	3298830002	Lab Receipt	04/19/2023 16:17

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	1760		mg/L	25	SM2540C-15	1	04/25/2023 18:31	GJB	B
Total Organic Carbon (TOC)	35.6		mg/L	2.5	SM5310B-14	5	04/27/2023 00:15	PAG	E
Turbidity	20		NTU	0.30	SM2130B-2011	1	04/20/2023 00:40	NRB	B

Results

Client Sample ID	CWMP010W	Collected	04/19/2023 13:47
Lab Sample ID	3298830003	Lab Receipt	04/19/2023 16:17

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	8.53		Feet		Field	1	04/19/2023 13:47	BGS	D
Dissolved Oxygen	5.87		mg/L	0.01	Field	1	04/19/2023 13:47	BGS	D
Elev Top MW Casing above MSL	360.90		Feet		Field	1	04/19/2023 13:47	BGS	D
Flow Rate	0.86		gal/min		Field	1	04/19/2023 13:47	BGS	D
Ground Water Elevation	352.37		ft/MSL		Field	1	04/19/2023 13:47	BGS	D
Oxidation-Reduction Potential	110		mV		Field	1	04/19/2023 13:47	BGS	D
pH, Field (SM4500B)	6.66		pH_Units		Field	1	04/19/2023 13:47	BGS	D
Sample Depth	17.00		Feet		Field	1	04/19/2023 13:47	BGS	D
Specific Conductance, Field	768		umhos/cm	1	Field	1	04/19/2023 13:47	BGS	D
Temperature	12.90		Deg. C		Field	1	04/19/2023 13:47	BGS	D
Total Well Depth	19.60		Feet		Field	1	04/19/2023 13:47	BGS	D
Turbidity, Field	2		NTU	1	Field	1	04/19/2023 13:47	BGS	D
Volume in Water Column	7.20		Gallons		Field	1	04/19/2023 13:47	BGS	D
Water Level After Purge	15.23		Feet		Field	1	04/19/2023 13:47	BGS	D
Well Volumes Purged	2.40		Vol		Field	1	04/19/2023 13:47	BGS	D

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/01/2023 01:08	VLM	H

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Barium, Dissolved	0.041		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Barium, Total	0.044		mg/L	0.0056	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Calcium, Dissolved	39.8		mg/L	0.11	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Calcium, Total	39.0		mg/L	0.11	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Chromium, Dissolved	0.0023		mg/L	0.0022	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Chromium, Total	0.0052		mg/L	0.0022	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Copper, Total	0.0062		mg/L	0.0056	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Iron, Total	0.17		mg/L	0.056	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Magnesium, Dissolved	37.3		mg/L	0.11	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Magnesium, Total	37.5		mg/L	0.11	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Manganese, Dissolved	0.026		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:38	RMD	M1

Results

Client Sample ID	CWMP010W	Collected	04/19/2023 13:47
Lab Sample ID	3298830003	Lab Receipt	04/19/2023 16:17

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	0.069		mg/L	0.0056	SW846 6020A	1	04/27/2023 12:36	MO	L1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2023 13:13	WDA	K
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 09:44	WDA	J
Nickel, Total	0.010		mg/L	0.0056	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Potassium, Dissolved	7.3		mg/L	0.11	SW846 6020A	1	04/27/2023 11:50	MO	M1
Potassium, Total	7.3		mg/L	0.11	SW846 6020A	1	04/27/2023 12:36	MO	L1
Selenium, Dissolved	ND	ND,1	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Selenium, Total	ND	ND,1	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Sodium, Dissolved	122		mg/L	0.11	SW846 6020A	1	04/27/2023 11:50	MO	M1
Sodium, Total	124		mg/L	0.11	SW846 6020A	1	04/27/2023 12:36	MO	L1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:29	RMD	L1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:38	RMD	M1
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:29	RMD	L1

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	05/01/2023 01:08	PDK	H
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H

Results

Client Sample ID	CWMP010W	Collected	04/19/2023 13:47
Lab Sample ID	3298830003	Lab Receipt	04/19/2023 16:17

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 01:08	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:08	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	05/01/2023 01:08	
4-Bromofluorobenzene	460-00-4	107%	79 – 114	05/01/2023 01:08	
Dibromofluoromethane	1868-53-7	102%	78 – 116	05/01/2023 01:08	
Toluene-d8	2037-26-5	100%	76 – 127	05/01/2023 01:08	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	144		mg/L	5	SM2320B-2011	1	04/26/2023 04:36	NML	B
Alkalinity, Total	144	2	mg/L	5	SM2320B-2011	1	04/26/2023 04:36	NML	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	04/26/2023 15:45	NML	A
Chemical Oxygen Demand (COD)	53		mg/L	15	EPA 410.4	1	04/25/2023 14:41	KMS	A
Chloride	226		mg/L	5.0	EPA 300.0	5	04/24/2023 18:34	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/20/2023 16:56	J1W	B
Nitrate-N	12.8	4	mg/L	1.0	EPA 300.0	2	04/20/2023 16:56	J1W	B
pH	8.07	3	pH_Units		S4500HB-11	1	04/26/2023 04:36	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 14:21	AKH	G
Specific Conductance	1120		umhos/cm	5	SM2510B-2011	1	04/21/2023 09:05	JXL	B
Sulfate	25.8		mg/L	2.0	EPA 300.0	2	04/20/2023 16:56	J1W	B

Results

Client Sample ID	CWMP010W	Collected	04/19/2023 13:47
Lab Sample ID	3298830003	Lab Receipt	04/19/2023 16:17

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Dissolved Solids	618		mg/L	25	SM2540C-15	1	04/25/2023 18:31	GJB	B
Total Organic Carbon (TOC)	2.8		mg/L	0.50	SM5310B-14	1	04/25/2023 06:07	PAG	E
Turbidity	3.1		NTU	0.30	SM2130B-2011	1	04/20/2023 00:40	NRB	B

Results

Client Sample ID	CWMP008W	Collected	04/19/2023 14:28
Lab Sample ID	3298830004	Lab Receipt	04/19/2023 16:17

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	3.32		Feet		Field	1	04/19/2023 14:28	BGS	D
Dissolved Oxygen	ND	ND	mg/L	0.01	Field	1	04/19/2023 14:28	BGS	D
Elev Top MW Casing above MSL	422.30		Feet		Field	1	04/19/2023 14:28	BGS	D
Flow Rate	0.92		gal/min		Field	1	04/19/2023 14:28	BGS	D
Ground Water Elevation	418.98		ft/MSL		Field	1	04/19/2023 14:28	BGS	D
Oxidation-Reduction Potential	-42		mV		Field	1	04/19/2023 14:28	BGS	D
pH, Field (SM4500B)	6.20		pH_Units		Field	1	04/19/2023 14:28	BGS	D
Sample Depth	19.00		Feet		Field	1	04/19/2023 14:28	BGS	D
Specific Conductance, Field	519		umhos/cm	1	Field	1	04/19/2023 14:28	BGS	D
Temperature	13.76		Deg. C		Field	1	04/19/2023 14:28	BGS	D
Total Well Depth	22.80		Feet		Field	1	04/19/2023 14:28	BGS	D
Turbidity, Field	2		NTU	1	Field	1	04/19/2023 14:28	BGS	D
Volume in Water Column	3.12		Gallons		Field	1	04/19/2023 14:28	BGS	D
Water Level After Purge	11.71		Feet		Field	1	04/19/2023 14:28	BGS	D
Well Volumes Purged	5.90		Vol		Field	1	04/19/2023 14:28	BGS	D

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/01/2023 01:31	VLM	H

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Antimony, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:31	RMD	J
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	04/25/2023 20:51	RMD	K
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	04/25/2023 21:31	RMD	J
Barium, Dissolved	0.13		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:51	RMD	K
Barium, Total	0.13		mg/L	0.0056	SW846 6020A	1	04/25/2023 21:31	RMD	J
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:31	RMD	J
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 20:51	RMD	K
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:31	RMD	J
Calcium, Dissolved	62.9		mg/L	0.11	SW846 6020A	1	04/25/2023 20:51	RMD	K
Calcium, Total	61.6		mg/L	0.11	SW846 6020A	1	04/25/2023 21:31	RMD	J
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:51	RMD	K
Chromium, Total	0.0037		mg/L	0.0022	SW846 6020A	1	04/25/2023 21:31	RMD	J
Cobalt, Total	0.030		mg/L	0.0056	SW846 6020A	1	04/25/2023 21:31	RMD	J
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:51	RMD	K
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:31	RMD	J
Iron, Dissolved	22.8		mg/L	0.056	SW846 6020A	1	04/25/2023 20:51	RMD	K
Iron, Total	23.2		mg/L	0.056	SW846 6020A	1	04/25/2023 21:31	RMD	J
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:51	RMD	K
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:31	RMD	J
Magnesium, Dissolved	31.4		mg/L	0.11	SW846 6020A	1	04/27/2023 11:52	MO	K
Magnesium, Total	30.3		mg/L	0.11	SW846 6020A	1	04/25/2023 21:31	RMD	J
Manganese, Dissolved	15.4		mg/L	0.0056	SW846 6020A	1	04/25/2023 20:51	RMD	K

Results

Client Sample ID	CWMP008W	Collected	04/19/2023 14:28
Lab Sample ID	3298830004	Lab Receipt	04/19/2023 16:17

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Manganese, Total	16.3		mg/L	0.056	SW846 6020A	10	04/27/2023 12:38	MO	J
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/20/2023 13:14	WDA	K
Nickel, Total	0.021		mg/L	0.0056	SW846 6020A	1	04/25/2023 21:31	RMD	J
Potassium, Dissolved	7.7		mg/L	0.11	SW846 6020A	1	04/27/2023 11:52	MO	K
Potassium, Total	7.8		mg/L	1.1	SW846 6020A	10	04/27/2023 12:38	MO	J
Selenium, Dissolved	ND	ND,1	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:51	RMD	K
Selenium, Total	ND	ND,1	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:31	RMD	J
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 20:51	RMD	K
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:31	RMD	J
Sodium, Dissolved	36.1		mg/L	0.11	SW846 6020A	1	04/27/2023 11:52	MO	K
Sodium, Total	36.6		mg/L	1.1	SW846 6020A	10	04/27/2023 12:38	MO	J
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	04/25/2023 21:31	RMD	J
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	04/25/2023 21:31	RMD	J
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 20:51	RMD	K
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	04/25/2023 21:31	RMD	J

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	05/01/2023 01:31	PDK	H
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,1-Dichloroethane	2.1		ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,2-Dichlorobenzene	1.1		ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
1,4-Dichlorobenzene	9.0		ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Benzene	1.4		ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Chlorobenzene	8.6		ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H

Results

Client Sample ID	CWMP008W	Collected	04/19/2023 14:28
Lab Sample ID	3298830004	Lab Receipt	04/19/2023 16:17

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Chloroethane	4.6		ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Dichlorodifluoromethane	1.5		ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/01/2023 01:31	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/01/2023 01:31	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	05/01/2023 01:31	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	05/01/2023 01:31	
Dibromofluoromethane	1868-53-7	104%	78 – 116	05/01/2023 01:31	
Toluene-d8	2037-26-5	104%	76 – 127	05/01/2023 01:31	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	341		mg/L	5	SM2320B-2011	1	04/26/2023 04:49	NML	B
Alkalinity, Total	341	2	mg/L	5	SM2320B-2011	1	04/26/2023 04:49	NML	B
Ammonia-N	6.75		mg/L	0.100	ASTM D6919-17	10	04/26/2023 15:59	NML	A
Chemical Oxygen Demand (COD)	45		mg/L	15	EPA 410.4	1	04/25/2023 14:41	KMS	A
Chloride	29.7		mg/L	2.0	EPA 300.0	2	04/20/2023 17:42	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/20/2023 17:42	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	04/20/2023 17:42	J1W	B
pH	7.40	3	pH_Units		S4500HB-11	1	04/26/2023 04:49	NML	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 23:05	AKH	G
Specific Conductance	804		umhos/cm	5	SM2510B-2011	1	04/21/2023 09:05	JXL	B
Sulfate	5.9		mg/L	2.0	EPA 300.0	2	04/20/2023 17:42	J1W	B
Total Dissolved Solids	446		mg/L	25	SM2540C-15	1	04/25/2023 18:31	GJB	B

Results

Client Sample ID	CWMP008W	Collected	04/19/2023 14:28
Lab Sample ID	3298830004	Lab Receipt	04/19/2023 16:17

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Total Organic Carbon (TOC)	7.8		mg/L	0.50	SM5310B-14	1	04/21/2023 00:00	PAG	E
Turbidity	4.2		NTU	0.30	SM2130B-2011	1	04/20/2023 00:40	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3298830001	CWMP016W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3298830002	CWMP009W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3298830003	CWMP010W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3298830004	CWMP008W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3298830001	CWMP016W	N/A	N/A	N/A		Field	980677
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	980588
		SW846 3015A	976553	04/20/2023 20:30	ANN	SW846 6020A	980607
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	979066
		SW846 3015A	976553	04/20/2023 20:30	ANN	SW846 6020A	979067
		SW846 7470A	978257	04/24/2023 08:10	WDA	SW846 7470A	978605
		SW846 7470A	976355	04/20/2023 08:10	WDA	SW846 7470A	976485
		N/A	N/A	N/A		Lib Search VOC	990758
		N/A	N/A	N/A		SW846 8260B	983853
		N/A	N/A	N/A		ASTM D6919-17	978867
		N/A	N/A	N/A		EPA 300.0	976361
		N/A	N/A	N/A		EPA 410.4	978908
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	976154
		N/A	N/A	N/A		SM2320B-2011	978475
		N/A	N/A	N/A		SM2510B-2011	976525
		N/A	N/A	N/A		SM2540C-15	978932
		N/A	N/A	N/A		SM5310B-14	978643
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665
3298830002	CWMP009W	N/A	N/A	N/A		Field	980677
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	979066
		SW846 3015A	976553	04/20/2023 20:30	ANN	SW846 6020A	979067
		SW846 3015A	976553	04/20/2023 20:30	ANN	SW846 6020A	980607
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	980588
		SW846 7470A	976355	04/20/2023 08:10	WDA	SW846 7470A	976485
		N/A	N/A	N/A		SW846 8260B	983853
		N/A	N/A	N/A		ASTM D6919-17	979654
		N/A	N/A	N/A		EPA 300.0	976361
		N/A	N/A	N/A		EPA 300.0	978577
		N/A	N/A	N/A		EPA 410.4	978908
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	976154
		N/A	N/A	N/A		SM2320B-2011	980265
		N/A	N/A	N/A		SM2510B-2011	976525
		N/A	N/A	N/A		SM2540C-15	978932
		N/A	N/A	N/A		SM5310B-14	979897
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665
3298830003	CWMP010W	N/A	N/A	N/A		Field	980677
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	980588
		SW846 3015A	976553	04/20/2023 20:30	ANN	SW846 6020A	979067
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	979066
		SW846 3015A	976553	04/20/2023 20:30	ANN	SW846 6020A	980607
		SW846 7470A	976355	04/20/2023 08:10	WDA	SW846 7470A	976485
		SW846 7470A	978257	04/24/2023 08:10	WDA	SW846 7470A	978605
		N/A	N/A	N/A		Lib Search VOC	990758
		N/A	N/A	N/A		SW846 8260B	983853
		N/A	N/A	N/A		ASTM D6919-17	979654
		N/A	N/A	N/A		EPA 300.0	976361
		N/A	N/A	N/A		EPA 300.0	978577
		N/A	N/A	N/A		EPA 410.4	978908
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	976154
		N/A	N/A	N/A		SM2320B-2011	978475
		N/A	N/A	N/A		SM2510B-2011	976525
		N/A	N/A	N/A		SM2540C-15	978932
		N/A	N/A	N/A		SM5310B-14	978643
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3298830004	CWMP008W	N/A	N/A	N/A		Field	980677
		SW846 3015A	976553	04/20/2023 20:30	ANN	SW846 6020A	979067
		SW846 3015A	976553	04/20/2023 20:30	ANN	SW846 6020A	980607
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	980588
		SW846 3015A	976552	04/20/2023 20:24	ANN	SW846 6020A	979066
		SW846 7470A	976355	04/20/2023 08:10	WDA	SW846 7470A	976485
		N/A	N/A	N/A		Lib Search VOC	990758
		N/A	N/A	N/A		SW846 8260B	983853
		N/A	N/A	N/A		ASTM D6919-17	979654
		N/A	N/A	N/A		EPA 300.0	976361
		N/A	N/A	N/A		EPA 410.4	978908
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	976154
		N/A	N/A	N/A		SM2320B-2011	978475
		N/A	N/A	N/A		SM2510B-2011	976525
		N/A	N/A	N/A		SM2540C-15	978932
		N/A	N/A	N/A		SM5310B-14	976550
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665

5/17/2023 1:29 PM

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALS Environmental
301 Fulling Mill Rd • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

Generated by ALS

COC # 3298830
Logged By: MJE
PM: SJB
1 of 1

ALS Qu

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

Client Name: Lancaster County Solid Waste MA
Address: 1299 Harrisburg Pike, P.O. Box 4424
Lancaster, PA 17604
Contact: Dan Brown
Phone#: (717) 735-0193
Project Name/#: Creswell/GWMP Form 19A
Bill To: Lancaster County Solid Waste MA

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

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	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 Filered)	Total Metals Form 19A + Subtitle D
					Enter Number of Containers Per Sample or Field Results Below.									
1. CWMP016W	04/19/23	1218	G	GW	2	1	2	1	1	X	X	1	2 1	2 1
2. CWMP009W	04/19/23	1310	G	GW	2	1	2	1	1	X	X	1	2 1	2 1
3. CWMP010W	04/19/23	1347	G	GW	2	1	2	1	1	X	X	1	2 1	2 1
4. CWMP008W	04/19/23	1428	G	GW	2	1	2	1	1	X	X	1	2 1	2 1
5													RAW	
6													4/19/23	
7														
8														
9														
10														

(Completed by Receiving Lab)

Cooler Temp: 1°C Therm ID: TH-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 By: RW | WO Temp (°C): 2C | Therm ID: 509

Receipt Info Completed By: RAW

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

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

Project Comments:

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

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 RC Shade ALS	4-19-23	1617	2	4/19/23	1617
3			4		
5			6		
7			8		
			10		

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

Special Processing: USACE ☐ Navy ☐ ☐

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

Reportable to PADEP? Yes ☐ PWSID # _____

Sample Disposal: Lab ☒ Special ☐

EDDS: Format Type- _____

* G=Grab; C=Composite

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

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

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 2023 CWMP-FORM 19A
Workorder 3299270
Report ID 242777 on 5/9/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 21, 2023.

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

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

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

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3299270001	CWMP012W	Ground Water	04/21/2023 10:35	04/21/2023 15:50	BGS	Analytical Laboratory Service
3299270002	CWMP002W	Ground Water	04/21/2023 12:27	04/21/2023 15:50	BGS	Analytical Laboratory Service
3299270003	CWMP003W	Ground Water	04/21/2023 12:42	04/21/2023 15:50	BGS	Analytical Laboratory Service
3299270004	CWMP004W	Ground Water	04/21/2023 12:58	04/21/2023 15:50	BGS	Analytical Laboratory Service
3299270005	Field Blank	Water	04/21/2023 13:55	04/21/2023 15:50	BGS	Analytical Laboratory Service
3299270006	Trip Blank	Water	04/21/2023 15:50	04/21/2023 15:50	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The QC sample type DUP for method EPA 410.4 was outside the control limits for the analyte Chemical Oxygen Demand (COD). The RPD was reported as 13.3 and the upper control limit is 10.
3	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
4	The concentration of this analyte was greater than 4 times the concentration of the spike added to the matrix spike. According to protocol, the calculation for percent recovery of the matrix spike is not valid.

Detected Results Summary

Client Sample ID	CWMP012W	Collected	04/21/2023 10:35
Lab Sample ID	3299270001	Lab Receipt	04/21/2023 15:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	66.25	Feet		Field	#
Dissolved Oxygen	8.75	mg/L	0.01	Field	#
Oxidation-Reduction Potential	135	mV		Field	#
pH, Field (SM4500B)	6.02	pH_Units		Field	#
Specific Conductance, Field	233	umhos/cm	1	Field	#
Temperature	16.89	Deg. C		Field	#
Turbidity, Field	383	NTU	1	Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.079	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.091	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	31.2	mg/L	0.11	SW846 6020A	#
Calcium, Total	31.0	mg/L	0.11	SW846 6020A	#
Cobalt, Total	0.0057	mg/L	0.0056	SW846 6020A	#
Iron, Dissolved	0.56	mg/L	0.056	SW846 6020A	#
Iron, Total	41.4	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	8.7	mg/L	0.11	SW846 6020A	#
Magnesium, Total	8.8	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.37	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.74	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.013	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.4	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	13.7	mg/L	0.11	SW846 6020A	#
Sodium, Total	14.0	mg/L	0.11	SW846 6020A	#
Zinc, Dissolved	0.0061	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.0088	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	73	mg/L	5	SM2320B-2011	#
Alkalinity, Total	73	mg/L	5	SM2320B-2011	#
Ammonia-N	0.126	mg/L	0.100	ASTM D6919-17	#
Chloride	30.3	mg/L	2.0	EPA 300.0	#
Nitrate-N	6.3	mg/L	1.0	EPA 300.0	#
pH	6.62	pH_Units		S4500HB-11	#
Specific Conductance	320	umhos/cm	5	SM2510B-2011	#
Sulfate	4.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	224	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	2.6	mg/L	1.0	SM5310B-14	#
Turbidity	160	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP002W	Collected	04/21/2023 12:27
Lab Sample ID	3299270002	Lab Receipt	04/21/2023 15:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	65.75	Feet		Field	#
Dissolved Oxygen	15.50	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	525.81	Feet		Field	#
Ground Water Elevation	460.06	ft/MSL		Field	#
Oxidation-Reduction Potential	251	mV		Field	#
pH, Field (SM4500B)	5.79	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	254	umhos/cm	1	Field	#
Temperature	14.42	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Turbidity, Field	12	NTU	1	Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.028	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.028	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	32.4	mg/L	0.11	SW846 6020A	#
Calcium, Total	32.3	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	11.5	mg/L	0.11	SW846 6020A	#
Magnesium, Total	11.2	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.16	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.16	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.015	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	2.3	mg/L	0.11	SW846 6020A	#
Potassium, Total	2.2	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	20.1	mg/L	0.11	SW846 6020A	#
Sodium, Total	19.6	mg/L	0.11	SW846 6020A	#
VOLATILE ORGANICS					
1,1-Dichloroethane	2.4	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	49	mg/L	5	SM2320B-2011	#
Alkalinity, Total	49	mg/L	5	SM2320B-2011	#
Ammonia-N	0.124	mg/L	0.100	ASTM D6919-17	#
Chloride	53.0	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.9	mg/L	1.0	EPA 300.0	#
pH	6.63	pH_Units		S4500HB-11	#
Specific Conductance	409	umhos/cm	5	SM2510B-2011	#
Sulfate	13.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	262	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.1	mg/L	0.50	SM5310B-14	#
Turbidity	0.45	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP003W	Collected	04/21/2023 12:42
Lab Sample ID	3299270003	Lab Receipt	04/21/2023 15:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	98.64	Feet		Field	#
Dissolved Oxygen	17.75	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	524.21	Feet		Field	#
Ground Water Elevation	425.57	ft/MSL		Field	#
Oxidation-Reduction Potential	240	mV		Field	#
pH, Field (SM4500B)	5.53	pH_Units		Field	#
Sample Depth	100.00	Feet		Field	#
Specific Conductance, Field	210	umhos/cm	1	Field	#
Temperature	14.58	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
Turbidity, Field	9	NTU	1	Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.019	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.020	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	22.5	mg/L	0.11	SW846 6020A	#
Calcium, Total	22.7	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	8.3	mg/L	0.11	SW846 6020A	#
Magnesium, Total	8.3	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.012	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.013	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.011	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.7	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.7	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	20.4	mg/L	0.11	SW846 6020A	#
Sodium, Total	20.1	mg/L	0.11	SW846 6020A	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.7	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	20	mg/L	5	SM2320B-2011	#
Alkalinity, Total	20	mg/L	5	SM2320B-2011	#
Ammonia-N	0.117	mg/L	0.100	ASTM D6919-17	#
Chloride	62.3	mg/L	2.0	EPA 300.0	#
Nitrate-N	6.5	mg/L	1.0	EPA 300.0	#
pH	6.38	pH_Units		S4500HB-11	#
Specific Conductance	324	umhos/cm	5	SM2510B-2011	#
Sulfate	5.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	266	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.50	mg/L	0.50	SM5310B-14	#
Turbidity	0.30	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP004W	Collected	04/21/2023 12:58
Lab Sample ID	3299270004	Lab Receipt	04/21/2023 15:50

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	100.47	Feet		Field	#
Dissolved Oxygen	5.48	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	529.53	Feet		Field	#
Ground Water Elevation	429.06	ft/MSL		Field	#
Oxidation-Reduction Potential	204	mV		Field	#
pH, Field (SM4500B)	5.78	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	226	umhos/cm	1	Field	#
Temperature	14.42	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.028	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.028	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	21.0	mg/L	0.11	SW846 6020A	#
Calcium, Total	21.0	mg/L	0.11	SW846 6020A	#
Magnesium, Dissolved	7.5	mg/L	0.11	SW846 6020A	#
Magnesium, Total	7.4	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.010	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.010	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	1.4	mg/L	0.11	SW846 6020A	#
Potassium, Total	1.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	19.3	mg/L	0.11	SW846 6020A	#
Sodium, Total	19.1	mg/L	0.11	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	24	mg/L	5	SM2320B-2011	#
Alkalinity, Total	24	mg/L	5	SM2320B-2011	#
Ammonia-N	0.123	mg/L	0.100	ASTM D6919-17	#
Chloride	56.2	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.3	mg/L	1.0	EPA 300.0	#
pH	6.55	pH_Units		S4500HB-11	#
Specific Conductance	305	umhos/cm	5	SM2510B-2011	#
Sulfate	5.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	250	mg/L	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	Field Blank	Collected	04/21/2023 13:55
Lab Sample ID	3299270005	Lab Receipt	04/21/2023 15:50

Compound	Result	Units	RDL	Method	Flag
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
WET CHEMISTRY					
pH	5.66	pH_Units		S4500HB-11	#

Results

Client Sample ID	CWMP012W	Collected	04/21/2023 10:35
Lab Sample ID	3299270001	Lab Receipt	04/21/2023 15:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	66.25		Feet		Field	1	04/21/2023 10:35	BGS	F
Dissolved Oxygen	8.75		mg/L	0.01	Field	1	04/21/2023 10:35	BGS	F
Oxidation-Reduction Potential	135		mV		Field	1	04/21/2023 10:35	BGS	F
pH, Field (SM4500B)	6.02		pH_Units		Field	1	04/21/2023 10:35	BGS	F
Specific Conductance, Field	233		umhos/cm	1	Field	1	04/21/2023 10:35	BGS	F
Temperature	16.89		Deg. C		Field	1	04/21/2023 10:35	BGS	F
Turbidity, Field	383		NTU	1	Field	1	04/21/2023 10:35	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	05/04/2023 03:44	VLM	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	05/01/2023 12:01	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/01/2023 13:50	MO	D2
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/01/2023 12:01	MO	E1
Barium, Dissolved	0.079		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:50	MO	D2
Barium, Total	0.091		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:01	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:01	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 13:50	MO	D2
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:01	MO	E1
Calcium, Dissolved	31.2		mg/L	0.11	SW846 6020A	1	05/01/2023 13:50	MO	D2
Calcium, Total	31.0	4	mg/L	0.11	SW846 6020A	1	05/01/2023 12:01	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:50	MO	D2
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:01	MO	E1
Cobalt, Total	0.0057		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:01	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:50	MO	D2
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:01	MO	E1
Iron, Dissolved	0.56		mg/L	0.056	SW846 6020A	1	05/01/2023 13:50	MO	D2
Iron, Total	41.4	4	mg/L	0.056	SW846 6020A	1	05/01/2023 12:01	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:50	MO	D2
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:01	MO	E1
Magnesium, Dissolved	8.7		mg/L	0.11	SW846 6020A	1	05/01/2023 13:50	MO	D2
Magnesium, Total	8.8		mg/L	0.11	SW846 6020A	1	05/01/2023 12:01	MO	E1
Manganese, Dissolved	0.37		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:50	MO	D2
Manganese, Total	0.74		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:01	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 08:39	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 10:20	WDA	E
Nickel, Total	0.013		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:01	MO	E1
Potassium, Dissolved	1.4		mg/L	0.11	SW846 6020A	1	05/01/2023 13:50	MO	D2
Potassium, Total	1.4		mg/L	0.11	SW846 6020A	1	05/01/2023 12:01	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:50	MO	D2
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:01	MO	E1

Results

Client Sample ID	CWMP012W	Collected	04/21/2023 10:35
Lab Sample ID	3299270001	Lab Receipt	04/21/2023 15:50

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:50	MO	D2
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:01	MO	E1
Sodium, Dissolved	13.7		mg/L	0.11	SW846 6020A	1	05/01/2023 13:50	MO	D2
Sodium, Total	14.0		mg/L	0.11	SW846 6020A	1	05/01/2023 12:01	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:01	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:01	MO	E1
Zinc, Dissolved	0.0061		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:50	MO	D2
Zinc, Total	0.0088		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:01	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	05/04/2023 03:44	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J

Results

Client Sample ID	CWMP012W	Collected	04/21/2023 10:35
Lab Sample ID	3299270001	Lab Receipt	04/21/2023 15:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 03:44	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:44	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.8%	62 – 133	05/04/2023 03:44	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	05/04/2023 03:44	
Dibromofluoromethane	1868-53-7	95.9%	78 – 116	05/04/2023 03:44	
Toluene-d8	2037-26-5	94.8%	76 – 127	05/04/2023 03:44	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	73		mg/L	5	SM2320B-2011	1	04/27/2023 15:38	NML	A
Alkalinity, Total	73	1	mg/L	5	SM2320B-2011	1	04/27/2023 15:38	NML	A
Ammonia-N	0.126		mg/L	0.100	ASTM D6919-17	10	05/01/2023 18:42	NML	C
Chemical Oxygen Demand (COD)	ND	ND,2	mg/L	15	EPA 410.4	1	04/26/2023 10:58	KMS	C
Chloride	30.3		mg/L	2.0	EPA 300.0	2	04/22/2023 11:29	AXW	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2023 11:29	AXW	A
Nitrate-N	6.3		mg/L	1.0	EPA 300.0	2	04/22/2023 11:29	AXW	A
pH	6.62	3	pH_Units		S4500HB-11	1	04/27/2023 15:38	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	05/08/2023 12:49	AKH	I
Specific Conductance	320		umhos/cm	5	SM2510B-2011	1	04/25/2023 08:55	JXL	A
Sulfate	4.6		mg/L	2.0	EPA 300.0	2	04/22/2023 11:29	AXW	A
Total Dissolved Solids	224		mg/L	25	SM2540C-15	1	04/27/2023 15:47	GJB	A
Total Organic Carbon (TOC)	2.6		mg/L	1.0	SM5310B-14	2	04/25/2023 23:29	PAG	G
Turbidity	160		NTU	0.30	SM2130B-2011	1	04/21/2023 23:30	NRB	A

Results

Client Sample ID	CWMP002W	Collected	04/21/2023 12:27
Lab Sample ID	3299270002	Lab Receipt	04/21/2023 15:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	65.75		Feet		Field	1	04/21/2023 12:27	BGS	F
Dissolved Oxygen	15.50		mg/L	0.01	Field	1	04/21/2023 12:27	BGS	F
Elev Top MW Casing above MSL	525.81		Feet		Field	1	04/21/2023 12:27	BGS	F
Ground Water Elevation	460.06		ft/MSL		Field	1	04/21/2023 12:27	BGS	F
Oxidation-Reduction Potential	251		mV		Field	1	04/21/2023 12:27	BGS	F
pH, Field (SM4500B)	5.79		pH_Units		Field	1	04/21/2023 12:27	BGS	F
Sample Depth	85.00		Feet		Field	1	04/21/2023 12:27	BGS	F
Specific Conductance, Field	254		umhos/cm	1	Field	1	04/21/2023 12:27	BGS	F
Temperature	14.42		Deg. C		Field	1	04/21/2023 12:27	BGS	F
Total Well Depth	100.00		Feet		Field	1	04/21/2023 12:27	BGS	F
Turbidity, Field	12		NTU	1	Field	1	04/21/2023 12:27	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	05/04/2023 02:36	VLM	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	05/01/2023 12:27	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/01/2023 13:52	MO	D2
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/01/2023 12:27	MO	E1
Barium, Dissolved	0.028		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:52	MO	D2
Barium, Total	0.028		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:27	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:27	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 13:52	MO	D2
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:27	MO	E1
Calcium, Dissolved	32.4		mg/L	0.11	SW846 6020A	1	05/01/2023 13:52	MO	D2
Calcium, Total	32.3		mg/L	0.11	SW846 6020A	1	05/01/2023 12:27	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:52	MO	D2
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:27	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:27	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:52	MO	D2
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:27	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 13:52	MO	D2
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 12:27	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:52	MO	D2
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:27	MO	E1
Magnesium, Dissolved	11.5		mg/L	0.11	SW846 6020A	1	05/01/2023 13:52	MO	D2
Magnesium, Total	11.2		mg/L	0.11	SW846 6020A	1	05/01/2023 12:27	MO	E1
Manganese, Dissolved	0.16		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:52	MO	D2
Manganese, Total	0.16		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:27	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 08:40	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 10:21	WDA	E
Nickel, Total	0.015		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:27	MO	E1

Results

Client Sample ID	CWMP002W	Collected	04/21/2023 12:27
Lab Sample ID	3299270002	Lab Receipt	04/21/2023 15:50

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	05/01/2023 13:52	MO	D2
Potassium, Total	2.2		mg/L	0.11	SW846 6020A	1	05/01/2023 12:27	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:52	MO	D2
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:27	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:52	MO	D2
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:27	MO	E1
Sodium, Dissolved	20.1		mg/L	0.11	SW846 6020A	1	05/01/2023 13:52	MO	D2
Sodium, Total	19.6		mg/L	0.11	SW846 6020A	1	05/01/2023 12:27	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:27	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:27	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:52	MO	D2
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:27	MO	E1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,1-Dichloroethane	2.4		ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J

Results

Client Sample ID	CWMP002W	Collected	04/21/2023 12:27
Lab Sample ID	3299270002	Lab Receipt	04/21/2023 15:50

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	05/04/2023 02:36	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:36	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:36	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.9%	62 – 133	05/04/2023 02:36	
4-Bromofluorobenzene	460-00-4	98.2%	79 – 114	05/04/2023 02:36	
Dibromofluoromethane	1868-53-7	95.8%	78 – 116	05/04/2023 02:36	
Toluene-d8	2037-26-5	93.2%	76 – 127	05/04/2023 02:36	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	49		mg/L	5	SM2320B-2011	1	04/27/2023 15:52	NML	A
Alkalinity, Total	49	1	mg/L	5	SM2320B-2011	1	04/27/2023 15:52	NML	A
Ammonia-N	0.124		mg/L	0.100	ASTM D6919-17	10	05/01/2023 18:28	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/26/2023 10:58	KMS	C
Chloride	53.0		mg/L	2.0	EPA 300.0	2	04/22/2023 11:39	AXW	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2023 11:39	AXW	A
Nitrate-N	5.9		mg/L	1.0	EPA 300.0	2	04/22/2023 11:39	AXW	A
pH	6.63	3	pH_Units		S4500HB-11	1	04/27/2023 15:52	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 17:54	AKH	I
Specific Conductance	409		umhos/cm	5	SM2510B-2011	1	04/25/2023 08:55	JXL	A
Sulfate	13.3		mg/L	2.0	EPA 300.0	2	04/22/2023 11:39	AXW	A
Total Dissolved Solids	262		mg/L	25	SM2540C-15	1	04/27/2023 15:47	GJB	A
Total Organic Carbon (TOC)	1.1		mg/L	0.50	SM5310B-14	1	04/25/2023 23:29	PAG	G
Turbidity	0.45		NTU	0.30	SM2130B-2011	1	04/21/2023 23:30	NRB	A

Results

Client Sample ID	CWMP002W	Collected	04/21/2023 12:27
Lab Sample ID	3299270002	Lab Receipt	04/21/2023 15:50

WET CHEMISTRY (cont.)

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

Results

Client Sample ID	CWMP003W	Collected	04/21/2023 12:42
Lab Sample ID	3299270003	Lab Receipt	04/21/2023 15:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	98.64		Feet		Field	1	04/21/2023 12:42	BGS	F
Dissolved Oxygen	17.75		mg/L	0.01	Field	1	04/21/2023 12:42	BGS	F
Elev Top MW Casing above MSL	524.21		Feet		Field	1	04/21/2023 12:42	BGS	F
Ground Water Elevation	425.57		ft/MSL		Field	1	04/21/2023 12:42	BGS	F
Oxidation-Reduction Potential	240		mV		Field	1	04/21/2023 12:42	BGS	F
pH, Field (SM4500B)	5.53		pH_Units		Field	1	04/21/2023 12:42	BGS	F
Sample Depth	100.00		Feet		Field	1	04/21/2023 12:42	BGS	F
Specific Conductance, Field	210		umhos/cm	1	Field	1	04/21/2023 12:42	BGS	F
Temperature	14.58		Deg. C		Field	1	04/21/2023 12:42	BGS	F
Total Well Depth	140.00		Feet		Field	1	04/21/2023 12:42	BGS	F
Turbidity, Field	9		NTU	1	Field	1	04/21/2023 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	05/04/2023 02:58	VLM	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	05/01/2023 12:29	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/01/2023 13:54	MO	D2
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/01/2023 12:29	MO	E1
Barium, Dissolved	0.019		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:54	MO	D2
Barium, Total	0.020		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:29	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:29	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 13:54	MO	D2
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:29	MO	E1
Calcium, Dissolved	22.5		mg/L	0.11	SW846 6020A	1	05/01/2023 13:54	MO	D2
Calcium, Total	22.7		mg/L	0.11	SW846 6020A	1	05/01/2023 12:29	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:54	MO	D2
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:29	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:29	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:54	MO	D2
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:29	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 13:54	MO	D2
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 12:29	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:54	MO	D2
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:29	MO	E1
Magnesium, Dissolved	8.3		mg/L	0.11	SW846 6020A	1	05/01/2023 13:54	MO	D2
Magnesium, Total	8.3		mg/L	0.11	SW846 6020A	1	05/01/2023 12:29	MO	E1
Manganese, Dissolved	0.012		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:54	MO	D2
Manganese, Total	0.013		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:29	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 08:41	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 10:24	WDA	E
Nickel, Total	0.011		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:29	MO	E1

Results

Client Sample ID	CWMP003W	Collected	04/21/2023 12:42
Lab Sample ID	3299270003	Lab Receipt	04/21/2023 15:50

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Potassium, Dissolved	1.7		mg/L	0.11	SW846 6020A	1	05/01/2023 13:54	MO	D2
Potassium, Total	1.7		mg/L	0.11	SW846 6020A	1	05/01/2023 12:29	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:54	MO	D2
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:29	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:54	MO	D2
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:29	MO	E1
Sodium, Dissolved	20.4		mg/L	0.11	SW846 6020A	1	05/01/2023 13:54	MO	D2
Sodium, Total	20.1		mg/L	0.11	SW846 6020A	1	05/01/2023 12:29	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:29	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:29	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:54	MO	D2
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:29	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	05/04/2023 02:58	PDK	K
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,1-Dichloroethane	1.7		ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K

Results

Client Sample ID	CWMP003W	Collected	04/21/2023 12:42
Lab Sample ID	3299270003	Lab Receipt	04/21/2023 15:50

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	05/04/2023 02:58	PDK	K
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:58	PDK	K
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:58	PDK	K

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.2%	62 – 133	05/04/2023 02:58	
4-Bromofluorobenzene	460-00-4	98.6%	79 – 114	05/04/2023 02:58	
Dibromofluoromethane	1868-53-7	94.6%	78 – 116	05/04/2023 02:58	
Toluene-d8	2037-26-5	92.7%	76 – 127	05/04/2023 02:58	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	20		mg/L	5	SM2320B-2011	1	04/27/2023 16:07	NML	A
Alkalinity, Total	20	1	mg/L	5	SM2320B-2011	1	04/27/2023 16:07	NML	A
Ammonia-N	0.117		mg/L	0.100	ASTM D6919-17	10	05/01/2023 16:39	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/26/2023 10:58	KMS	C
Chloride	62.3		mg/L	2.0	EPA 300.0	2	04/22/2023 11:49	AXW	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2023 11:49	AXW	A
Nitrate-N	6.5		mg/L	1.0	EPA 300.0	2	04/22/2023 11:49	AXW	A
pH	6.38	3	pH_Units		S4500HB-11	1	04/27/2023 16:07	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 17:49	AKH	I
Specific Conductance	324		umhos/cm	5	SM2510B-2011	1	04/25/2023 08:55	JXL	A
Sulfate	5.2		mg/L	2.0	EPA 300.0	2	04/22/2023 11:49	AXW	A
Total Dissolved Solids	266		mg/L	25	SM2540C-15	1	04/27/2023 15:47	GJB	A
Total Organic Carbon (TOC)	0.50		mg/L	0.50	SM5310B-14	1	04/25/2023 23:29	PAG	G
Turbidity	0.30		NTU	0.30	SM2130B-2011	1	04/21/2023 23:30	NRB	A

Results

Client Sample ID	CWMP003W	Collected	04/21/2023 12:42
Lab Sample ID	3299270003	Lab Receipt	04/21/2023 15:50

WET CHEMISTRY (cont.)

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

Results

Client Sample ID	CWMP004W	Collected	04/21/2023 12:58
Lab Sample ID	3299270004	Lab Receipt	04/21/2023 15:50

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	100.47		Feet		Field	1	04/21/2023 12:58	BGS	F
Dissolved Oxygen	5.48		mg/L	0.01	Field	1	04/21/2023 12:58	BGS	F
Elev Top MW Casing above MSL	529.53		Feet		Field	1	04/21/2023 12:58	BGS	F
Ground Water Elevation	429.06		ft/MSL		Field	1	04/21/2023 12:58	BGS	F
Oxidation-Reduction Potential	204		mV		Field	1	04/21/2023 12:58	BGS	F
pH, Field (SM4500B)	5.78		pH_Units		Field	1	04/21/2023 12:58	BGS	F
Sample Depth	130.00		Feet		Field	1	04/21/2023 12:58	BGS	F
Specific Conductance, Field	226		umhos/cm	1	Field	1	04/21/2023 12:58	BGS	F
Temperature	14.42		Deg. C		Field	1	04/21/2023 12:58	BGS	F
Total Well Depth	140.00		Feet		Field	1	04/21/2023 12:58	BGS	F
Turbidity, Field	ND	ND	NTU	1	Field	1	04/21/2023 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	05/04/2023 03:21	VLM	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	05/01/2023 12:31	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/01/2023 13:56	MO	D2
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/01/2023 12:31	MO	E1
Barium, Dissolved	0.028		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:56	MO	D2
Barium, Total	0.028		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:31	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:31	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 13:56	MO	D2
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:31	MO	E1
Calcium, Dissolved	21.0		mg/L	0.11	SW846 6020A	1	05/01/2023 13:56	MO	D2
Calcium, Total	21.0		mg/L	0.11	SW846 6020A	1	05/01/2023 12:31	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:56	MO	D2
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:31	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:31	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:56	MO	D2
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:31	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 13:56	MO	D2
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 12:31	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:56	MO	D2
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:31	MO	E1
Magnesium, Dissolved	7.5		mg/L	0.11	SW846 6020A	1	05/01/2023 13:56	MO	D2
Magnesium, Total	7.4		mg/L	0.11	SW846 6020A	1	05/01/2023 12:31	MO	E1
Manganese, Dissolved	0.010		mg/L	0.0056	SW846 6020A	1	05/01/2023 13:56	MO	D2
Manganese, Total	0.010		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:31	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 08:42	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 10:26	WDA	E
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:31	MO	E1

Results

Client Sample ID	CWMP004W	Collected	04/21/2023 12:58
Lab Sample ID	3299270004	Lab Receipt	04/21/2023 15:50

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Potassium, Dissolved	1.4		mg/L	0.11	SW846 6020A	1	05/01/2023 13:56	MO	D2
Potassium, Total	1.4		mg/L	0.11	SW846 6020A	1	05/01/2023 12:31	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:56	MO	D2
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:31	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:56	MO	D2
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:31	MO	E1
Sodium, Dissolved	19.3		mg/L	0.11	SW846 6020A	1	05/01/2023 13:56	MO	D2
Sodium, Total	19.1		mg/L	0.11	SW846 6020A	1	05/01/2023 12:31	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:31	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:31	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:56	MO	D2
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:31	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	05/04/2023 03:21	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J

Results

Client Sample ID	CWMP004W	Collected	04/21/2023 12:58
Lab Sample ID	3299270004	Lab Receipt	04/21/2023 15:50

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	05/04/2023 03:21	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 03:21	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 03:21	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	95.7%	62 – 133	05/04/2023 03:21	
4-Bromofluorobenzene	460-00-4	99.4%	79 – 114	05/04/2023 03:21	
Dibromofluoromethane	1868-53-7	94%	78 – 116	05/04/2023 03:21	
Toluene-d8	2037-26-5	93.1%	76 – 127	05/04/2023 03:21	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	24		mg/L	5	SM2320B-2011	1	04/27/2023 16:22	NML	A
Alkalinity, Total	24	1	mg/L	5	SM2320B-2011	1	04/27/2023 16:22	NML	A
Ammonia-N	0.123		mg/L	0.100	ASTM D6919-17	10	05/01/2023 16:52	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/26/2023 10:58	KMS	C
Chloride	56.2		mg/L	2.0	EPA 300.0	2	04/22/2023 12:00	AXW	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2023 12:00	AXW	A
Nitrate-N	5.3		mg/L	1.0	EPA 300.0	2	04/22/2023 12:00	AXW	A
pH	6.55	3	pH_Units		S4500HB-11	1	04/27/2023 16:22	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 17:51	AKH	I
Specific Conductance	305		umhos/cm	5	SM2510B-2011	1	04/25/2023 08:55	JXL	A
Sulfate	5.7		mg/L	2.0	EPA 300.0	2	04/22/2023 12:00	AXW	A
Total Dissolved Solids	250		mg/L	25	SM2540C-15	1	04/27/2023 15:47	GJB	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	04/25/2023 23:29	PAG	G
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	04/21/2023 23:30	NRB	A

Results

Client Sample ID	CWMP004W	Collected	04/21/2023 12:58
Lab Sample ID	3299270004	Lab Receipt	04/21/2023 15:50

WET CHEMISTRY (cont.)

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

Results

Client Sample ID	Field Blank	Collected	04/21/2023 13:55
Lab Sample ID	3299270005	Lab Receipt	04/21/2023 15:50

LIBRARY SEARCH - VOLATILES

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
No TIC's Detected	.				Lib Search VOC	1	05/03/2023 22:49	VLM	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	05/01/2023 12:33	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/01/2023 13:58	MO	D2
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/01/2023 12:33	MO	E1
Barium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:58	MO	D2
Barium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:33	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:33	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 13:58	MO	D2
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:33	MO	E1
Calcium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/01/2023 13:58	MO	D2
Calcium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/01/2023 12:33	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:58	MO	D2
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:33	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:33	MO	E1
Copper, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:58	MO	D2
Copper, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:33	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 13:58	MO	D2
Iron, Total	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 12:33	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:58	MO	D2
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:33	MO	E1
Magnesium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/01/2023 13:58	MO	D2
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/01/2023 12:33	MO	E1
Manganese, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:58	MO	D2
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:33	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 08:43	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 10:27	WDA	E
Nickel, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:33	MO	E1
Potassium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/01/2023 13:58	MO	D2
Potassium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/01/2023 12:33	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:58	MO	D2
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:33	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 13:58	MO	D2
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:33	MO	E1
Sodium, Dissolved	ND	ND	mg/L	0.11	SW846 6020A	1	05/01/2023 13:58	MO	D2
Sodium, Total	ND	ND	mg/L	0.11	SW846 6020A	1	05/01/2023 12:33	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:33	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:33	MO	E1
Zinc, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 13:58	MO	D2
Zinc, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:33	MO	E1

Results

Client Sample ID	Field Blank	Collected	04/21/2023 13:55
Lab Sample ID	3299270005	Lab Receipt	04/21/2023 15:50

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	05/03/2023 22:49	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/03/2023 22:49	PDK	J

Results

Client Sample ID	Field Blank	Collected	04/21/2023 13:55
Lab Sample ID	3299270005	Lab Receipt	04/21/2023 15:50

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	05/03/2023 22:49	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/03/2023 22:49	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 22:49	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.7%	62 – 133	05/03/2023 22:49	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	05/03/2023 22:49	
Dibromofluoromethane	1868-53-7	96.5%	78 – 116	05/03/2023 22:49	
Toluene-d8	2037-26-5	95.7%	76 – 127	05/03/2023 22:49	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	04/27/2023 16:30	NML	A
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	04/27/2023 16:30	NML	A
Ammonia-N	ND	ND	mg/L	0.010	ASTM D6919-17	1	05/01/2023 18:56	NML	C
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	04/26/2023 10:58	KMS	C
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	04/22/2023 12:10	AXW	A
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	04/22/2023 12:10	AXW	A
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	04/22/2023 12:10	AXW	A
pH	5.66	3	pH_Units		S4500HB-11	1	04/27/2023 16:30	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 18:04	AKH	I
Specific Conductance	ND	ND	umhos/cm	5	SM2510B-2011	1	04/25/2023 08:55	JXL	A
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	04/22/2023 12:10	AXW	A
Total Dissolved Solids	ND	ND	mg/L	25	SM2540C-15	1	04/27/2023 15:47	GJB	A
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SM5310B-14	1	04/25/2023 23:29	PAG	G
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	04/21/2023 23:30	NRB	A

Results

Client Sample ID	Trip Blank	Collected	04/21/2023 15:50
Lab Sample ID	3299270006	Lab Receipt	04/21/2023 15:50

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	05/03/2023 23:12	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A

Results

Client Sample ID	Trip Blank	Collected	04/21/2023 15:50
Lab Sample ID	3299270006	Lab Receipt	04/21/2023 15:50

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/03/2023 23:12	PDK	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/03/2023 23:12	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.1%	62 – 133	05/03/2023 23:12	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	05/03/2023 23:12	
Dibromofluoromethane	1868-53-7	95%	78 – 116	05/03/2023 23:12	
Toluene-d8	2037-26-5	93.9%	76 – 127	05/03/2023 23:12	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3299270001	CWMP012W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3299270002	CWMP002W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3299270003	CWMP003W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3299270004	CWMP004W	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3299270005	Field Blank	SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3299270006	Trip Blank	SW846 8260B	N/A	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3299270001	CWMP012W	N/A	N/A	N/A		Field	980677
		SW846 3015A	978633	04/24/2023 19:24	ANN	SW846 6020A	984495
		SW846 3015A	977858	04/24/2023 01:24	ANN	SW846 6020A	984493
		SW846 7470A	978255	04/24/2023 08:10	WDA	SW846 7470A	978603
		SW846 7470A	978258	04/24/2023 08:10	WDA	SW846 7470A	978606
		N/A	N/A	N/A		Lib Search VOC	987331
		N/A	N/A	N/A		SW846 8260B	986470
		N/A	N/A	N/A		ASTM D6919-17	984478
		N/A	N/A	N/A		EPA 300.0	977262
		N/A	N/A	N/A		EPA 410.4	979666
		N/A	N/A	N/A		S4500HB-11	980265
		N/A	N/A	N/A		SM2130B-2011	977152
		N/A	N/A	N/A		SM2320B-2011	980265
		N/A	N/A	N/A		SM2510B-2011	978564
		N/A	N/A	N/A		SM2540C-15	979876
		N/A	N/A	N/A		SM5310B-14	979059
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	989660
3299270002	CWMP002W	N/A	N/A	N/A		Field	980677
		SW846 3015A	978633	04/24/2023 19:24	ANN	SW846 6020A	984495
		SW846 3015A	977858	04/24/2023 01:24	ANN	SW846 6020A	984493
		SW846 7470A	978255	04/24/2023 08:10	WDA	SW846 7470A	978603
		SW846 7470A	978258	04/24/2023 08:10	WDA	SW846 7470A	978606
		N/A	N/A	N/A		Lib Search VOC	987331
		N/A	N/A	N/A		SW846 8260B	986470
		N/A	N/A	N/A		ASTM D6919-17	984478
		N/A	N/A	N/A		EPA 300.0	977262
		N/A	N/A	N/A		EPA 410.4	979666
		N/A	N/A	N/A		S4500HB-11	980265
		N/A	N/A	N/A		SM2130B-2011	977152
		N/A	N/A	N/A		SM2320B-2011	980265
		N/A	N/A	N/A		SM2510B-2011	978564
		N/A	N/A	N/A		SM2540C-15	979876
		N/A	N/A	N/A		SM5310B-14	979059
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665
3299270003	CWMP003W	N/A	N/A	N/A		Field	980677
		SW846 3015A	978633	04/24/2023 19:24	ANN	SW846 6020A	984495
		SW846 3015A	977858	04/24/2023 01:24	ANN	SW846 6020A	984493
		SW846 7470A	978255	04/24/2023 08:10	WDA	SW846 7470A	978603
		SW846 7470A	978258	04/24/2023 08:10	WDA	SW846 7470A	978606
		N/A	N/A	N/A		Lib Search VOC	987331
		N/A	N/A	N/A		SW846 8260B	986470
		N/A	N/A	N/A		ASTM D6919-17	984477
		N/A	N/A	N/A		EPA 300.0	977262
		N/A	N/A	N/A		EPA 410.4	979666
		N/A	N/A	N/A		S4500HB-11	980265
		N/A	N/A	N/A		SM2130B-2011	977152
		N/A	N/A	N/A		SM2320B-2011	980265
		N/A	N/A	N/A		SM2510B-2011	978564
		N/A	N/A	N/A		SM2540C-15	979877
		N/A	N/A	N/A		SM5310B-14	979059
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3299270004	CWMP004W	N/A	N/A	N/A		Field	980677
		SW846 3015A	978633	04/24/2023 19:24	ANN	SW846 6020A	984495
		SW846 3015A	977858	04/24/2023 01:24	ANN	SW846 6020A	984493
		SW846 7470A	978255	04/24/2023 08:10	WDA	SW846 7470A	978603
		SW846 7470A	978258	04/24/2023 08:10	WDA	SW846 7470A	978606
		N/A	N/A	N/A		Lib Search VOC	987331
		N/A	N/A	N/A		SW846 8260B	986470
		N/A	N/A	N/A		ASTM D6919-17	984477
		N/A	N/A	N/A		EPA 300.0	977262
		N/A	N/A	N/A		EPA 410.4	979666
		N/A	N/A	N/A		S4500HB-11	980265
		N/A	N/A	N/A		SM2130B-2011	977152
		N/A	N/A	N/A		SM2320B-2011	980265
		N/A	N/A	N/A		SM2510B-2011	978564
		N/A	N/A	N/A		SM2540C-15	979877
		N/A	N/A	N/A		SM5310B-14	979059
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665
3299270005	Field Blank	SW846 3015A	977858	04/24/2023 01:24	ANN	SW846 6020A	984493
		SW846 3015A	978633	04/24/2023 19:24	ANN	SW846 6020A	984495
		SW846 7470A	978255	04/24/2023 08:10	WDA	SW846 7470A	978603
		SW846 7470A	978258	04/24/2023 08:10	WDA	SW846 7470A	978606
		N/A	N/A	N/A		Lib Search VOC	989727
		N/A	N/A	N/A		SW846 8260B	986470
		N/A	N/A	N/A		ASTM D6919-17	984478
		N/A	N/A	N/A		EPA 300.0	977262
		N/A	N/A	N/A		EPA 410.4	979666
		N/A	N/A	N/A		S4500HB-11	980265
		N/A	N/A	N/A		SM2130B-2011	977152
		N/A	N/A	N/A		SM2320B-2011	980265
		N/A	N/A	N/A		SM2510B-2011	978564
		N/A	N/A	N/A		SM2540C-15	979877
		N/A	N/A	N/A		SM5310B-14	979059
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665
3299270006	Trip Blank	N/A	N/A	N/A		SW846 8260B	986470

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

ALS Environmental
301 Fulling Mill Rd • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

Gen

3299270

Logged By: SLS
PM: SJB

7270

1 of 1

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

Client Name: Lancaster County Solid Waste MA
Address: 1299 Harrisburg Pike, P.O. Box 4424
Lancaster, PA 17604
Contact: Dan Brown
Phone#: (717) 735-0193
Project Name/#: Creswell/GWMP Form 19A
Bill To: Lancaster County Solid Waste MA

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

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	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 Filered)	Total Metals Form 19A + Subtitle D
					Enter Number of Containers Per Sample or Field Results Below.									
1. CWMP012W	04/21/23	1035	G	GW	2	1	2	1	1	x	x	1	2	2
2. CWMP002W	04/21/23	1227	G	GW	2	1	2	1	1	x	x	1	2	2
3. CWMP003W	04/21/23	1242	G	GW	2	1	2	1	1	x	x	1	2	2
4. CWMP004W	04/21/23	1258	G	GW	2	1	2	1	1	X	X	1	2	2
5. Field Blank	04/21/23	1355	G	DI	2	1	2	1	1			1	2	2
6. Trip Blank	04/21/23	1550	G	DI			2						DB 4/21/23	
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
1 [signature] ALS	4-21-23	1550	2 [signature]	4-21-23	1550
3			4		
5			6		
7			8		
			10		

Laboratory Use Only (completed by Receiving Lab)

Cooler Temp: _____ Therm ID: _____
No. of Coolers: _____

	Y	N	Initial
Custody Seals Present?			
(if present) Seals Intact?			
Received on Ice?			
COC/Labels Complete/Accurate?			
Cont. in Good Cond.?			
Correct Containers?			
Correct Sample Volumes?			
Correct Preservation?			
Headspace/Volatiles?			

Courier/Tracking #:

Sample/COC Comments

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

Data Deliverables: ☐ Standard ☐ CLP-like ☐ USACE

Special Processing: USACE ☐ Navy ☐ ☐

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

Reportable to PADEP? Yes ☐ PWSID # _____

Sample Disposal: Lab [X] Special ☐

EDDS: Format Type-

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

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

Rev 8/04

5/9/2023 4:43 PM

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

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

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

Project 2ND QTR 2023 CWMP-FORM 19A
Workorder 3299051
Report ID 242237 on 5/7/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Apr 20, 2023.

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

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

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

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3299051001	CWMP018S	Ground Water	04/20/2023 10:59	04/20/2023 15:10	BGS	Analytical Laboratory Service
3299051002	CWMP017S	Ground Water	04/20/2023 11:50	04/20/2023 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 preformed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The QC sample type MS for method EPA 300.0 was outside the control limits for the analyte Nitrate-N. The % Recovery was reported as 77.9 and the control limits were 80 to 120.
3	The QC sample type MSD for method EPA 300.0 was outside the control limits for the analyte Nitrate-N. The % Recovery was reported as 73.5 and the control limits were 80 to 120.
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.

Detected Results Summary

Client Sample ID	CWMP018S	Collected	04/20/2023 10:59
Lab Sample ID	3299051001	Lab Receipt	04/20/2023 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	10.58	mg/L	0.01	Field	#
pH, Field (SM4500B)	8.40	pH_Units		Field	#
Specific Conductance, Field	1573	umhos/cm	1	Field	#
Temperature	14.00	Deg. C		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.040	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.040	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	73.3	mg/L	0.11	SW846 6020A	#
Calcium, Total	72.8	mg/L	0.11	SW846 6020A	#
Copper, Dissolved	0.021	mg/L	0.0056	SW846 6020A	#
Copper, Total	0.0073	mg/L	0.0056	SW846 6020A	#
Iron, Total	0.067	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	76.6	mg/L	0.11	SW846 6020A	#
Magnesium, Total	78.0	mg/L	0.11	SW846 6020A	#
Nickel, Total	0.017	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	19.1	mg/L	0.11	SW846 6020A	#
Potassium, Total	19.4	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	320	mg/L	11.0	SW846 6020A	#
Sodium, Total	332	mg/L	11.0	SW846 6020A	#
Zinc, Dissolved	0.19	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.19	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	319	mg/L	5	SM2320B-2011	#
Alkalinity, Total	362	mg/L	5	SM2320B-2011	#
Chemical Oxygen Demand (COD)	57	mg/L	15	EPA 410.4	#
Chloride	515	mg/L	10.0	EPA 300.0	#
Nitrate-N	24.9	mg/L	2.5	EPA 300.0	#
pH	8.62	pH_Units		S4500HB-11	#
Specific Conductance	2660	umhos/cm	50	SM2510B-2011	#
Sulfate	17.9	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1420	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	7.7	mg/L	0.50	SM5310B-14	#
Turbidity	1.1	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP017S	Collected	04/20/2023 11:50
Lab Sample ID	3299051002	Lab Receipt	04/20/2023 15:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	14.98	mg/L	0.01	Field	#
pH, Field (SM4500B)	7.95	pH_Units		Field	#
Specific Conductance, Field	2328	umhos/cm	1	Field	#
Temperature	20.02	Deg. C		Field	#
LIBRARY SEARCH - VOLATILES					
No TIC's Detected	.			Lib Search VOC	#
METALS					
Barium, Dissolved	0.026	mg/L	0.0056	SW846 6020A	#
Barium, Total	0.026	mg/L	0.0056	SW846 6020A	#
Calcium, Dissolved	80.6	mg/L	0.11	SW846 6020A	#
Calcium, Total	80.1	mg/L	0.11	SW846 6020A	#
Copper, Dissolved	0.012	mg/L	0.0056	SW846 6020A	#
Copper, Total	0.012	mg/L	0.0056	SW846 6020A	#
Iron, Dissolved	0.13	mg/L	0.056	SW846 6020A	#
Iron, Total	0.28	mg/L	0.056	SW846 6020A	#
Magnesium, Dissolved	110	mg/L	0.11	SW846 6020A	#
Magnesium, Total	109	mg/L	0.11	SW846 6020A	#
Manganese, Dissolved	0.050	mg/L	0.0056	SW846 6020A	#
Manganese, Total	0.057	mg/L	0.0056	SW846 6020A	#
Nickel, Total	0.0093	mg/L	0.0056	SW846 6020A	#
Potassium, Dissolved	19.6	mg/L	0.11	SW846 6020A	#
Potassium, Total	19.2	mg/L	0.11	SW846 6020A	#
Sodium, Dissolved	488	mg/L	11.0	SW846 6020A	#
Sodium, Total	479	mg/L	11.0	SW846 6020A	#
Zinc, Dissolved	0.16	mg/L	0.0056	SW846 6020A	#
Zinc, Total	0.18	mg/L	0.0056	SW846 6020A	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	559	mg/L	50	SM2320B-2011	#
Alkalinity, Total	559	mg/L	50	SM2320B-2011	#
Chemical Oxygen Demand (COD)	44	mg/L	15	EPA 410.4	#
Chloride	732	mg/L	25.0	EPA 300.0	#
Nitrate-N	34.2	mg/L	2.5	EPA 300.0	#
pH	8.57	pH_Units		S4500HB-11	#
Specific Conductance	3810	umhos/cm	50	SM2510B-2011	#
Sulfate	16.4	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	2020	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	4.3	mg/L	0.50	SM5310B-14	#
Turbidity	1.4	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP018S	Collected	04/20/2023 10:59
Lab Sample ID	3299051001	Lab Receipt	04/20/2023 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	10.58		mg/L	0.01	Field	1	04/20/2023 10:59	BGS	F
pH, Field (SM4500B)	8.40		pH_Units		Field	1	04/20/2023 10:59	BGS	F
Specific Conductance, Field	1573		umhos/cm	1	Field	1	04/20/2023 10:59	BGS	F
Temperature	14.00		Deg. C		Field	1	04/20/2023 10:59	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	05/04/2023 01:50	VLM	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	05/01/2023 11:26	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/01/2023 12:35	MO	D2
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/01/2023 11:26	MO	E1
Barium, Dissolved	0.040		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:35	MO	D2
Barium, Total	0.040		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:26	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 11:26	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:35	MO	D2
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 11:26	MO	E1
Calcium, Dissolved	73.3		mg/L	0.11	SW846 6020A	1	05/01/2023 12:35	MO	D2
Calcium, Total	72.8		mg/L	0.11	SW846 6020A	1	05/01/2023 11:26	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:35	MO	D2
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 11:26	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 11:26	MO	E1
Copper, Dissolved	0.021		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:35	MO	D2
Copper, Total	0.0073		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:26	MO	E1
Iron, Dissolved	ND	ND	mg/L	0.056	SW846 6020A	1	05/01/2023 12:35	MO	D2
Iron, Total	0.067		mg/L	0.056	SW846 6020A	1	05/01/2023 11:26	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:35	MO	D2
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 11:26	MO	E1
Magnesium, Dissolved	76.6		mg/L	0.11	SW846 6020A	1	05/01/2023 12:35	MO	D2
Magnesium, Total	78.0		mg/L	0.11	SW846 6020A	1	05/01/2023 11:26	MO	E1
Manganese, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:35	MO	D2
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 11:26	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 08:34	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/21/2023 11:24	WDA	E
Nickel, Total	0.017		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:26	MO	E1
Potassium, Dissolved	19.1		mg/L	0.11	SW846 6020A	1	05/01/2023 12:35	MO	D2
Potassium, Total	19.4		mg/L	0.11	SW846 6020A	1	05/01/2023 11:26	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:35	MO	D2
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 11:26	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:35	MO	D2
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 11:26	MO	E1
Sodium, Dissolved	320		mg/L	11.0	SW846 6020A	100	05/01/2023 13:27	MO	D2

Results

Client Sample ID	CWMP018S	Collected	04/20/2023 10:59
Lab Sample ID	3299051001	Lab Receipt	04/20/2023 15:10

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Sodium, Total	332		mg/L	11.0	SW846 6020A	100	05/01/2023 13:18	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 11:26	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 11:26	MO	E1
Zinc, Dissolved	0.19		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:35	MO	D2
Zinc, Total	0.19		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:26	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	05/04/2023 01:50	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J

Results

Client Sample ID	CWMP018S	Collected	04/20/2023 10:59
Lab Sample ID	3299051001	Lab Receipt	04/20/2023 15:10

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	05/04/2023 01:50	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 01:50	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 01:50	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.1%	62 – 133	05/04/2023 01:50	
4-Bromofluorobenzene	460-00-4	99%	79 – 114	05/04/2023 01:50	
Dibromofluoromethane	1868-53-7	97.3%	78 – 116	05/04/2023 01:50	
Toluene-d8	2037-26-5	94.8%	76 – 127	05/04/2023 01:50	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	319		mg/L	5	SM2320B-2011	1	04/26/2023 07:22	NML	A
Alkalinity, Total	362	1	mg/L	5	SM2320B-2011	1	04/26/2023 07:22	NML	A
Chemical Oxygen Demand (COD)	57		mg/L	15	EPA 410.4	1	04/26/2023 10:58	KMS	C
Chloride	515		mg/L	10.0	EPA 300.0	10	04/25/2023 08:45	J1W	A
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	04/21/2023 13:20	J1W	A
Nitrate-N	24.9	2,3	mg/L	2.5	EPA 300.0	5	04/21/2023 13:20	J1W	A
pH	8.62	4	pH_Units		S4500HB-11	1	04/26/2023 07:22	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 17:04	AKH	I
Specific Conductance	2660		umhos/cm	50	SM2510B-2011	10	04/25/2023 08:55	JXL	A
Sulfate	17.9		mg/L	5.0	EPA 300.0	5	04/21/2023 13:20	J1W	A
Total Dissolved Solids	1420		mg/L	25	SM2540C-15	1	04/26/2023 16:46	GJB	A
Total Organic Carbon (TOC)	7.7		mg/L	0.50	SM5310B-14	1	04/25/2023 06:07	PAG	G
Turbidity	1.1		NTU	0.30	SM2130B-2011	1	04/21/2023 03:35	NRB	A

Results

Client Sample ID	CWMP017S	Collected	04/20/2023 11:50
Lab Sample ID	3299051002	Lab Receipt	04/20/2023 15:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	14.98		mg/L	0.01	Field	1	04/20/2023 11:50	BGS	F
pH, Field (SM4500B)	7.95		pH_Units		Field	1	04/20/2023 11:50	BGS	F
Specific Conductance, Field	2328		umhos/cm	1	Field	1	04/20/2023 11:50	BGS	F
Temperature	20.02		Deg. C		Field	1	04/20/2023 11:50	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	05/04/2023 02:13	VLM	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	05/01/2023 11:28	MO	E1
Arsenic, Dissolved	ND	ND	mg/L	0.0030	SW846 6020A	1	05/01/2023 12:37	MO	D2
Arsenic, Total	ND	ND	mg/L	0.0033	SW846 6020A	1	05/01/2023 11:28	MO	E1
Barium, Dissolved	0.026		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:37	MO	D2
Barium, Total	0.026		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:28	MO	E1
Beryllium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 11:28	MO	E1
Cadmium, Dissolved	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 12:37	MO	D2
Cadmium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 11:28	MO	E1
Calcium, Dissolved	80.6		mg/L	0.11	SW846 6020A	1	05/01/2023 12:37	MO	D2
Calcium, Total	80.1		mg/L	0.11	SW846 6020A	1	05/01/2023 11:28	MO	E1
Chromium, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:37	MO	D2
Chromium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 11:28	MO	E1
Cobalt, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 11:28	MO	E1
Copper, Dissolved	0.012		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:37	MO	D2
Copper, Total	0.012		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:28	MO	E1
Iron, Dissolved	0.13		mg/L	0.056	SW846 6020A	1	05/01/2023 12:37	MO	D2
Iron, Total	0.28		mg/L	0.056	SW846 6020A	1	05/01/2023 11:28	MO	E1
Lead, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:37	MO	D2
Lead, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 11:28	MO	E1
Magnesium, Dissolved	110		mg/L	0.11	SW846 6020A	1	05/01/2023 12:37	MO	D2
Magnesium, Total	109		mg/L	0.11	SW846 6020A	1	05/01/2023 11:28	MO	E1
Manganese, Dissolved	0.050		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:37	MO	D2
Manganese, Total	0.057		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:28	MO	E1
Mercury, Dissolved	ND	ND	mg/L	0.00050	SW846 7470A	1	04/25/2023 08:35	WDA	D
Mercury, Total	ND	ND	mg/L	0.00050	SW846 7470A	1	04/21/2023 11:25	WDA	E
Nickel, Total	0.0093		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:28	MO	E1
Potassium, Dissolved	19.6		mg/L	0.11	SW846 6020A	1	05/01/2023 12:37	MO	D2
Potassium, Total	19.2		mg/L	0.11	SW846 6020A	1	05/01/2023 11:28	MO	E1
Selenium, Dissolved	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 12:37	MO	D2
Selenium, Total	ND	ND	mg/L	0.0056	SW846 6020A	1	05/01/2023 11:28	MO	E1
Silver, Dissolved	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 12:37	MO	D2
Silver, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 11:28	MO	E1
Sodium, Dissolved	488		mg/L	11.0	SW846 6020A	100	05/01/2023 13:29	MO	D2

Results

Client Sample ID	CWMP017S	Collected	04/20/2023 11:50
Lab Sample ID	3299051002	Lab Receipt	04/20/2023 15:10

METALS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Sodium, Total	479		mg/L	11.0	SW846 6020A	100	05/01/2023 13:21	MO	E1
Thallium, Total	ND	ND	mg/L	0.0011	SW846 6020A	1	05/01/2023 11:28	MO	E1
Vanadium, Total	ND	ND	mg/L	0.0022	SW846 6020A	1	05/01/2023 11:28	MO	E1
Zinc, Dissolved	0.16		mg/L	0.0056	SW846 6020A	1	05/01/2023 12:37	MO	D2
Zinc, Total	0.18		mg/L	0.0056	SW846 6020A	1	05/01/2023 11:28	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	05/04/2023 02:13	PDK	J
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
2-Butanone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
2-Hexanone	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
3-Chloro-1-propene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Acetone	ND	ND	ug/L	10.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Acrylonitrile	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Bromochloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Carbon Disulfide	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Dibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Dichlorodifluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Iodomethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J

Results

Client Sample ID	CWMP017S	Collected	04/20/2023 11:50
Lab Sample ID	3299051002	Lab Receipt	04/20/2023 15:10

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	05/04/2023 02:13	PDK	J
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	3.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Vinyl Acetate	ND	ND	ug/L	5.0	SW846 8260B	1	05/04/2023 02:13	PDK	J
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	05/04/2023 02:13	PDK	J

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	97.1%	62 – 133	05/04/2023 02:13	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	05/04/2023 02:13	
Dibromofluoromethane	1868-53-7	95.8%	78 – 116	05/04/2023 02:13	
Toluene-d8	2037-26-5	92.9%	76 – 127	05/04/2023 02:13	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	559		mg/L	50	SM2320B-2011	10	04/27/2023 13:04	NML	A
Alkalinity, Total	559	1	mg/L	50	SM2320B-2011	10	04/27/2023 13:04	NML	A
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	04/27/2023 03:09	NML	C
Chemical Oxygen Demand (COD)	44		mg/L	15	EPA 410.4	1	04/26/2023 10:58	KMS	C
Chloride	732		mg/L	25.0	EPA 300.0	25	04/25/2023 08:56	J1W	A
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	04/21/2023 14:13	J1W	A
Nitrate-N	34.2		mg/L	2.5	EPA 300.0	5	04/21/2023 14:13	J1W	A
pH	8.57	4	pH_Units		S4500HB-11	1	04/26/2023 07:37	NML	A
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	04/26/2023 17:11	AKH	I
Specific Conductance	3810		umhos/cm	50	SM2510B-2011	10	04/25/2023 08:55	JXL	A
Sulfate	16.4		mg/L	5.0	EPA 300.0	5	04/21/2023 14:13	J1W	A
Total Dissolved Solids	2020		mg/L	25	SM2540C-15	1	04/26/2023 16:46	GJB	A
Total Organic Carbon (TOC)	4.3		mg/L	0.50	SM5310B-14	1	04/25/2023 06:07	PAG	G
Turbidity	1.4		NTU	0.30	SM2130B-2011	1	04/21/2023 03:35	NRB	A

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3299051001	CWMP018S	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	
3299051002	CWMP017S	Field	N/A	
		SW846 6020A	SW846 3015A	
		SW846 6020A	SW846 3015A	
		SW846 7470A	SW846 7470A	
		SW846 7470A	SW846 7470A	
		Lib Search VOC	N/A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2510B-2011	N/A	
		SM2540C-15	N/A	
		SM5310B-14	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3299051001	CWMP018S	N/A	N/A	N/A		Field	980677
		SW846 3015A	978633	04/24/2023 19:24	ANN	SW846 6020A	984495
		SW846 3015A	977858	04/24/2023 01:24	ANN	SW846 6020A	984493
		SW846 7470A	976860	04/21/2023 06:55	WDA	SW846 7470A	976997
		SW846 7470A	978255	04/24/2023 08:10	WDA	SW846 7470A	978603
		N/A	N/A	N/A		Lib Search VOC	987331
		N/A	N/A	N/A		SW846 8260B	986470
		N/A	N/A	N/A		EPA 300.0	976872
		N/A	N/A	N/A		EPA 300.0	978869
		N/A	N/A	N/A		EPA 410.4	979666
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	976754
		N/A	N/A	N/A		SM2320B-2011	978475
		N/A	N/A	N/A		SM2510B-2011	978564
		N/A	N/A	N/A		SM2540C-15	979010
		N/A	N/A	N/A		SM5310B-14	978643
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665
3299051002	CWMP017S	N/A	N/A	N/A		Field	980677
		SW846 3015A	977858	04/24/2023 01:24	ANN	SW846 6020A	984493
		SW846 3015A	978633	04/24/2023 19:24	ANN	SW846 6020A	984495
		SW846 7470A	978255	04/24/2023 08:10	WDA	SW846 7470A	978603
		SW846 7470A	976860	04/21/2023 06:55	WDA	SW846 7470A	976997
		N/A	N/A	N/A		Lib Search VOC	987331
		N/A	N/A	N/A		SW846 8260B	986470
		N/A	N/A	N/A		ASTM D6919-17	979786
		N/A	N/A	N/A		EPA 300.0	978869
		N/A	N/A	N/A		EPA 300.0	976872
		N/A	N/A	N/A		EPA 410.4	979666
		N/A	N/A	N/A		S4500HB-11	978475
		N/A	N/A	N/A		SM2130B-2011	976754
		N/A	N/A	N/A		SM2320B-2011	980265
		N/A	N/A	N/A		SM2510B-2011	978564
		N/A	N/A	N/A		SM2540C-15	979010
		N/A	N/A	N/A		SM5310B-14	978643
		SW846 9066	979659	04/26/2023 07:37	AKH	SW846 9066	979665

5/7/2023 8:11 PM

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ALS Environmental

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by AL

3299051

Logged By: SLS

PM: SJB

1 of 1

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

Client Name: Lancaster County Solid Waste MA

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

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

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

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

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	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 Filered)	Total Metals Form 19A + Subtitle D
					Enter Number of Containers Per Sample or Field Results Below.									
1. CWMP018S	04/20/23	1059	G	GW	2	1	2	1	1	X	X	1	2	2
2. CWMP017S	04/20/23	1150	G	GW	2	1	2	1	1	X	X	1	2	2
3													2	
4													RAW 4/20/23	
5														
6														
7														
8														
9														
10														

(Completed by Receiving Lab)

Cooler Temp: _____ **Therm ID:** _____

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 By: RW | WO Temp (°C): 3C | Therm ID: 570

Receipt Info Completed By: RW

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

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

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 TSO Wade AES	4/20/23	1530	2	4-20-23	1530
3			4		
5			6		
7			8		
9			10		

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

Special Processing: USACE ☐ Navy ☐ ☐

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

Reportable to PADEP? Yes ☐ PWSID # _____

Sample Disposal: Lab ☒ Special ☐

EDDS: Format Type- _____

* G=Grab; C=Composite

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