2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/27/2023
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: 7.63 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.50 ft — Elevation of Water Level: 445.77 ft./MSL

Sampling Depth: 33 ft — Volume of Water Column: 42.40 gal

Total Well Depth: 36.5 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)?: ___ Yes X No

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/16/2023 — Sample Collection Time: 10:21

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): 3328245001 — Final Lab Analysis CompletionDate: 10/27/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP007W
Sample Date	10/16/2023

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	EPA 350.3
BICARBONATE	13	SM18-2321
CALCIUM, TOTAL	21.8	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	78.7	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	67 ND	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	11	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	8.4	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	10.1	EPA 300.0
pH-FIELD (SU)	5.25	FIELD
pH-LAB (SU)	7.06	EPA 150.1
POTASSIUM, TOTAL	2.2	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	36.6	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	563	FIELD
SPEC. COND., LAB (umhos/cm)	403	EPA 120.1
SULFATE	17.3	EPA 300.0
ALKALINITY	13	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	272	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
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.	CWMP007W
Sample Date	10/16/2023

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.

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COMMONWEALTH OF PENNSYLVANIA
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BUREAU OF WASTE MANAGEMENT

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General Reference: Section 273.284
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SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: 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: 29.86 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.23 ft — Elevation of Water Level: 485.27 ft./MSL

Sampling Depth: 57 ft — Volume of Water Column: 53.52 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/16/2023 — Sample Collection Time: 11:39

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): 3328245002 — Final Lab Analysis CompletionDate: 10/27/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP001W
Sample Date	10/16/2023

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	EPA 350.3
BICARBONATE	8	SM18-2321
CALCIUM, TOTAL	15.9	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	26.3	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	870	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	10.7	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	51	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	18.1	EPA 300.0
pH-FIELD (SU)	5.19	FIELD
pH-LAB (SU)	6.93	EPA 150.1
POTASSIUM, TOTAL	2.2	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	13.7	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	352	FIELD
SPEC. COND., LAB (umhos/cm)	258	EPA 120.1
SULFATE	3.5	EPA 300.0
ALKALINITY	8	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	158	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	19	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP001W
Sample Date	10/16/2023

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.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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

Casing Stickup: -0.37 ft — Elevation of Water Level: 467.83 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 138.64 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/16/2023 — 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): 3328245003 — Final Lab Analysis CompletionDate: 10/27/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	10/16/2023

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	EPA 350.3
BICARBONATE	11	SM18-2321
CALCIUM, TOTAL	17.4	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	75.1	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	67 ND	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	8.5	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	54	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	7.7	EPA 300.0
pH-FIELD (SU)	5.35	FIELD
pH-LAB (SU)	7.22	EPA 150.1
POTASSIUM, TOTAL	2.1	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	35.9	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	496	FIELD
SPEC. COND., LAB (umhos/cm)	359	EPA 120.1
SULFATE	6.2	EPA 300.0
ALKALINITY	11	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	238	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.65	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	10/16/2023

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.

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COMMONWEALTH OF PENNSYLVANIA
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: 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: 11.68 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.53 ft — Elevation of Water Level: 300.29 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: 1.7

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/18/2023 — Sample Collection Time: 10:53

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): 3328683001 — Final Lab Analysis CompletionDate: 10/30/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP016W
Sample Date	10/18/2023

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	EPA 350.3
BICARBONATE	11	SM18-2321
CALCIUM, TOTAL	6.2	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	2.7	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	190	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	1.4	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	1.8	EPA 300.0
pH-FIELD (SU)	5.72	FIELD
pH-LAB (SU)	7.2	EPA 150.1
POTASSIUM, TOTAL	0.56 ND	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	3.7	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	93	FIELD
SPEC. COND., LAB (umhos/cm)	64	EPA 120.1
SULFATE	9.2	EPA 300.0
ALKALINITY	11	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	126	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	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.	CWMP016W
Sample Date	10/18/2023

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.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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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: 8.63 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.10 ft — Elevation of Water Level: 352.27 ft./MSL

Sampling Depth: 17 ft — Volume of Water Column: 7.16 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/18/2023 — Sample Collection Time: 12:56

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): 3328683002 — Final Lab Analysis CompletionDate: 10/30/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP010W
Sample Date	10/18/2023

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	0.86	EPA 350.3
BICARBONATE	290	SM18-2321
CALCIUM, TOTAL	87.8	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	47	EPA 410.4
CHLORIDE	317	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	1300	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	49.4	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	520	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	8.5	EPA 300.0
pH-FIELD (SU)	6.37	FIELD
pH-LAB (SU)	8.1	EPA 150.1
POTASSIUM, TOTAL	16.5	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	180	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	2172	FIELD
SPEC. COND., LAB (umhos/cm)	1580	EPA 120.1
SULFATE	20.2	EPA 300.0
ALKALINITY	290	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	974	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	17.3	SM18-5310B
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.	CWMP010W
Sample Date	10/18/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/27/2023
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: 9.56 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.70 ft — Elevation of Water Level: 394.64 ft./MSL

Sampling Depth: 16 ft — Volume of Water Column: 6.62 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 4.6

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/18/2023 — Sample Collection Time: 13:48

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): 3328683003 — Final Lab Analysis CompletionDate: 10/30/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP009W
Sample Date	10/18/2023

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	28.5	EPA 350.3
BICARBONATE	466	SM18-2321
CALCIUM, TOTAL	199	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	113	EPA 410.4
CHLORIDE	709	EPA 300.0
FLUORIDE	1 ND	EPA 300.0
IRON, TOTAL (ug/l)	39100	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	92.6	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	13800	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	5 ND	EPA 300.0
pH-FIELD (SU)	6.13	FIELD
pH-LAB (SU)	7.67	EPA 150.1
POTASSIUM, TOTAL	35.7	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	216	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	4521	FIELD
SPEC. COND., LAB (umhos/cm)	3500	EPA 120.1
SULFATE	11.8	EPA 300.0
ALKALINITY	466	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1900	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	38.7	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	23	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	10/18/2023

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	2.3	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1.2	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
cis 1,2-DICHLOROETHENE	2.6	SW846 8260B
trans 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/27/2023
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)?: ___ Yes X No

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/19/2023 — Sample Collection Time: 10:03

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): 3328969001 — Final Lab Analysis CompletionDate: 10/31/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP018S
Sample Date	10/19/2023

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	0.283	EPA 350.3
BICARBONATE	282	SM18-2321
CALCIUM, TOTAL	111	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	25	EPA 410.4
CHLORIDE	558	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	160	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	62.8	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	39	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	23.9	EPA 300.0
pH-FIELD (SU)	8.28	FIELD
pH-LAB (SU)	8.51	EPA 150.1
POTASSIUM, TOTAL	31.3	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	300	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	3389	FIELD
SPEC. COND., LAB (umhos/cm)	2990	EPA 120.1
SULFATE	49.4	EPA 300.0
ALKALINITY	318	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1460	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	6.9	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.8	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP018S
Sample Date	10/19/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/27/2023
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)?: ___ Yes X No

Spring Flow Rate: _____ gpm

Sample Date (mm/dd/yy): 10/19/2023 — Sample Collection Time: 11:03

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): 3328969002 — Final Lab Analysis CompletionDate: 11/1/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP017S
Sample Date	10/19/2023

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	0.211	EPA 350.3
BICARBONATE	437	SM18-2321
CALCIUM, TOTAL	85.1	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	17	EPA 410.4
CHLORIDE	594	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	1700	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	73.5	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	410	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	34.2	EPA 300.0
pH-FIELD (SU)	7.76	FIELD
pH-LAB (SU)	8.32	EPA 150.1
POTASSIUM, TOTAL	20	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	411	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	3695	FIELD
SPEC. COND., LAB (umhos/cm)	3220	EPA 120.1
SULFATE	62.3	EPA 300.0
ALKALINITY	437	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1720	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	4.7	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	11	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	10/19/2023

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/27/2023
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: 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: 3.1 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.80 ft — Elevation of Water Level: 419.2 ft./MSL

Sampling Depth: 19 ft — Volume of Water Column: 3.21 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 5.8

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/19/2023 — 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): 3328969003 — Final Lab Analysis CompletionDate: 11/1/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP008W
Sample Date	10/19/2023

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	5.48	EPA 350.3
BICARBONATE	358	SM18-2321
CALCIUM, TOTAL	67.4	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	27	EPA 410.4
CHLORIDE	36	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	22200	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	30.1	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	14600	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	1 ND	EPA 300.0
pH-FIELD (SU)	6.14	FIELD
pH-LAB (SU)	7.68	EPA 150.1
POTASSIUM, TOTAL	8.5	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	38.9	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	1145	FIELD
SPEC. COND., LAB (umhos/cm)	759	EPA 120.1
SULFATE	6.9	EPA 300.0
ALKALINITY	358	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	428	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	7.1	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	3.8	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP008W
Sample Date	10/19/2023

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	1.8	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
cis 1,2-DICHLOROETHENE	1 ND	SW846 8260B
trans 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/27/2023
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: 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: 67.39 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.90 ft — Elevation of Water Level: 315.31 ft./MSL

Sampling Depth: 0 ft — Volume of Water Column: 50.68 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)?: ___ Yes X No

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/20/2023 — Sample Collection Time: 10:23

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): 3329124001 — Final Lab Analysis CompletionDate: 11/8/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP012W
Sample Date	10/20/2023

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	0.193	EPA 350.3
BICARBONATE	72	SM18-2321
CALCIUM, TOTAL	32	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	33.4	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	41100	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	9.3	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	690	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	8.7	EPA 300.0
pH-FIELD (SU)	6.4	FIELD
pH-LAB (SU)	7.77	EPA 150.1
POTASSIUM, TOTAL	1.5	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	15.3	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	531	FIELD
SPEC. COND., LAB (umhos/cm)	310	EPA 120.1
SULFATE	5.3	EPA 300.0
ALKALINITY	72	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	224	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	1.5	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	50	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	10/20/2023

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.

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

Casing Stickup: -1.19 ft — Elevation of Water Level: 444.42 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 27.33 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)?: ___ Yes X No

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/20/2023 — Sample Collection Time: 11:44

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): 3329124002 — Final Lab Analysis CompletionDate: 11/3/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP002W
Sample Date	10/20/2023

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	0.274	EPA 350.3
BICARBONATE	92	SM18-2321
CALCIUM, TOTAL	51.8	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	125	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	67 ND	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	16.9	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	840	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	6.8	EPA 300.0
pH-FIELD (SU)	5.63	FIELD
pH-LAB (SU)	7.61	EPA 150.1
POTASSIUM, TOTAL	2.7	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	30.2	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	769	FIELD
SPEC. COND., LAB (umhos/cm)	563	EPA 120.1
SULFATE	28.7	EPA 300.0
ALKALINITY	92	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	402	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	2.9	SM18-5310B
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.	CWMP002W
Sample Date	10/20/2023

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	8.3	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
cis 1,2-DICHLOROETHENE	1 ND	SW846 8260B
trans 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

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

Casing Stickup: -1.29 ft — Elevation of Water Level: 430.95 ft./MSL

Sampling Depth: 100 ft — Volume of Water Column: -26.82 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)?: ___ Yes X No

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/20/2023 — 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): 3329124003 — Final Lab Analysis CompletionDate: 11/3/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP003W
Sample Date	10/20/2023

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	0.208	EPA 350.3
BICARBONATE	24	SM18-2321
CALCIUM, TOTAL	26.2	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	85.4	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	67 ND	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	9.9	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	7.3	EPA 300.0
pH-FIELD (SU)	5.55	FIELD
pH-LAB (SU)	7.21	EPA 150.1
POTASSIUM, TOTAL	1.7	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	23.3	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	542	FIELD
SPEC. COND., LAB (umhos/cm)	360	EPA 120.1
SULFATE	7.7	EPA 300.0
ALKALINITY	24	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	302	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
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.	CWMP003W
Sample Date	10/20/2023

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	2	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
cis 1,2-DICHLOROETHENE	1 ND	SW846 8260B
trans 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

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

Casing Stickup: -1.37 ft — Elevation of Water Level: 427.40 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 55.62 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)?: ___ Yes X No

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/20/2023 — Sample Collection Time: 12:14

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): 3329124004 — Final Lab Analysis CompletionDate: 11/3/2023

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP004W
Sample Date	10/20/2023

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	0.2	EPA 350.3
BICARBONATE	28	SM18-2321
CALCIUM, TOTAL	21.5	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	53.9	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	67 ND	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	7.6	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	10	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	6.3	EPA 300.0
pH-FIELD (SU)	5.48	FIELD
pH-LAB (SU)	7.28	EPA 150.1
POTASSIUM, TOTAL	1.5	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	17.5	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	419	FIELD
SPEC. COND., LAB (umhos/cm)	274	EPA 120.1
SULFATE	7.9	EPA 300.0
ALKALINITY	28	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	224	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.52	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.35	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	10/20/2023

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.

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 4TH QTR 2023 GWMP-FORM 19Q
Workorder 3328245
Report ID 280237 on 10/31/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 16, 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):
Jordan Bigler - Lancaster County Solid Waste Authority
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3328245001	CWMP007W	Ground Water	10/16/2023 10:21	10/16/2023 15:40	BGS	Analytical Laboratory Service
3328245002	CWMP001W	Ground Water	10/16/2023 11:39	10/16/2023 15:40	BGS	Analytical Laboratory Service
3328245003	CWMP005W	Ground Water	10/16/2023 13:10	10/16/2023 15:40	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte 1,1-Dichloroethene. The % Recovery was reported as 137 and the control limits were 63 to 128.
2	The QC sample type MS for method SW846 8260B was outside the control limits for the analyte trans-1,2-Dichloroethene. The % Recovery was reported as 127 and the control limits were 71 to 122.
3	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
4	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
5	The QC sample type MS for method SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 88.8 and the control limits were 90 to 110.

Detected Results Summary

Client Sample ID	CWMP007W	Collected	10/16/2023 10:21
Lab Sample ID	3328245001	Lab Receipt	10/16/2023 15:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	7.63	Feet		Field	#
Dissolved Oxygen	5.07	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	453.40	Feet		Field	#
Flow Rate	1.57	gal/min		Field	#
Ground Water Elevation	445.77	ft/MSL		Field	#
Oxidation-Reduction Potential	332	mV		Field	#
pH, Field (SM4500B)	5.25	pH_Units		Field	#
Sample Depth	33.00	Feet		Field	#
Specific Conductance, Field	563	umhos/cm	1	Field	#
Temperature	13.57	Deg. C		Field	#
Total Well Depth	36.50	Feet		Field	#
Volume in Water Column	42.44	Gallons		Field	#
Water Level After Purge	8.49	Feet		Field	#
Well Volumes Purged	2.23	Vol		Field	#
METALS					
Calcium, Total	21.8	mg/L	0.11	SW846 6010C	#
Magnesium, Total	11.0	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0084	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	36.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	13	mg/L	5	SM2320B-2011	#
Alkalinity, Total	13	mg/L	5	SM2320B-2011	#
Chloride	78.7	mg/L	2.0	EPA 300.0	#
Nitrate-N	10.1	mg/L	1.0	EPA 300.0	#
pH	7.06	pH_Units		S4500HB-11	#
Specific Conductance	403	umhos/cm	5	SW846 9050A	#
Sulfate	17.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	272	mg/L	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	CWMP001W	Collected	10/16/2023 11:39
Lab Sample ID	3328245002	Lab Receipt	10/16/2023 15:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	29.86	Feet		Field	#
Dissolved Oxygen	8.41	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	515.13	Feet		Field	#
Flow Rate	1.81	gal/min		Field	#
Ground Water Elevation	485.27	ft/MSL		Field	#
Oxidation-Reduction Potential	338	mV		Field	#
pH, Field (SM4500B)	5.19	pH_Units		Field	#
Sample Depth	57.00	Feet		Field	#
Specific Conductance, Field	352	umhos/cm	1	Field	#
Temperature	13.84	Deg. C		Field	#
Total Well Depth	66.30	Feet		Field	#
Turbidity, Field	26	NTU	1	Field	#
Volume in Water Column	53.57	Gallons		Field	#
Water Level After Purge	52.03	Feet		Field	#
Well Volumes Purged	2.02	Vol		Field	#
METALS					
Calcium, Total	15.9	mg/L	0.11	SW846 6010C	#
Iron, Total	0.87	mg/L	0.067	SW846 6010C	#
Magnesium, Total	10.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.051	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	8	mg/L	5	SM2320B-2011	#
Alkalinity, Total	8	mg/L	5	SM2320B-2011	#
Chloride	26.3	mg/L	2.0	EPA 300.0	#
Nitrate-N	18.1	mg/L	1.0	EPA 300.0	#
pH	6.93	pH_Units		S4500HB-11	#
Specific Conductance	258	umhos/cm	5	SW846 9050A	#
Sulfate	3.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	158	mg/L	25	SM2540C-15	#
Turbidity	19	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP005W	Collected	10/16/2023 13:10
Lab Sample ID	3328245003	Lab Receipt	10/16/2023 15:40

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	45.60	Feet		Field	#
Dissolved Oxygen	6.12	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	513.43	Feet		Field	#
Flow Rate	2.35	gal/min		Field	#
Ground Water Elevation	467.83	ft/MSL		Field	#
Oxidation-Reduction Potential	314	mV		Field	#
pH, Field (SM4500B)	5.35	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	496	umhos/cm	1	Field	#
Temperature	13.09	Deg. C		Field	#
Total Well Depth	138.92	Feet		Field	#
Volume in Water Column	137.18	Gallons		Field	#
Water Level After Purge	47.79	Feet		Field	#
Well Volumes Purged	1.03	Vol		Field	#
METALS					
Calcium, Total	17.4	mg/L	0.11	SW846 6010C	#
Magnesium, Total	8.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.054	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	35.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	11	mg/L	5	SM2320B-2011	#
Alkalinity, Total	11	mg/L	5	SM2320B-2011	#
Chloride	75.1	mg/L	2.0	EPA 300.0	#
Nitrate-N	7.7	mg/L	1.0	EPA 300.0	#
pH	7.22	pH_Units		S4500HB-11	#
Specific Conductance	359	umhos/cm	5	SW846 9050A	#
Sulfate	6.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	238	mg/L	25	SM2540C-15	#
Turbidity	0.65	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP007W	Collected	10/16/2023 10:21
Lab Sample ID	3328245001	Lab Receipt	10/16/2023 15:40

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	7.63		Feet		Field	1	10/16/2023 10:21	BGS	D
Dissolved Oxygen	5.07		mg/L	0.01	Field	1	10/16/2023 10:21	BGS	D
Elev Top MW Casing above MSL	453.40		Feet		Field	1	10/16/2023 10:21	BGS	D
Flow Rate	1.57		gal/min		Field	1	10/16/2023 10:21	BGS	D
Ground Water Elevation	445.77		ft/MSL		Field	1	10/16/2023 10:21	BGS	D
Oxidation-Reduction Potential	332		mV		Field	1	10/16/2023 10:21	BGS	D
pH, Field (SM4500B)	5.25		pH_Units		Field	1	10/16/2023 10:21	BGS	D
Sample Depth	33.00		Feet		Field	1	10/16/2023 10:21	BGS	D
Specific Conductance, Field	563		umhos/cm	1	Field	1	10/16/2023 10:21	BGS	D
Temperature	13.57		Deg. C		Field	1	10/16/2023 10:21	BGS	D
Total Well Depth	36.50		Feet		Field	1	10/16/2023 10:21	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/16/2023 10:21	BGS	D
Volume in Water Column	42.44		Gallons		Field	1	10/16/2023 10:21	BGS	D
Water Level After Purge	8.49		Feet		Field	1	10/16/2023 10:21	BGS	D
Well Volumes Purged	2.23		Vol		Field	1	10/16/2023 10:21	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	21.8		mg/L	0.11	SW846 6010C	1	10/23/2023 14:40	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/23/2023 14:40	AXW	J1
Magnesium, Total	11.0		mg/L	0.11	SW846 6010C	1	10/23/2023 14:40	AXW	J1
Manganese, Total	0.0084		mg/L	0.0056	SW846 6010C	1	10/23/2023 14:40	AXW	J1
Potassium, Total	2.2		mg/L	0.56	SW846 6010C	1	10/23/2023 14:40	AXW	J1
Sodium, Total	36.6		mg/L	0.56	SW846 6010C	1	10/23/2023 14:40	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
1,1-Dichloroethene	ND	ND,1	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
trans-1,2-Dichloroethene	ND	ND,2	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 04:52	PDK	H

Results

Client Sample ID	CWMP007W	Collected	10/16/2023 10:21
Lab Sample ID	3328245001	Lab Receipt	10/16/2023 15:40

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	10/24/2023 04:52	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	10/24/2023 04:52	
Dibromofluoromethane	1868-53-7	102%	78 – 116	10/24/2023 04:52	
Toluene-d8	2037-26-5	98.2%	76 – 127	10/24/2023 04:52	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	13		mg/L	5	SM2320B-2011	1	10/20/2023 05:38	JMS	B
Alkalinity, Total	13	3	mg/L	5	SM2320B-2011	1	10/20/2023 05:38	JMS	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	10/27/2023 00:38	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/18/2023 14:58	KMS	A
Chloride	78.7		mg/L	2.0	EPA 300.0	2	10/17/2023 09:03	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/17/2023 09:03	J1W	B
Nitrate-N	10.1		mg/L	1.0	EPA 300.0	2	10/17/2023 09:03	J1W	B
pH	7.06	4	pH_Units		S4500HB-11	1	10/20/2023 05:38	JMS	B
Phenolics	ND	ND,5	mg/L	0.004	SW846 9066	1	10/26/2023 15:34	AKH	G
Specific Conductance	403		umhos/cm	5	SW846 9050A	1	10/25/2023 13:45	JXL	B
Sulfate	17.3		mg/L	2.0	EPA 300.0	2	10/17/2023 09:03	J1W	B
Total Dissolved Solids	272		mg/L	25	SM2540C-15	1	10/20/2023 00:00	KRS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/18/2023 03:01	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	10/16/2023 23:20	NRB	B

Results

Client Sample ID	CWMP001W	Collected	10/16/2023 11:39
Lab Sample ID	3328245002	Lab Receipt	10/16/2023 15:40

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	29.86		Feet		Field	1	10/16/2023 11:39	BGS	D
Dissolved Oxygen	8.41		mg/L	0.01	Field	1	10/16/2023 11:39	BGS	D
Elev Top MW Casing above MSL	515.13		Feet		Field	1	10/16/2023 11:39	BGS	D
Flow Rate	1.81		gal/min		Field	1	10/16/2023 11:39	BGS	D
Ground Water Elevation	485.27		ft/MSL		Field	1	10/16/2023 11:39	BGS	D
Oxidation-Reduction Potential	338		mV		Field	1	10/16/2023 11:39	BGS	D
pH, Field (SM4500B)	5.19		pH_Units		Field	1	10/16/2023 11:39	BGS	D
Sample Depth	57.00		Feet		Field	1	10/16/2023 11:39	BGS	D
Specific Conductance, Field	352		umhos/cm	1	Field	1	10/16/2023 11:39	BGS	D
Temperature	13.84		Deg. C		Field	1	10/16/2023 11:39	BGS	D
Total Well Depth	66.30		Feet		Field	1	10/16/2023 11:39	BGS	D
Turbidity, Field	26		NTU	1	Field	1	10/16/2023 11:39	BGS	D
Volume in Water Column	53.57		Gallons		Field	1	10/16/2023 11:39	BGS	D
Water Level After Purge	52.03		Feet		Field	1	10/16/2023 11:39	BGS	D
Well Volumes Purged	2.02		Vol		Field	1	10/16/2023 11:39	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	15.9		mg/L	0.11	SW846 6010C	1	10/23/2023 15:23	AXW	J1
Iron, Total	0.87		mg/L	0.067	SW846 6010C	1	10/23/2023 15:23	AXW	J1
Magnesium, Total	10.7		mg/L	0.11	SW846 6010C	1	10/23/2023 15:23	AXW	J1
Manganese, Total	0.051		mg/L	0.0056	SW846 6010C	1	10/23/2023 15:23	AXW	J1
Potassium, Total	2.2		mg/L	0.56	SW846 6010C	1	10/23/2023 15:23	AXW	J1
Sodium, Total	13.7		mg/L	0.56	SW846 6010C	1	10/23/2023 15:23	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:15	PDK	H

Results

Client Sample ID	CWMP001W	Collected	10/16/2023 11:39
Lab Sample ID	3328245002	Lab Receipt	10/16/2023 15:40

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	10/24/2023 05:15	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	10/24/2023 05:15	
Dibromofluoromethane	1868-53-7	104%	78 – 116	10/24/2023 05:15	
Toluene-d8	2037-26-5	101%	76 – 127	10/24/2023 05:15	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	8		mg/L	5	SM2320B-2011	1	10/20/2023 06:04	JMS	B
Alkalinity, Total	8	3	mg/L	5	SM2320B-2011	1	10/20/2023 06:04	JMS	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	10/27/2023 00:52	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/18/2023 14:58	KMS	A
Chloride	26.3		mg/L	2.0	EPA 300.0	2	10/17/2023 09:13	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/17/2023 09:13	J1W	B
Nitrate-N	18.1		mg/L	1.0	EPA 300.0	2	10/17/2023 09:13	J1W	B
pH	6.93	4	pH_Units		S4500HB-11	1	10/20/2023 06:04	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 15:46	AKH	G
Specific Conductance	258		umhos/cm	5	SW846 9050A	1	10/25/2023 13:45	JXL	B
Sulfate	3.5		mg/L	2.0	EPA 300.0	2	10/17/2023 09:13	J1W	B
Total Dissolved Solids	158		mg/L	25	SM2540C-15	1	10/20/2023 00:00	KRS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/18/2023 03:01	PAG	E
Turbidity	19		NTU	0.30	SM2130B-2011	1	10/16/2023 23:20	NRB	B

Results

Client Sample ID	CWMP005W	Collected	10/16/2023 13:10
Lab Sample ID	3328245003	Lab Receipt	10/16/2023 15:40

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	45.60		Feet		Field	1	10/16/2023 13:10	BGS	D
Dissolved Oxygen	6.12		mg/L	0.01	Field	1	10/16/2023 13:10	BGS	D
Elev Top MW Casing above MSL	513.43		Feet		Field	1	10/16/2023 13:10	BGS	D
Flow Rate	2.35		gal/min		Field	1	10/16/2023 13:10	BGS	D
Ground Water Elevation	467.83		ft/MSL		Field	1	10/16/2023 13:10	BGS	D
Oxidation-Reduction Potential	314		mV		Field	1	10/16/2023 13:10	BGS	D
pH, Field (SM4500B)	5.35		pH_Units		Field	1	10/16/2023 13:10	BGS	D
Sample Depth	130.00		Feet		Field	1	10/16/2023 13:10	BGS	D
Specific Conductance, Field	496		umhos/cm	1	Field	1	10/16/2023 13:10	BGS	D
Temperature	13.09		Deg. C		Field	1	10/16/2023 13:10	BGS	D
Total Well Depth	138.92		Feet		Field	1	10/16/2023 13:10	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/16/2023 13:10	BGS	D
Volume in Water Column	137.18		Gallons		Field	1	10/16/2023 13:10	BGS	D
Water Level After Purge	47.79		Feet		Field	1	10/16/2023 13:10	BGS	D
Well Volumes Purged	1.03		Vol		Field	1	10/16/2023 13:10	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	17.4		mg/L	0.11	SW846 6010C	1	10/23/2023 15:24	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/23/2023 15:24	AXW	J1
Magnesium, Total	8.5		mg/L	0.11	SW846 6010C	1	10/23/2023 15:24	AXW	J1
Manganese, Total	0.054		mg/L	0.0056	SW846 6010C	1	10/23/2023 15:24	AXW	J1
Potassium, Total	2.1		mg/L	0.56	SW846 6010C	1	10/23/2023 15:24	AXW	J1
Sodium, Total	35.9		mg/L	0.56	SW846 6010C	1	10/23/2023 15:24	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/24/2023 05:38	PDK	H

Results

Client Sample ID	CWMP005W	Collected	10/16/2023 13:10
Lab Sample ID	3328245003	Lab Receipt	10/16/2023 15:40

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	104%	62 – 133	10/24/2023 05:38	
4-Bromofluorobenzene	460-00-4	104%	79 – 114	10/24/2023 05:38	
Dibromofluoromethane	1868-53-7	104%	78 – 116	10/24/2023 05:38	
Toluene-d8	2037-26-5	100%	76 – 127	10/24/2023 05:38	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	11		mg/L	5	SM2320B-2011	1	10/20/2023 06:18	JMS	B
Alkalinity, Total	11	3	mg/L	5	SM2320B-2011	1	10/20/2023 06:18	JMS	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	10/27/2023 00:24	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/18/2023 14:58	KMS	A
Chloride	75.1		mg/L	2.0	EPA 300.0	2	10/17/2023 09:24	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/17/2023 09:24	J1W	B
Nitrate-N	7.7		mg/L	1.0	EPA 300.0	2	10/17/2023 09:24	J1W	B
pH	7.22	4	pH_Units		S4500HB-11	1	10/20/2023 06:18	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 15:50	AKH	G
Specific Conductance	359		umhos/cm	5	SW846 9050A	1	10/23/2023 10:51	JXL	B
Sulfate	6.2		mg/L	2.0	EPA 300.0	2	10/17/2023 09:24	J1W	B
Total Dissolved Solids	238		mg/L	25	SM2540C-15	1	10/23/2023 11:05	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/18/2023 03:01	PAG	E
Turbidity	0.65		NTU	0.30	SM2130B-2011	1	10/16/2023 23:20	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3328245001	CWMP007W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3328245002	CWMP001W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3328245003	CWMP005W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3328245001	CWMP007W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1076410	10/18/2023 03:35	ANN	SW846 6010C	1078118
		N/A	N/A	N/A		SW846 8260B	1078279
		N/A	N/A	N/A		ASTM D6919-17	1079327
		N/A	N/A	N/A		EPA 300.0	1076106
		N/A	N/A	N/A		EPA 410.4	1076605
		N/A	N/A	N/A		S4500HB-11	1077126
		N/A	N/A	N/A		SM2130B-2011	1075935
		N/A	N/A	N/A		SM2320B-2011	1077126
		N/A	N/A	N/A		SM2540C-15	1077111
		N/A	N/A	N/A		SW846 9050A	1078792
		N/A	N/A	N/A		SW846 9060A	1076312
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3328245002	CWMP001W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1076410	10/18/2023 03:35	ANN	SW846 6010C	1078118
		N/A	N/A	N/A		SW846 8260B	1078279
		N/A	N/A	N/A		ASTM D6919-17	1079327
		N/A	N/A	N/A		EPA 300.0	1076106
		N/A	N/A	N/A		EPA 410.4	1076605
		N/A	N/A	N/A		S4500HB-11	1077126
		N/A	N/A	N/A		SM2130B-2011	1075935
		N/A	N/A	N/A		SM2320B-2011	1077126
		N/A	N/A	N/A		SM2540C-15	1077111
		N/A	N/A	N/A		SW846 9050A	1078792
		N/A	N/A	N/A		SW846 9060A	1076312
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3328245003	CWMP005W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1076410	10/18/2023 03:35	ANN	SW846 6010C	1078118
		N/A	N/A	N/A		SW846 8260B	1078279
		N/A	N/A	N/A		ASTM D6919-17	1079327
		N/A	N/A	N/A		EPA 300.0	1076106
		N/A	N/A	N/A		EPA 410.4	1076605
		N/A	N/A	N/A		S4500HB-11	1077126
		N/A	N/A	N/A		SM2130B-2011	1075935
		N/A	N/A	N/A		SM2320B-2011	1077126
		N/A	N/A	N/A		SM2540C-15	1077316
		N/A	N/A	N/A		SW846 9050A	1078138
		N/A	N/A	N/A		SW846 9060A	1076312
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

3328245

Logged By: SLS
PM: SJB

1 of 1

ALS Environmental
34 Dogwood Lane • Middletown, PA 17057 • Phone: 717-944-5541 • Fax: 717-944-1430 • www.alsglobal.com
301 Fulling Mill Road • Middletown, PA 17057 • 717.944.5541 • Fax: 717.944.1430

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 19Q Wells

Bill To: Lancaster County Solid Waste MA

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

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

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

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

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	8260 VOCs - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Total Metals: Ca, Fe, Mn, Mg, K, Na	pH, NO3, Cl, F, SpC, SO4, Turb, TDS	Alkalinity, HCO3	
					Enter Number of Containers Per Sample or Field Results Below.									
1. CWMP007W	10/16/23	1021	G	GW	2	1	2	x	x	1	2	1	1	
2. CWMP001W	10/16/23	1139	G	GW	2	1	2	x	x	1	2	1	1	
3. CWMP005W	10/16/23	1310	G	GW	2	1	2	x	x	1	2	1	1	
4														
5														
6														
7														
8														
9														
10														

(Completed by Receiving Lab)

Cooler Temp: _____ Therm ID: _____

	Y	N	Initial
No. of Coolers: _____			
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 573

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	NA
CR6 Samples Filtered	Y	N	NA
OP Samples Filtered	Y	N	NA
VOA Trip Blank			Y N
NJ≤ 4 Days?			
Rad Screen (uCi)			
Courier/Tracking #:			
SDWA Compliance			Y N
PWSID			
WV Containers 0-6°C			Y N NA

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

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	10-16-23	1534	2 DAG LALS	10/16/23	1540
3			4		
5			6		
7			8		
9			10		

Data Deliverables: ☐Standard ☐CLP-like ☐USACE

Special Processing: USACE ☐ Navy ☐

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

Reportable to PADEP? Yes ☐ PWSID # _____

Sample Disposal: Lab [X] Special ☐

EDDS: Format Type- _____

* G=Grab; C=Composite

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

Rev 8/04

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

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 4TH QTR 2023 GWMP-FORM 19Q
Workorder 3328683
Report ID 280434 on 11/1/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 18, 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):
Jordan Bigler - Lancaster County Solid Waste Authority
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3328683001	CWMP016W	Ground Water	10/18/2023 10:53	10/18/2023 15:35	BGS	Analytical Laboratory Service
3328683002	CWMP010W	Ground Water	10/18/2023 12:56	10/18/2023 15:35	BGS	Analytical Laboratory Service
3328683003	CWMP009W	Ground Water	10/18/2023 13:48	10/18/2023 15:35	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
3	The sample was originally run within hold time, but required further analysis that exceeded hold time.
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.
5	The recovery of the Matrix Spike (MS) associated to this analyte was outside of the established control limits. The sample was post-digestion spiked, and this matrix spike was within acceptable recovery limits.
6	The QC sample type MSD for method SW846 6010C was outside the control limits for the analyte Iron, Total. The % Recovery was reported as 138 and the control limits were 75 to 125.
7	The QC sample type MS for method SW846 6010C was outside the control limits for the analyte Iron, Total. The % Recovery was reported as 132 and the control limits were 75 to 125.

Detected Results Summary

Client Sample ID	CWMP016W	Collected	10/18/2023 10:53
Lab Sample ID	3328683001	Lab Receipt	10/18/2023 15:35

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	11.68	Feet		Field	#
Dissolved Oxygen	8.93	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	311.97	Feet		Field	#
Flow Rate	2.24	gal/min		Field	#
Ground Water Elevation	300.29	ft/MSL		Field	#
Oxidation-Reduction Potential	288	mV		Field	#
pH, Field (SM4500B)	5.72	pH_Units		Field	#
Sample Depth	71.00	Feet		Field	#
Specific Conductance, Field	93	umhos/cm	1	Field	#
Temperature	12.64	Deg. C		Field	#
Total Well Depth	73.52	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
Volume in Water Column	90.90	Gallons		Field	#
Water Level After Purge	21.07	Feet		Field	#
Well Volumes Purged	1.73	Vol		Field	#
METALS					
Calcium, Total	6.2	mg/L	0.11	SW846 6010C	#
Iron, Total	0.19	mg/L	0.067	SW846 6010C	#
Magnesium, Total	1.4	mg/L	0.11	SW846 6010C	#
Sodium, Total	3.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	11	mg/L	5	SM2320B-2011	#
Alkalinity, Total	11	mg/L	5	SM2320B-2011	#
Chloride	2.7	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.8	mg/L	1.0	EPA 300.0	#
pH	7.20	pH_Units		S4500HB-11	#
Specific Conductance	64	umhos/cm	5	SW846 9050A	#
Sulfate	9.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	126	mg/L	25	SM2540C-15	#
Turbidity	3.0	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP010W	Collected	10/18/2023 12:56
Lab Sample ID	3328683002	Lab Receipt	10/18/2023 15:35

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	8.63	Feet		Field	#
Dissolved Oxygen	2.43	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	360.90	Feet		Field	#
Flow Rate	0.09	gal/min		Field	#
Ground Water Elevation	352.27	ft/MSL		Field	#
Oxidation-Reduction Potential	136	mV		Field	#
pH, Field (SM4500B)	6.37	pH_Units		Field	#
Sample Depth	17.00	Feet		Field	#
Specific Conductance, Field	2172	umhos/cm	1	Field	#
Temperature	20.37	Deg. C		Field	#
Total Well Depth	19.60	Feet		Field	#
Turbidity, Field	4	NTU	1	Field	#
Volume in Water Column	7.13	Gallons		Field	#
Water Level After Purge	16.49	Feet		Field	#
Well Volumes Purged	1.19	Vol		Field	#
METALS					
Calcium, Total	87.8	mg/L	0.11	SW846 6010C	#
Iron, Total	1.3	mg/L	0.067	SW846 6010C	#
Magnesium, Total	49.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.52	mg/L	0.0056	SW846 6010C	#
Potassium, Total	16.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	180	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	290	mg/L	5	SM2320B-2011	#
Alkalinity, Total	290	mg/L	5	SM2320B-2011	#
Ammonia-N	0.860	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	47	mg/L	15	EPA 410.4	#
Chloride	317	mg/L	5.0	EPA 300.0	#
Nitrate-N	8.5	mg/L	2.5	EPA 300.0	#
pH	8.10	pH_Units		S4500HB-11	#
Specific Conductance	1580	umhos/cm	5	SW846 9050A	#
Sulfate	20.2	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	974	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	17.3	mg/L	12.5	SW846 9060A	#
Turbidity	1.4	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP009W	Collected	10/18/2023 13:48
Lab Sample ID	3328683003	Lab Receipt	10/18/2023 15:35

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	9.56	Feet		Field	#
Dissolved Oxygen	0.09	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	404.20	Feet		Field	#
Flow Rate	1.51	gal/min		Field	#
Ground Water Elevation	394.64	ft/MSL		Field	#
Oxidation-Reduction Potential	-39	mV		Field	#
pH, Field (SM4500B)	6.13	pH_Units		Field	#
Sample Depth	16.00	Feet		Field	#
Specific Conductance, Field	4521	umhos/cm	1	Field	#
Temperature	15.46	Deg. C		Field	#
Total Well Depth	19.70	Feet		Field	#
Volume in Water Column	6.59	Gallons		Field	#
Water Level After Purge	11.65	Feet		Field	#
Well Volumes Purged	4.58	Vol		Field	#
METALS					
Calcium, Total	199	mg/L	0.11	SW846 6010C	#
Iron, Total	39.1	mg/L	0.067	SW846 6010C	#
Magnesium, Total	92.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	13.8	mg/L	0.0056	SW846 6010C	#
Potassium, Total	35.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	216	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.2	ug/L	1.0	SW846 8260B	#
Benzene	2.3	ug/L	1.0	SW846 8260B	#
cis-1,2-Dichloroethene	2.6	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	466	mg/L	50	SM2320B-2011	#
Alkalinity, Total	466	mg/L	50	SM2320B-2011	#
Ammonia-N	28.5	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	113	mg/L	15	EPA 410.4	#
Chloride	709	mg/L	10.0	EPA 300.0	#
pH	7.67	pH_Units		S4500HB-11	#
Specific Conductance	3500	umhos/cm	50	SW846 9050A	#
Sulfate	11.8	mg/L	10.0	EPA 300.0	#
Total Dissolved Solids	1900	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	38.7	mg/L	12.5	SW846 9060A	#
Turbidity	23	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP016W	Collected	10/18/2023 10:53
Lab Sample ID	3328683001	Lab Receipt	10/18/2023 15:35

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	11.68		Feet		Field	1	10/18/2023 10:53	BGS	D
Dissolved Oxygen	8.93		mg/L	0.01	Field	1	10/18/2023 10:53	BGS	D
Elev Top MW Casing above MSL	311.97		Feet		Field	1	10/18/2023 10:53	BGS	D
Flow Rate	2.24		gal/min		Field	1	10/18/2023 10:53	BGS	D
Ground Water Elevation	300.29		ft/MSL		Field	1	10/18/2023 10:53	BGS	D
Oxidation-Reduction Potential	288		mV		Field	1	10/18/2023 10:53	BGS	D
pH, Field (SM4500B)	5.72		pH_Units		Field	1	10/18/2023 10:53	BGS	D
Sample Depth	71.00		Feet		Field	1	10/18/2023 10:53	BGS	D
Specific Conductance, Field	93		umhos/cm	1	Field	1	10/18/2023 10:53	BGS	D
Temperature	12.64		Deg. C		Field	1	10/18/2023 10:53	BGS	D
Total Well Depth	73.52		Feet		Field	1	10/18/2023 10:53	BGS	D
Turbidity, Field	1		NTU	1	Field	1	10/18/2023 10:53	BGS	D
Volume in Water Column	90.90		Gallons		Field	1	10/18/2023 10:53	BGS	D
Water Level After Purge	21.07		Feet		Field	1	10/18/2023 10:53	BGS	D
Well Volumes Purged	1.73		Vol		Field	1	10/18/2023 10:53	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	6.2		mg/L	0.11	SW846 6010C	1	10/23/2023 13:47	AXW	J1
Iron, Total	0.19		mg/L	0.067	SW846 6010C	1	10/23/2023 13:47	AXW	J1
Magnesium, Total	1.4		mg/L	0.11	SW846 6010C	1	10/23/2023 13:47	AXW	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	10/23/2023 13:47	AXW	J1
Potassium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	10/23/2023 13:47	AXW	J1
Sodium, Total	3.7		mg/L	0.56	SW846 6010C	1	10/23/2023 13:47	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/29/2023 23:54	PDK	H

Results

Client Sample ID	CWMP016W	Collected	10/18/2023 10:53
Lab Sample ID	3328683001	Lab Receipt	10/18/2023 15:35

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	100%	62 – 133	10/29/2023 23:54	
4-Bromofluorobenzene	460-00-4	91.3%	79 – 114	10/29/2023 23:54	
Dibromofluoromethane	1868-53-7	94.3%	78 – 116	10/29/2023 23:54	
Toluene-d8	2037-26-5	98.3%	76 – 127	10/29/2023 23:54	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	11		mg/L	5	SM2320B-2011	1	10/20/2023 02:18	JMS	B
Alkalinity, Total	11	1	mg/L	5	SM2320B-2011	1	10/20/2023 02:18	JMS	B
Ammonia-N	ND	ND	mg/L	0.100	ASTM D6919-17	10	10/27/2023 21:42	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/19/2023 11:45	KMS	A
Chloride	2.7		mg/L	2.0	EPA 300.0	2	10/19/2023 10:31	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/19/2023 10:31	J1W	B
Nitrate-N	1.8		mg/L	1.0	EPA 300.0	2	10/19/2023 10:31	J1W	B
pH	7.20	2	pH_Units		S4500HB-11	1	10/20/2023 02:18	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 15:53	AKH	G
Specific Conductance	64		umhos/cm	5	SW846 9050A	1	10/30/2023 10:12	JXL	B
Sulfate	9.2		mg/L	2.0	EPA 300.0	2	10/19/2023 10:31	J1W	B
Total Dissolved Solids	126	3	mg/L	25	SM2540C-15	1	10/27/2023 10:50	KRS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	3.0		NTU	0.30	SM2130B-2011	1	10/19/2023 00:45	NRB	B

Results

Client Sample ID	CWMP010W	Collected	10/18/2023 12:56
Lab Sample ID	3328683002	Lab Receipt	10/18/2023 15:35

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	8.63		Feet		Field	1	10/18/2023 12:56	BGS	D
Dissolved Oxygen	2.43		mg/L	0.01	Field	1	10/18/2023 12:56	BGS	D
Elev Top MW Casing above MSL	360.90		Feet		Field	1	10/18/2023 12:56	BGS	D
Flow Rate	0.09		gal/min		Field	1	10/18/2023 12:56	BGS	D
Ground Water Elevation	352.27		ft/MSL		Field	1	10/18/2023 12:56	BGS	D
Oxidation-Reduction Potential	136		mV		Field	1	10/18/2023 12:56	BGS	D
pH, Field (SM4500B)	6.37		pH_Units		Field	1	10/18/2023 12:56	BGS	D
Sample Depth	17.00		Feet		Field	1	10/18/2023 12:56	BGS	D
Specific Conductance, Field	2172		umhos/cm	1	Field	1	10/18/2023 12:56	BGS	D
Temperature	20.37		Deg. C		Field	1	10/18/2023 12:56	BGS	D
Total Well Depth	19.60		Feet		Field	1	10/18/2023 12:56	BGS	D
Turbidity, Field	4		NTU	1	Field	1	10/18/2023 12:56	BGS	D
Volume in Water Column	7.13		Gallons		Field	1	10/18/2023 12:56	BGS	D
Water Level After Purge	16.49		Feet		Field	1	10/18/2023 12:56	BGS	D
Well Volumes Purged	1.19		Vol		Field	1	10/18/2023 12:56	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	87.8	4	mg/L	0.11	SW846 6010C	1	10/23/2023 13:48	AXW	J1
Iron, Total	1.3	5,6,7	mg/L	0.067	SW846 6010C	1	10/23/2023 13:48	AXW	J1
Magnesium, Total	49.4	4	mg/L	0.11	SW846 6010C	1	10/23/2023 13:48	AXW	J1
Manganese, Total	0.52		mg/L	0.0056	SW846 6010C	1	10/23/2023 13:48	AXW	J1
Potassium, Total	16.5		mg/L	0.56	SW846 6010C	1	10/23/2023 13:48	AXW	J1
Sodium, Total	180		mg/L	0.56	SW846 6010C	1	10/23/2023 13:48	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:14	PDK	H

Results

Client Sample ID	CWMP010W	Collected	10/18/2023 12:56
Lab Sample ID	3328683002	Lab Receipt	10/18/2023 15:35

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.6%	62 – 133	10/30/2023 00:14	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	10/30/2023 00:14	
Dibromofluoromethane	1868-53-7	94.4%	78 – 116	10/30/2023 00:14	
Toluene-d8	2037-26-5	107%	76 – 127	10/30/2023 00:14	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	290		mg/L	5	SM2320B-2011	1	10/20/2023 02:32	JMS	B
Alkalinity, Total	290	1	mg/L	5	SM2320B-2011	1	10/20/2023 02:32	JMS	B
Ammonia-N	0.860		mg/L	0.100	ASTM D6919-17	10	10/27/2023 22:09	NML	A
Chemical Oxygen Demand (COD)	47		mg/L	15	EPA 410.4	1	10/19/2023 11:45	KMS	A
Chloride	317		mg/L	5.0	EPA 300.0	5	10/19/2023 10:42	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	10/19/2023 10:42	J1W	B
Nitrate-N	8.5		mg/L	2.5	EPA 300.0	5	10/19/2023 10:42	J1W	B
pH	8.10	2	pH_Units		S4500HB-11	1	10/20/2023 02:32	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 15:23	AKH	G
Specific Conductance	1580		umhos/cm	5	SW846 9050A	1	10/30/2023 10:12	JXL	B
Sulfate	20.2		mg/L	5.0	EPA 300.0	5	10/19/2023 10:42	J1W	B
Total Dissolved Solids	974		mg/L	25	SM2540C-15	1	10/24/2023 12:33	RAG	B
Total Organic Carbon (TOC)	17.3		mg/L	12.5	SW846 9060A	25	10/27/2023 03:15	PAG	E
Turbidity	1.4		NTU	0.30	SM2130B-2011	1	10/19/2023 00:45	NRB	B

Results

Client Sample ID	CWMP009W	Collected	10/18/2023 13:48
Lab Sample ID	3328683003	Lab Receipt	10/18/2023 15:35

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	9.56		Feet		Field	1	10/18/2023 13:48	BGS	D
Dissolved Oxygen	0.09		mg/L	0.01	Field	1	10/18/2023 13:48	BGS	D
Elev Top MW Casing above MSL	404.20		Feet		Field	1	10/18/2023 13:48	BGS	D
Flow Rate	1.51		gal/min		Field	1	10/18/2023 13:48	BGS	D
Ground Water Elevation	394.64		ft/MSL		Field	1	10/18/2023 13:48	BGS	D
Oxidation-Reduction Potential	-39		mV		Field	1	10/18/2023 13:48	BGS	D
pH, Field (SM4500B)	6.13		pH_Units		Field	1	10/18/2023 13:48	BGS	D
Sample Depth	16.00		Feet		Field	1	10/18/2023 13:48	BGS	D
Specific Conductance, Field	4521		umhos/cm	1	Field	1	10/18/2023 13:48	BGS	D
Temperature	15.46		Deg. C		Field	1	10/18/2023 13:48	BGS	D
Total Well Depth	19.70		Feet		Field	1	10/18/2023 13:48	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/18/2023 13:48	BGS	D
Volume in Water Column	6.59		Gallons		Field	1	10/18/2023 13:48	BGS	D
Water Level After Purge	11.65		Feet		Field	1	10/18/2023 13:48	BGS	D
Well Volumes Purged	4.58		Vol		Field	1	10/18/2023 13:48	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	199		mg/L	0.11	SW846 6010C	1	10/23/2023 13:56	AXW	J1
Iron, Total	39.1		mg/L	0.067	SW846 6010C	1	10/23/2023 13:56	AXW	J1
Magnesium, Total	92.6		mg/L	0.11	SW846 6010C	1	10/23/2023 13:56	AXW	J1
Manganese, Total	13.8		mg/L	0.0056	SW846 6010C	1	10/23/2023 13:56	AXW	J1
Potassium, Total	35.7		mg/L	0.56	SW846 6010C	1	10/23/2023 13:56	AXW	J1
Sodium, Total	216		mg/L	0.56	SW846 6010C	1	10/23/2023 13:56	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
1,1-Dichloroethane	1.2		ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
Benzene	2.3		ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
cis-1,2-Dichloroethene	2.6		ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 00:34	PDK	H

Results

Client Sample ID	CWMP009W	Collected	10/18/2023 13:48
Lab Sample ID	3328683003	Lab Receipt	10/18/2023 15:35

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	100%	62 – 133	10/30/2023 00:34	
4-Bromofluorobenzene	460-00-4	91%	79 – 114	10/30/2023 00:34	
Dibromofluoromethane	1868-53-7	96.6%	78 – 116	10/30/2023 00:34	
Toluene-d8	2037-26-5	98.6%	76 – 127	10/30/2023 00:34	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	466		mg/L	50	SM2320B-2011	10	10/26/2023 20:58	JMS	B
Alkalinity, Total	466	1	mg/L	50	SM2320B-2011	10	10/26/2023 20:58	JMS	B
Ammonia-N	28.5		mg/L	0.100	ASTM D6919-17	10	10/27/2023 21:56	NML	A
Chemical Oxygen Demand (COD)	113		mg/L	15	EPA 410.4	1	10/19/2023 11:45	KMS	A
Chloride	709		mg/L	10.0	EPA 300.0	10	10/19/2023 10:52	J1W	B
Fluoride	ND	ND	mg/L	1.0	EPA 300.0	10	10/19/2023 10:52	J1W	B
Nitrate-N	ND	ND	mg/L	5.0	EPA 300.0	10	10/19/2023 10:52	J1W	B
pH	7.67	2	pH_Units		S4500HB-11	1	10/20/2023 03:26	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 15:27	AKH	G
Specific Conductance	3500		umhos/cm	50	SW846 9050A	10	10/30/2023 10:12	JXL	B
Sulfate	11.8		mg/L	10.0	EPA 300.0	10	10/19/2023 10:52	J1W	B
Total Dissolved Solids	1900		mg/L	25	SM2540C-15	1	10/24/2023 12:33	RAG	B
Total Organic Carbon (TOC)	38.7		mg/L	12.5	SW846 9060A	25	10/27/2023 03:15	PAG	E
Turbidity	23		NTU	0.30	SM2130B-2011	1	10/19/2023 00:45	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3328683001	CWMP016W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3328683002	CWMP010W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3328683003	CWMP009W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3328683001	CWMP016W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1077032	10/19/2023 03:10	ANN	SW846 6010C	1078117
		N/A	N/A	N/A		SW846 8260B	1080203
		N/A	N/A	N/A		ASTM D6919-17	1079670
		N/A	N/A	N/A		EPA 300.0	1077043
		N/A	N/A	N/A		EPA 410.4	1077063
		N/A	N/A	N/A		S4500HB-11	1077126
		N/A	N/A	N/A		SM2130B-2011	1077024
		N/A	N/A	N/A		SM2320B-2011	1077126
		N/A	N/A	N/A		SM2540C-15	1079597
		N/A	N/A	N/A		SW846 9050A	1080276
		N/A	N/A	N/A		SW846 9060A	1078214
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3328683002	CWMP010W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1077032	10/19/2023 03:10	ANN	SW846 6010C	1078117
		N/A	N/A	N/A		SW846 8260B	1080203
		N/A	N/A	N/A		ASTM D6919-17	1079670
		N/A	N/A	N/A		EPA 300.0	1077043
		N/A	N/A	N/A		EPA 410.4	1077063
		N/A	N/A	N/A		S4500HB-11	1077126
		N/A	N/A	N/A		SM2130B-2011	1077024
		N/A	N/A	N/A		SM2320B-2011	1077126
		N/A	N/A	N/A		SM2540C-15	1078398
		N/A	N/A	N/A		SW846 9050A	1080276
		N/A	N/A	N/A		SW846 9060A	1078214
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3328683003	CWMP009W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1077032	10/19/2023 03:10	ANN	SW846 6010C	1078117
		N/A	N/A	N/A		SW846 8260B	1080203
		N/A	N/A	N/A		ASTM D6919-17	1079670
		N/A	N/A	N/A		EPA 300.0	1077043
		N/A	N/A	N/A		EPA 410.4	1077063
		N/A	N/A	N/A		S4500HB-11	1077126
		N/A	N/A	N/A		SM2130B-2011	1077024
		N/A	N/A	N/A		SM2320B-2011	1078801
		N/A	N/A	N/A		SM2540C-15	1078398
		N/A	N/A	N/A		SW846 9050A	1080276
		N/A	N/A	N/A		SW846 9060A	1078214
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

3328683

Logged By: SLS
PM: SJB

Page 1 of 1

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 19Q Wells
Bill To: Lancaster County Solid Waste MA

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

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	8260 VOCs - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Total Metals: Ca, Fe, Mn, Mg, K, Na	pH, NO3, Cl, F, SpC, SO4, Turb, TDS	Alkalinity, HCO3
					Enter Number of Containers Per Sample or Field Results Below.								
1. CWMP016W	10/18/23	1053	G	GW	2	1	2	x	x	1	2	1	1
2. CWMP010W	10/18/23	1256	G	GW	2	1	2	x	x	1	2	1	1
3. CWMP009W	10/18/23	1348	G	GW	2	1	2	x	x	1	2	1	1
4													
5													
6													
7													
8													
9													
10													

Project Comments:

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

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
[illegible] BY AW	10-18-23	1535	2 [illegible]	10/18/23	1535
			4		
			6		
			8		
			10		

* 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

Cooler Temp: 1°C Therm ID: 585
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?			

Temp By: RW | WO Temp (°C) 7c | Therm ID 585

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
OP Samples Filtered Y N NA
VOA Trip Blank Y N NA
NJ≤ 4 Days? Y N NA
Rad Screen (uCi) Y N
Courier/Tracking #:

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

ALS Field Services: [ ] Pickup [ ] Labor
[ ] Composite_Sampling [ ] Rental_Equipment
[ ] Other:

Data Deliverables: [ ] Standard [ ] CLP-like [ ] USACE [ ]
Special Processing: USACE [ ] Navy [ ] [ ]
State Samples Collected In: [ ] NY [ ] NJ [X] PA [ ] NC [ ]
Reportable to PADEP? Yes [ ] PWSID #
Sample Disposal: Lab [X] Special [ ]
EDDS: Format Type-

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 4TH QTR 2023 GWMP-FORM 19Q
Workorder 3328969
Report ID 281670 on 11/9/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 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):
Jordan Bigler - Lancaster County Solid Waste Authority
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3328969001	CWMP018S	Ground Water	10/19/2023 10:03	10/19/2023 15:25	BGS	Analytical Laboratory Service
3328969002	CWMP017S	Ground Water	10/19/2023 11:03	10/19/2023 15:25	BGS	Analytical Laboratory Service
3328969003	CWMP008W	Ground Water	10/19/2023 11:58	10/19/2023 15:25	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
3	The concentration of this analyte was greater than 4 times the concentration of the spike added to the matrix spike. According to protocol, the calculation for percent recovery of the matrix spike is not valid.

Detected Results Summary

Client Sample ID	CWMP018S	Collected	10/19/2023 10:03
Lab Sample ID	3328969001	Lab Receipt	10/19/2023 15:25

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	10.33	mg/L	0.01	Field	#
pH, Field (SM4500B)	8.28	pH_Units		Field	#
Specific Conductance, Field	3389	umhos/cm	1	Field	#
Temperature	11.98	Deg. C		Field	#
METALS					
Calcium, Total	111	mg/L	0.11	SW846 6010C	#
Iron, Total	0.16	mg/L	0.067	SW846 6010C	#
Magnesium, Total	62.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.039	mg/L	0.0056	SW846 6010C	#
Potassium, Total	31.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	300	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	282	mg/L	5	SM2320B-2011	#
Alkalinity, Total	318	mg/L	5	SM2320B-2011	#
Ammonia-N	0.283	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	25	mg/L	15	EPA 410.4	#
Chloride	558	mg/L	10.0	EPA 300.0	#
Nitrate-N	23.9	mg/L	2.5	EPA 300.0	#
pH	8.51	pH_Units		S4500HB-11	#
Specific Conductance	2990	umhos/cm	50	SW846 9050A	#
Sulfate	49.4	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1460	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	6.9	mg/L	0.50	SW846 9060A	#
Turbidity	0.80	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP017S	Collected	10/19/2023 11:03
Lab Sample ID	3328969002	Lab Receipt	10/19/2023 15:25

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	8.71	mg/L	0.01	Field	#
pH, Field (SM4500B)	7.76	pH_Units		Field	#
Specific Conductance, Field	3695	umhos/cm	1	Field	#
Temperature	18.16	Deg. C		Field	#
METALS					
Calcium, Total	85.1	mg/L	0.11	SW846 6010C	#
Iron, Total	1.7	mg/L	0.067	SW846 6010C	#
Magnesium, Total	73.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.41	mg/L	0.0056	SW846 6010C	#
Potassium, Total	20.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	411	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	437	mg/L	50	SM2320B-2011	#
Alkalinity, Total	437	mg/L	50	SM2320B-2011	#
Ammonia-N	0.211	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	17	mg/L	15	EPA 410.4	#
Chloride	594	mg/L	10.0	EPA 300.0	#
Nitrate-N	34.2	mg/L	2.5	EPA 300.0	#
pH	8.32	pH_Units		S4500HB-11	#
Specific Conductance	3220	umhos/cm	50	SW846 9050A	#
Sulfate	62.3	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1720	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	4.7	mg/L	0.50	SW846 9060A	#
Turbidity	11	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP008W	Collected	10/19/2023 11:58
Lab Sample ID	3328969003	Lab Receipt	10/19/2023 15:25

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	3.10	Feet		Field	#
Dissolved Oxygen	0.01	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	422.30	Feet		Field	#
Flow Rate	0.92	gal/min		Field	#
Ground Water Elevation	419.20	ft/MSL		Field	#
Oxidation-Reduction Potential	-36	mV		Field	#
pH, Field (SM4500B)	6.14	pH_Units		Field	#
Sample Depth	19.00	Feet		Field	#
Specific Conductance, Field	1145	umhos/cm	1	Field	#
Temperature	16.16	Deg. C		Field	#
Total Well Depth	22.80	Feet		Field	#
Volume in Water Column	3.15	Gallons		Field	#
Water Level After Purge	13.62	Feet		Field	#
Well Volumes Purged	5.84	Vol		Field	#
METALS					
Calcium, Total	67.4	mg/L	0.11	SW846 6010C	#
Iron, Total	22.2	mg/L	0.067	SW846 6010C	#
Magnesium, Total	30.1	mg/L	0.11	SW846 6010C	#
Manganese, Total	14.6	mg/L	0.0056	SW846 6010C	#
Potassium, Total	8.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	38.9	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.8	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	358	mg/L	5	SM2320B-2011	#
Alkalinity, Total	358	mg/L	5	SM2320B-2011	#
Ammonia-N	5.48	mg/L	0.100	ASTM D6919-17	#
Chemical Oxygen Demand (COD)	27	mg/L	15	EPA 410.4	#
Chloride	36.0	mg/L	2.0	EPA 300.0	#
pH	7.68	pH_Units		S4500HB-11	#
Specific Conductance	759	umhos/cm	5	SW846 9050A	#
Sulfate	6.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	428	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	7.1	mg/L	0.50	SW846 9060A	#
Turbidity	3.8	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP018S	Collected	10/19/2023 10:03
Lab Sample ID	3328969001	Lab Receipt	10/19/2023 15:25

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	10.33		mg/L	0.01	Field	1	10/19/2023 10:03	BGS	D
pH, Field (SM4500B)	8.28		pH_Units		Field	1	10/19/2023 10:03	BGS	D
Specific Conductance, Field	3389		umhos/cm	1	Field	1	10/19/2023 10:03	BGS	D
Temperature	11.98		Deg. C		Field	1	10/19/2023 10:03	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	111	3	mg/L	0.11	SW846 6010C	1	10/25/2023 11:54	AXW	J1
Iron, Total	0.16		mg/L	0.067	SW846 6010C	1	10/25/2023 11:54	AXW	J1
Magnesium, Total	62.8		mg/L	0.11	SW846 6010C	1	10/25/2023 11:54	AXW	J1
Manganese, Total	0.039		mg/L	0.0056	SW846 6010C	1	10/25/2023 11:54	AXW	J1
Potassium, Total	31.3		mg/L	0.56	SW846 6010C	1	10/25/2023 11:54	AXW	J1
Sodium, Total	300		mg/L	0.56	SW846 6010C	1	10/25/2023 11:54	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:07	TMP	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	117%	62 – 133	10/30/2023 16:07	
4-Bromofluorobenzene	460-00-4	107%	79 – 114	10/30/2023 16:07	
Dibromofluoromethane	1868-53-7	93.2%	78 – 116	10/30/2023 16:07	
Toluene-d8	2037-26-5	92%	76 – 127	10/30/2023 16:07	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	282		mg/L	5	SM2320B-2011	1	10/24/2023 18:31	JMS	B

Results

Client Sample ID	CWMP018S	Collected	10/19/2023 10:03
Lab Sample ID	3328969001	Lab Receipt	10/19/2023 15:25

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	318	1	mg/L	5	SM2320B-2011	1	10/24/2023 18:31	JMS	B
Ammonia-N	0.283		mg/L	0.100	ASTM D6919-17	10	10/31/2023 17:48	NML	A
Chemical Oxygen Demand (COD)	25		mg/L	15	EPA 410.4	1	10/23/2023 11:42	KMS	A
Chloride	558		mg/L	10.0	EPA 300.0	10	10/24/2023 22:17	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	10/20/2023 11:50	J1W	B
Nitrate-N	23.9		mg/L	2.5	EPA 300.0	5	10/20/2023 11:50	J1W	B
pH	8.51	2	pH_Units		S4500HB-11	1	10/24/2023 18:31	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 17:29	AKH	G
Specific Conductance	2990		umhos/cm	50	SW846 9050A	10	10/30/2023 10:12	JXL	B
Sulfate	49.4		mg/L	5.0	EPA 300.0	5	10/20/2023 11:50	J1W	B
Total Dissolved Solids	1460		mg/L	25	SM2540C-15	1	10/25/2023 11:01	RAG	B
Total Organic Carbon (TOC)	6.9		mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	0.80		NTU	0.30	SM2130B-2011	1	10/19/2023 22:05	NRB	B

Results

Client Sample ID	CWMP017S	Collected	10/19/2023 11:03
Lab Sample ID	3328969002	Lab Receipt	10/19/2023 15:25

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	8.71		mg/L	0.01	Field	1	10/19/2023 11:02	BGS	D
pH, Field (SM4500B)	7.76		pH_Units		Field	1	10/19/2023 11:02	BGS	D
Specific Conductance, Field	3695		umhos/cm	1	Field	1	10/19/2023 11:02	BGS	D
Temperature	18.16		Deg. C		Field	1	10/19/2023 11:02	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	85.1		mg/L	0.11	SW846 6010C	1	10/25/2023 12:00	AXW	J1
Iron, Total	1.7		mg/L	0.067	SW846 6010C	1	10/25/2023 12:00	AXW	J1
Magnesium, Total	73.5		mg/L	0.11	SW846 6010C	1	10/25/2023 12:00	AXW	J1
Manganese, Total	0.41		mg/L	0.0056	SW846 6010C	1	10/25/2023 12:00	AXW	J1
Potassium, Total	20.0		mg/L	0.56	SW846 6010C	1	10/25/2023 12:00	AXW	J1
Sodium, Total	411		mg/L	0.56	SW846 6010C	1	10/25/2023 12:00	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/30/2023 16:30	TMP	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	115%	62 – 133	10/30/2023 16:30	
4-Bromofluorobenzene	460-00-4	105%	79 – 114	10/30/2023 16:30	
Dibromofluoromethane	1868-53-7	90.4%	78 – 116	10/30/2023 16:30	
Toluene-d8	2037-26-5	90.6%	76 – 127	10/30/2023 16:30	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	437		mg/L	50	SM2320B-2011	10	10/27/2023 01:57	JMS	B

Results

Client Sample ID	CWMP017S	Collected	10/19/2023 11:03
Lab Sample ID	3328969002	Lab Receipt	10/19/2023 15:25

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Total	437	1	mg/L	50	SM2320B-2011	10	10/27/2023 01:57	JMS	B
Ammonia-N	0.211		mg/L	0.100	ASTM D6919-17	10	10/31/2023 17:20	NML	A
Chemical Oxygen Demand (COD)	17		mg/L	15	EPA 410.4	1	10/23/2023 11:42	KMS	A
Chloride	594		mg/L	10.0	EPA 300.0	10	10/24/2023 23:10	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	10/20/2023 12:00	J1W	B
Nitrate-N	34.2		mg/L	2.5	EPA 300.0	5	10/20/2023 12:00	J1W	B
pH	8.32	2	pH_Units		S4500HB-11	1	10/24/2023 18:46	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 17:48	AKH	G
Specific Conductance	3220		umhos/cm	50	SW846 9050A	10	11/01/2023 09:50	JXL	B
Sulfate	62.3		mg/L	5.0	EPA 300.0	5	10/20/2023 12:00	J1W	B
Total Dissolved Solids	1720		mg/L	25	SM2540C-15	1	10/25/2023 11:01	RAG	B
Total Organic Carbon (TOC)	4.7		mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	11		NTU	0.30	SM2130B-2011	1	10/19/2023 22:05	NRB	B

Results

Client Sample ID	CWMP008W	Collected	10/19/2023 11:58
Lab Sample ID	3328969003	Lab Receipt	10/19/2023 15:25

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	3.10		Feet		Field	1	10/19/2023 11:58	BGS	D
Dissolved Oxygen	0.01		mg/L	0.01	Field	1	10/19/2023 11:58	BGS	D
Elev Top MW Casing above MSL	422.30		Feet		Field	1	10/19/2023 11:58	BGS	D
Flow Rate	0.92		gal/min		Field	1	10/19/2023 11:58	BGS	D
Ground Water Elevation	419.20		ft/MSL		Field	1	10/19/2023 11:58	BGS	D
Oxidation-Reduction Potential	-36		mV		Field	1	10/19/2023 11:58	BGS	D
pH, Field (SM4500B)	6.14		pH_Units		Field	1	10/19/2023 11:58	BGS	D
Sample Depth	19.00		Feet		Field	1	10/19/2023 11:58	BGS	D
Specific Conductance, Field	1145		umhos/cm	1	Field	1	10/19/2023 11:58	BGS	D
Temperature	16.16		Deg. C		Field	1	10/19/2023 11:58	BGS	D
Total Well Depth	22.80		Feet		Field	1	10/19/2023 11:58	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/19/2023 11:58	BGS	D
Volume in Water Column	3.15		Gallons		Field	1	10/19/2023 11:58	BGS	D
Water Level After Purge	13.62		Feet		Field	1	10/19/2023 11:58	BGS	D
Well Volumes Purged	5.84		Vol		Field	1	10/19/2023 11:58	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	67.4		mg/L	0.11	SW846 6010C	1	10/25/2023 12:01	AXW	J1
Iron, Total	22.2		mg/L	0.067	SW846 6010C	1	10/25/2023 12:01	AXW	J1
Magnesium, Total	30.1		mg/L	0.11	SW846 6010C	1	10/25/2023 12:01	AXW	J1
Manganese, Total	14.6		mg/L	0.0056	SW846 6010C	1	10/25/2023 12:01	AXW	J1
Potassium, Total	8.5		mg/L	0.56	SW846 6010C	1	10/25/2023 12:01	AXW	J1
Sodium, Total	38.9		mg/L	0.56	SW846 6010C	1	10/25/2023 12:01	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
1,1-Dichloroethane	1.8		ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/01/2023 14:35	ILY	I

Results

Client Sample ID	CWMP008W	Collected	10/19/2023 11:58
Lab Sample ID	3328969003	Lab Receipt	10/19/2023 15:25

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	11/01/2023 14:35	
4-Bromofluorobenzene	460-00-4	92.4%	79 – 114	11/01/2023 14:35	
Dibromofluoromethane	1868-53-7	97.9%	78 – 116	11/01/2023 14:35	
Toluene-d8	2037-26-5	103%	76 – 127	11/01/2023 14:35	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	358		mg/L	5	SM2320B-2011	1	10/24/2023 18:59	JMS	B
Alkalinity, Total	358	1	mg/L	5	SM2320B-2011	1	10/24/2023 18:59	JMS	B
Ammonia-N	5.48		mg/L	0.100	ASTM D6919-17	10	10/31/2023 17:34	NML	A
Chemical Oxygen Demand (COD)	27		mg/L	15	EPA 410.4	1	10/23/2023 11:42	KMS	A
Chloride	36.0		mg/L	2.0	EPA 300.0	2	10/20/2023 12:11	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/20/2023 12:11	J1W	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	10/20/2023 12:11	J1W	B
pH	7.68	2	pH_Units		S4500HB-11	1	10/24/2023 18:59	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 17:37	AKH	G
Specific Conductance	759		umhos/cm	5	SW846 9050A	1	11/01/2023 09:50	JXL	B
Sulfate	6.9		mg/L	2.0	EPA 300.0	2	10/20/2023 12:11	J1W	B
Total Dissolved Solids	428		mg/L	25	SM2540C-15	1	10/25/2023 11:01	RAG	B
Total Organic Carbon (TOC)	7.1		mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	3.8		NTU	0.30	SM2130B-2011	1	10/19/2023 22:05	NRB	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3328969001	CWMP018S	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3328969002	CWMP017S	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3328969003	CWMP008W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3328969001	CWMP018S	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1078021	10/23/2023 01:28	ANN	SW846 6010C	1078775
		N/A	N/A	N/A		SW846 8260B	1080313
		N/A	N/A	N/A		ASTM D6919-17	1080289
		N/A	N/A	N/A		EPA 300.0	1078309
		N/A	N/A	N/A		EPA 300.0	1077307
		N/A	N/A	N/A		EPA 410.4	1078109
		N/A	N/A	N/A		S4500HB-11	1078337
		N/A	N/A	N/A		SM2130B-2011	1077275
		N/A	N/A	N/A		SM2320B-2011	1078337
		N/A	N/A	N/A		SM2540C-15	1078702
		N/A	N/A	N/A		SW846 9050A	1080276
		N/A	N/A	N/A		SW846 9060A	1078214
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3328969002	CWMP017S	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1078021	10/23/2023 01:28	ANN	SW846 6010C	1078775
		N/A	N/A	N/A		SW846 8260B	1080313
		N/A	N/A	N/A		ASTM D6919-17	1080289
		N/A	N/A	N/A		EPA 300.0	1077307
		N/A	N/A	N/A		EPA 300.0	1078309
		N/A	N/A	N/A		EPA 410.4	1078109
		N/A	N/A	N/A		S4500HB-11	1078337
		N/A	N/A	N/A		SM2130B-2011	1077275
		N/A	N/A	N/A		SM2320B-2011	1078801
		N/A	N/A	N/A		SM2540C-15	1078702
		N/A	N/A	N/A		SW846 9050A	1080672
		N/A	N/A	N/A		SW846 9060A	1078214
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3328969003	CWMP008W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1078021	10/23/2023 01:28	ANN	SW846 6010C	1078775
		N/A	N/A	N/A		SW846 8260B	1081067
		N/A	N/A	N/A		ASTM D6919-17	1080289
		N/A	N/A	N/A		EPA 300.0	1077307
		N/A	N/A	N/A		EPA 410.4	1078109
		N/A	N/A	N/A		S4500HB-11	1078337
		N/A	N/A	N/A		SM2130B-2011	1077275
		N/A	N/A	N/A		SM2320B-2011	1078337
		N/A	N/A	N/A		SM2540C-15	1078702
		N/A	N/A	N/A		SW846 9050A	1080672
		N/A	N/A	N/A		SW846 9060A	1078214
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333

ALS Environmental
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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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3328969

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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 19Q Wells

Bill To: Lancaster County Solid Waste MA

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

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

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

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

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

ANALYSES/METHOD REQUESTED

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix	TOC	O-OH	8260 VOCs - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Total Metals: Ca, Fe, Mn, Mg, K, Na	pH, NO3, Cl, F, SpC, SO4, Turb, TDS	Alkalinity, HCO3	
					Enter Number of Containers Per Sample or Field Results Below.									
1. CWMP018S	10/19/23	1003	G	GW	2	1	2	x	x	1	2	1	1	
2. CWMP017S	10/19/23	1103	G	GW	2	1	2	x	x	1	2	1	1	
3. CWMP008W	10/19/23	1158	G	GW	2	1	2	x	x	1	2	1	1	
4														
5														
6														
7														
8														
9														
10														

Project Comments:

LOGGED BY(signature): DATE TIME

REVIEWED BY(signature): DATE TIME

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
1 Zach Shack ALS	10/19/23	1525	2 Lance Cardene	10-19-23	1525
3			4		
5			6		
7			8		
9			10		

Cooler Temp: 1 Therm ID: 525

No. of Coolers: _____ Y N Initial

Custody Seals Present? [ ] [ ]

Temp By: DAG | WO Temp (°C): 1 | Therm ID: 525

Receipt Info Completed By: DAG

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

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

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 4TH QTR 2023 GWMP-FORM 19Q
Workorder 3329124
Report ID 282286 on 11/10/2023

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 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):
Jordan Bigler - Lancaster County Solid Waste Authority
Ashley Gichuki - Lancaster County Solid Waste Authority
Daniel Brown - Lancaster County Solid Waste Authority
Jeff Musser - Lancaster County Solid Waste Authority

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3329124001	CWMP012W	Ground Water	10/20/2023 10:23	10/20/2023 15:55	BGS	Analytical Laboratory Service
3329124002	CWMP002W	Ground Water	10/20/2023 11:44	10/20/2023 15:55	BGS	Analytical Laboratory Service
3329124003	CWMP003W	Ground Water	10/20/2023 11:58	10/20/2023 15:55	BGS	Analytical Laboratory Service
3329124004	CWMP004W	Ground Water	10/20/2023 12:14	10/20/2023 15:55	BGS	Analytical Laboratory Service
3329124005	Field Blank	Water	10/20/2023 14:40	10/20/2023 15:55	BGS	Analytical Laboratory Service
3329124006	Trip Blank	Water	10/20/2023 15:55	10/20/2023 15:55	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The sample was originally run within hold time, but required further analysis that exceeded hold time.
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 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	10/20/2023 10:23
Lab Sample ID	3329124001	Lab Receipt	10/20/2023 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	67.39	Feet		Field	#
Dissolved Oxygen	5.11	mg/L	0.01	Field	#
Oxidation-Reduction Potential	206	mV		Field	#
pH, Field (SM4500B)	6.40	pH_Units		Field	#
Specific Conductance, Field	531	umhos/cm	1	Field	#
Temperature	14.22	Deg. C		Field	#
Turbidity, Field	25	NTU	1	Field	#
METALS					
Calcium, Total	32.0	mg/L	0.11	SW846 6010C	#
Iron, Total	41.1	mg/L	0.067	SW846 6010C	#
Magnesium, Total	9.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.69	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	15.3	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	72	mg/L	5	SM2320B-2011	#
Alkalinity, Total	72	mg/L	5	SM2320B-2011	#
Ammonia-N	0.193	mg/L	0.100	ASTM D6919-17	#
Chloride	33.4	mg/L	2.0	EPA 300.0	#
Nitrate-N	8.7	mg/L	1.0	EPA 300.0	#
pH	7.77	pH_Units		S4500HB-11	#
Specific Conductance	310	umhos/cm	5	SW846 9050A	#
Sulfate	5.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	224	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.5	mg/L	0.50	SW846 9060A	#
Turbidity	50	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP002W	Collected	10/20/2023 11:44
Lab Sample ID	3329124002	Lab Receipt	10/20/2023 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	81.39	Feet		Field	#
Dissolved Oxygen	3.19	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	525.81	Feet		Field	#
Ground Water Elevation	444.42	ft/MSL		Field	#
Oxidation-Reduction Potential	218	mV		Field	#
pH, Field (SM4500B)	5.63	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	769	umhos/cm	1	Field	#
Temperature	14.56	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Turbidity, Field	69	NTU	1	Field	#
METALS					
Calcium, Total	51.8	mg/L	0.11	SW846 6010C	#
Magnesium, Total	16.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.84	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	30.2	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	8.3	ug/L	1.0	SW846 8260B	#
Chloroethane	8.5	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	92	mg/L	5	SM2320B-2011	#
Alkalinity, Total	92	mg/L	5	SM2320B-2011	#
Ammonia-N	0.274	mg/L	0.100	ASTM D6919-17	#
Chloride	125	mg/L	5.0	EPA 300.0	#
Nitrate-N	6.8	mg/L	2.5	EPA 300.0	#
pH	7.61	pH_Units		S4500HB-11	#
Specific Conductance	563	umhos/cm	5	SW846 9050A	#
Sulfate	28.7	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	402	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	2.9	mg/L	0.50	SW846 9060A	#

Detected Results Summary

Client Sample ID	CWMP003W	Collected	10/20/2023 11:58
Lab Sample ID	3329124003	Lab Receipt	10/20/2023 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	93.26	Feet		Field	#
Dissolved Oxygen	8.64	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	524.21	Feet		Field	#
Ground Water Elevation	430.95	ft/MSL		Field	#
Oxidation-Reduction Potential	218	mV		Field	#
pH, Field (SM4500B)	5.55	pH_Units		Field	#
Sample Depth	100.00	Feet		Field	#
Specific Conductance, Field	542	umhos/cm	1	Field	#
Temperature	15.29	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
Turbidity, Field	13	NTU	1	Field	#
METALS					
Calcium, Total	26.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	9.9	mg/L	0.11	SW846 6010C	#
Potassium, Total	1.7	mg/L	0.56	SW846 6010C	#
Sodium, Total	23.3	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	2.0	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	24	mg/L	5	SM2320B-2011	#
Alkalinity, Total	24	mg/L	5	SM2320B-2011	#
Ammonia-N	0.208	mg/L	0.100	ASTM D6919-17	#
Chloride	85.4	mg/L	2.0	EPA 300.0	#
Nitrate-N	7.3	mg/L	1.0	EPA 300.0	#
pH	7.21	pH_Units		S4500HB-11	#
Specific Conductance	360	umhos/cm	5	SW846 9050A	#
Sulfate	7.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	302	mg/L	25	SM2540C-15	#

Detected Results Summary

Client Sample ID	CWMP004W	Collected	10/20/2023 12:14
Lab Sample ID	3329124004	Lab Receipt	10/20/2023 15:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	102.13	Feet		Field	#
Dissolved Oxygen	6.55	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	529.53	Feet		Field	#
Ground Water Elevation	427.40	ft/MSL		Field	#
Oxidation-Reduction Potential	223	mV		Field	#
pH, Field (SM4500B)	5.48	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	419	umhos/cm	1	Field	#
Temperature	15.13	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
METALS					
Calcium, Total	21.5	mg/L	0.11	SW846 6010C	#
Magnesium, Total	7.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.010	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	17.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	28	mg/L	5	SM2320B-2011	#
Alkalinity, Total	28	mg/L	5	SM2320B-2011	#
Ammonia-N	0.200	mg/L	0.100	ASTM D6919-17	#
Chloride	53.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	6.3	mg/L	1.0	EPA 300.0	#
pH	7.28	pH_Units		S4500HB-11	#
Specific Conductance	274	umhos/cm	5	SW846 9050A	#
Sulfate	7.9	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	224	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.52	mg/L	0.50	SW846 9060A	#
Turbidity	0.35	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	Field Blank	Collected	10/20/2023 14:40
Lab Sample ID	3329124005	Lab Receipt	10/20/2023 15:55

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Ammonia-N	0.035	mg/L	0.010	ASTM D6919-17	#
pH	5.54	pH_Units		S4500HB-11	#
Total Dissolved Solids	34	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.1	mg/L	0.50	SW846 9060A	#

Results

Client Sample ID	CWMP012W	Collected	10/20/2023 10:23
Lab Sample ID	3329124001	Lab Receipt	10/20/2023 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	67.39		Feet		Field	1	10/20/2023 10:22	BGS	D
Dissolved Oxygen	5.11		mg/L	0.01	Field	1	10/20/2023 10:22	BGS	D
Oxidation-Reduction Potential	206		mV		Field	1	10/20/2023 10:22	BGS	D
pH, Field (SM4500B)	6.40		pH_Units		Field	1	10/20/2023 10:22	BGS	D
Specific Conductance, Field	531		umhos/cm	1	Field	1	10/20/2023 10:22	BGS	D
Temperature	14.22		Deg. C		Field	1	10/20/2023 10:22	BGS	D
Turbidity, Field	25		NTU	1	Field	1	10/20/2023 10:22	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	32.0		mg/L	0.11	SW846 6010C	1	10/26/2023 12:23	AXW	J1
Iron, Total	41.1		mg/L	0.067	SW846 6010C	1	10/26/2023 12:23	AXW	J1
Magnesium, Total	9.3		mg/L	0.11	SW846 6010C	1	10/26/2023 12:23	AXW	J1
Manganese, Total	0.69		mg/L	0.0056	SW846 6010C	1	10/26/2023 12:23	AXW	J1
Potassium, Total	1.5		mg/L	0.56	SW846 6010C	1	10/26/2023 12:23	AXW	J1
Sodium, Total	15.3		mg/L	0.56	SW846 6010C	1	10/26/2023 12:23	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 04:44	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96%	62 – 133	11/03/2023 04:44	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	11/03/2023 04:44	
Dibromofluoromethane	1868-53-7	92.4%	78 – 116	11/03/2023 04:44	
Toluene-d8	2037-26-5	96.2%	76 – 127	11/03/2023 04:44	

WET CHEMISTRY

Results

Client Sample ID	CWMP012W	Collected	10/20/2023 10:23
Lab Sample ID	3329124001	Lab Receipt	10/20/2023 15:55

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	72	1	mg/L	5	SM2320B-2011	1	11/08/2023 16:13	JMS	B
Alkalinity, Total	72	1,2	mg/L	5	SM2320B-2011	1	11/08/2023 16:13	JMS	B
Ammonia-N	0.193		mg/L	0.100	ASTM D6919-17	10	11/01/2023 00:38	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/24/2023 11:43	KMS	A
Chloride	33.4		mg/L	2.0	EPA 300.0	2	10/21/2023 10:41	GMM	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/21/2023 10:41	GMM	B
Nitrate-N	8.7		mg/L	1.0	EPA 300.0	2	10/21/2023 10:41	GMM	B
pH	7.77	3	pH_Units		S4500HB-11	1	11/08/2023 16:13	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 18:57	AKH	G
Specific Conductance	310		umhos/cm	5	SW846 9050A	1	11/01/2023 09:50	JXL	B
Sulfate	5.3		mg/L	2.0	EPA 300.0	2	10/21/2023 10:41	GMM	B
Total Dissolved Solids	224		mg/L	25	SM2540C-15	1	10/26/2023 06:58	KRS	B
Total Organic Carbon (TOC)	1.5		mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	50		NTU	0.30	SM2130B-2011	1	10/20/2023 23:05	NRB	B

Results

Client Sample ID	CWMP002W	Collected	10/20/2023 11:44
Lab Sample ID	3329124002	Lab Receipt	10/20/2023 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	81.39		Feet		Field	1	10/20/2023 11:43	BGS	D
Dissolved Oxygen	3.19		mg/L	0.01	Field	1	10/20/2023 11:43	BGS	D
Elev Top MW Casing above MSL	525.81		Feet		Field	1	10/20/2023 11:43	BGS	D
Ground Water Elevation	444.42		ft/MSL		Field	1	10/20/2023 11:43	BGS	D
Oxidation-Reduction Potential	218		mV		Field	1	10/20/2023 11:43	BGS	D
pH, Field (SM4500B)	5.63		pH_Units		Field	1	10/20/2023 11:43	BGS	D
Sample Depth	85.00		Feet		Field	1	10/20/2023 11:43	BGS	D
Specific Conductance, Field	769		umhos/cm	1	Field	1	10/20/2023 11:43	BGS	D
Temperature	14.56		Deg. C		Field	1	10/20/2023 11:43	BGS	D
Total Well Depth	100.00		Feet		Field	1	10/20/2023 11:43	BGS	D
Turbidity, Field	69		NTU	1	Field	1	10/20/2023 11:43	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	51.8	4	mg/L	0.11	SW846 6010C	1	10/26/2023 12:24	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/26/2023 12:24	AXW	J1
Magnesium, Total	16.9		mg/L	0.11	SW846 6010C	1	10/26/2023 12:24	AXW	J1
Manganese, Total	0.84		mg/L	0.0056	SW846 6010C	1	10/26/2023 12:24	AXW	J1
Potassium, Total	2.7		mg/L	0.56	SW846 6010C	1	10/26/2023 12:24	AXW	J1
Sodium, Total	30.2		mg/L	0.56	SW846 6010C	1	10/26/2023 12:24	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,1-Dichloroethane	8.3		ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,2,4-Trichlorobenzene	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,3-Dichloropropene, Total	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H

Results

Client Sample ID	CWMP002W	Collected	10/20/2023 11:44
Lab Sample ID	3329124002	Lab Receipt	10/20/2023 15:55

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroethane	8.5		ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:07	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.2%	62 – 133	11/03/2023 05:07	
4-Bromofluorobenzene	460-00-4	111%	79 – 114	11/03/2023 05:07	
Dibromofluoromethane	1868-53-7	95.7%	78 – 116	11/03/2023 05:07	
Toluene-d8	2037-26-5	99.7%	76 – 127	11/03/2023 05:07	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	92		mg/L	5	SM2320B-2011	1	10/27/2023 07:24	JMS	B
Alkalinity, Total	92	2	mg/L	5	SM2320B-2011	1	10/27/2023 07:24	JMS	B
Ammonia-N	0.274		mg/L	0.100	ASTM D6919-17	10	11/01/2023 01:19	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/24/2023 11:43	KMS	A
Chloride	125		mg/L	5.0	EPA 300.0	5	10/21/2023 10:52	GMM	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	10/21/2023 10:52	GMM	B
Nitrate-N	6.8		mg/L	2.5	EPA 300.0	5	10/21/2023 10:52	GMM	B
pH	7.61	3	pH_Units		S4500HB-11	1	10/27/2023 07:24	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 19:24	AKH	G
Specific Conductance	563		umhos/cm	5	SW846 9050A	1	11/01/2023 09:50	JXL	B
Sulfate	28.7		mg/L	5.0	EPA 300.0	5	10/21/2023 10:52	GMM	B
Total Dissolved Solids	402		mg/L	25	SM2540C-15	1	10/26/2023 06:58	KRS	B
Total Organic Carbon (TOC)	2.9		mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	10/20/2023 23:05	NRB	B

Results

Client Sample ID	CWMP003W	Collected	10/20/2023 11:58
Lab Sample ID	3329124003	Lab Receipt	10/20/2023 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	93.26		Feet		Field	1	10/20/2023 11:58	BGS	D
Dissolved Oxygen	8.64		mg/L	0.01	Field	1	10/20/2023 11:58	BGS	D
Elev Top MW Casing above MSL	524.21		Feet		Field	1	10/20/2023 11:58	BGS	D
Ground Water Elevation	430.95		ft/MSL		Field	1	10/20/2023 11:58	BGS	D
Oxidation-Reduction Potential	218		mV		Field	1	10/20/2023 11:58	BGS	D
pH, Field (SM4500B)	5.55		pH_Units		Field	1	10/20/2023 11:58	BGS	D
Sample Depth	100.00		Feet		Field	1	10/20/2023 11:58	BGS	D
Specific Conductance, Field	542		umhos/cm	1	Field	1	10/20/2023 11:58	BGS	D
Temperature	15.29		Deg. C		Field	1	10/20/2023 11:58	BGS	D
Total Well Depth	140.00		Feet		Field	1	10/20/2023 11:58	BGS	D
Turbidity, Field	13		NTU	1	Field	1	10/20/2023 11:58	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	26.2		mg/L	0.11	SW846 6010C	1	10/26/2023 12:32	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/26/2023 12:32	AXW	J1
Magnesium, Total	9.9		mg/L	0.11	SW846 6010C	1	10/26/2023 12:32	AXW	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	10/26/2023 12:32	AXW	J1
Potassium, Total	1.7		mg/L	0.56	SW846 6010C	1	10/26/2023 12:32	AXW	J1
Sodium, Total	23.3		mg/L	0.56	SW846 6010C	1	10/26/2023 12:32	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,1-Dichloroethane	2.0		ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,2,4-Trichlorobenzene	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,3-Dichloropropene, Total	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H

Results

Client Sample ID	CWMP003W	Collected	10/20/2023 11:58
Lab Sample ID	3329124003	Lab Receipt	10/20/2023 15:55

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:30	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	100%	62 – 133	11/03/2023 05:30	
4-Bromofluorobenzene	460-00-4	108%	79 – 114	11/03/2023 05:30	
Dibromofluoromethane	1868-53-7	96.4%	78 – 116	11/03/2023 05:30	
Toluene-d8	2037-26-5	99.2%	76 – 127	11/03/2023 05:30	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	24		mg/L	5	SM2320B-2011	1	10/27/2023 08:59	JMS	B
Alkalinity, Total	24	2	mg/L	5	SM2320B-2011	1	10/27/2023 08:59	JMS	B
Ammonia-N	0.208		mg/L	0.100	ASTM D6919-17	10	11/01/2023 01:32	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/24/2023 11:43	KMS	A
Chloride	85.4		mg/L	2.0	EPA 300.0	2	10/21/2023 11:02	GMM	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/21/2023 11:02	GMM	B
Nitrate-N	7.3		mg/L	1.0	EPA 300.0	2	10/21/2023 11:02	GMM	B
pH	7.21	3	pH_Units		S4500HB-11	1	10/27/2023 08:59	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 19:28	AKH	G
Specific Conductance	360		umhos/cm	5	SW846 9050A	1	11/01/2023 09:50	JXL	B
Sulfate	7.7		mg/L	2.0	EPA 300.0	2	10/21/2023 11:02	GMM	B
Total Dissolved Solids	302		mg/L	25	SM2540C-15	1	10/26/2023 06:58	KRS	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	10/20/2023 23:05	NRB	B

Results

Client Sample ID	CWMP004W	Collected	10/20/2023 12:14
Lab Sample ID	3329124004	Lab Receipt	10/20/2023 15:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	102.13		Feet		Field	1	10/20/2023 12:14	BGS	D
Dissolved Oxygen	6.55		mg/L	0.01	Field	1	10/20/2023 12:14	BGS	D
Elev Top MW Casing above MSL	529.53		Feet		Field	1	10/20/2023 12:14	BGS	D
Ground Water Elevation	427.40		ft/MSL		Field	1	10/20/2023 12:14	BGS	D
Oxidation-Reduction Potential	223		mV		Field	1	10/20/2023 12:14	BGS	D
pH, Field (SM4500B)	5.48		pH_Units		Field	1	10/20/2023 12:14	BGS	D
Sample Depth	130.00		Feet		Field	1	10/20/2023 12:14	BGS	D
Specific Conductance, Field	419		umhos/cm	1	Field	1	10/20/2023 12:14	BGS	D
Temperature	15.13		Deg. C		Field	1	10/20/2023 12:14	BGS	D
Total Well Depth	140.00		Feet		Field	1	10/20/2023 12:14	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/20/2023 12:14	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	21.5		mg/L	0.11	SW846 6010C	1	10/26/2023 12:34	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/26/2023 12:34	AXW	J1
Magnesium, Total	7.6		mg/L	0.11	SW846 6010C	1	10/26/2023 12:34	AXW	J1
Manganese, Total	0.010		mg/L	0.0056	SW846 6010C	1	10/26/2023 12:34	AXW	J1
Potassium, Total	1.5		mg/L	0.56	SW846 6010C	1	10/26/2023 12:34	AXW	J1
Sodium, Total	17.5		mg/L	0.56	SW846 6010C	1	10/26/2023 12:34	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,2,3-Trichloropropane	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,2,4-Trichlorobenzene	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,2-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,2-Dichloropropane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,3-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,3-Dichloropropene, Total	ND	ND	ug/L	2.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
1,4-Dichlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Bromodichloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Bromoform	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Bromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Carbon Tetrachloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Chlorobenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Chlorodibromomethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H

Results

Client Sample ID	CWMP004W	Collected	10/20/2023 12:14
Lab Sample ID	3329124004	Lab Receipt	10/20/2023 15:55

VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Chloroform	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Chloromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Styrene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Trichlorofluoromethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 05:53	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	11/03/2023 05:53	
4-Bromofluorobenzene	460-00-4	107%	79 – 114	11/03/2023 05:53	
Dibromofluoromethane	1868-53-7	94.9%	78 – 116	11/03/2023 05:53	
Toluene-d8	2037-26-5	99.5%	76 – 127	11/03/2023 05:53	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	28		mg/L	5	SM2320B-2011	1	10/27/2023 09:11	JMS	B
Alkalinity, Total	28	2	mg/L	5	SM2320B-2011	1	10/27/2023 09:11	JMS	B
Ammonia-N	0.200		mg/L	0.100	ASTM D6919-17	10	11/01/2023 01:46	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/24/2023 11:43	KMS	A
Chloride	53.9		mg/L	2.0	EPA 300.0	2	10/21/2023 11:13	GMM	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/21/2023 11:13	GMM	B
Nitrate-N	6.3		mg/L	1.0	EPA 300.0	2	10/21/2023 11:13	GMM	B
pH	7.28	3	pH_Units		S4500HB-11	1	10/27/2023 09:11	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 18:50	AKH	G
Specific Conductance	274		umhos/cm	5	SW846 9050A	1	11/01/2023 09:50	JXL	B
Sulfate	7.9		mg/L	2.0	EPA 300.0	2	10/21/2023 11:13	GMM	B
Total Dissolved Solids	224		mg/L	25	SM2540C-15	1	10/26/2023 06:58	KRS	B
Total Organic Carbon (TOC)	0.52		mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	0.35		NTU	0.30	SM2130B-2011	1	10/20/2023 23:05	NRB	B

Results

Client Sample ID	Field Blank	Collected	10/20/2023 14:40
Lab Sample ID	3329124005	Lab Receipt	10/20/2023 15:55

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	10/26/2023 12:35	AXW	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/26/2023 12:35	AXW	J1
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	10/26/2023 12:35	AXW	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	10/26/2023 12:35	AXW	J1
Potassium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	10/26/2023 12:35	AXW	J1
Sodium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	10/26/2023 12:35	AXW	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 01:38	PDK	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	83.3%	62 – 133	11/03/2023 01:38	
4-Bromofluorobenzene	460-00-4	106%	79 – 114	11/03/2023 01:38	
Dibromofluoromethane	1868-53-7	93.5%	78 – 116	11/03/2023 01:38	
Toluene-d8	2037-26-5	100%	76 – 127	11/03/2023 01:38	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	10/27/2023 09:19	JMS	B
Alkalinity, Total	ND	ND,2	mg/L	5	SM2320B-2011	1	10/27/2023 09:19	JMS	B
Ammonia-N	0.035		mg/L	0.010	ASTM D6919-17	1	11/01/2023 02:00	NML	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/24/2023 11:43	KMS	A
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	10/21/2023 11:23	GMM	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/21/2023 11:23	GMM	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	10/21/2023 11:23	GMM	B
pH	5.54	3	pH_Units		S4500HB-11	1	10/27/2023 09:19	JMS	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/26/2023 18:42	AKH	G

Results

Client Sample ID	Field Blank	Collected	10/20/2023 14:40
Lab Sample ID	3329124005	Lab Receipt	10/20/2023 15:55

WET CHEMISTRY (cont.)

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Specific Conductance	ND	ND	umhos/cm	5	SW846 9050A	1	11/01/2023 09:50	JXL	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	10/21/2023 11:23	GMM	B
Total Dissolved Solids	34		mg/L	25	SM2540C-15	1	10/26/2023 06:58	KRS	B
Total Organic Carbon (TOC)	1.1		mg/L	0.50	SW846 9060A	1	10/27/2023 03:15	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	10/20/2023 23:05	NRB	B

Results

Client Sample ID	Trip Blank	Collected	10/20/2023 15:55
Lab Sample ID	3329124006	Lab Receipt	10/20/2023 15:55

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	11/03/2023 02:02	PDK	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	86.5%	62 – 133	11/03/2023 02:02	
4-Bromofluorobenzene	460-00-4	108%	79 – 114	11/03/2023 02:02	
Dibromofluoromethane	1868-53-7	95.8%	78 – 116	11/03/2023 02:02	
Toluene-d8	2037-26-5	101%	76 – 127	11/03/2023 02:02	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3329124001	CWMP012W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3329124002	CWMP002W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3329124003	CWMP003W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3329124004	CWMP004W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3329124005	Field Blank	SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		ASTM D6919-17	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3329124006	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
3329124001	CWMP012W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1078022	10/23/2023 05:35	ANN	SW846 6010C	1079315
		N/A	N/A	N/A		SW846 8260B	1082033
		N/A	N/A	N/A		ASTM D6919-17	1080290
		N/A	N/A	N/A		EPA 300.0	1077488
		N/A	N/A	N/A		EPA 410.4	1078341
		N/A	N/A	N/A		S4500HB-11	1085155
		N/A	N/A	N/A		SM2130B-2011	1077480
		N/A	N/A	N/A		SM2320B-2011	1085155
		N/A	N/A	N/A		SM2540C-15	1078836
		N/A	N/A	N/A		SW846 9050A	1080672
		N/A	N/A	N/A		SW846 9060A	1078214
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3329124002	CWMP002W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1078022	10/23/2023 05:35	ANN	SW846 6010C	1079315
		N/A	N/A	N/A		SW846 8260B	1082033
		N/A	N/A	N/A		ASTM D6919-17	1080290
		N/A	N/A	N/A		EPA 300.0	1077488
		N/A	N/A	N/A		EPA 410.4	1078341
		N/A	N/A	N/A		S4500HB-11	1078801
		N/A	N/A	N/A		SM2130B-2011	1077480
		N/A	N/A	N/A		SM2320B-2011	1078801
		N/A	N/A	N/A		SM2540C-15	1078836
		N/A	N/A	N/A		SW846 9050A	1080672
		N/A	N/A	N/A		SW846 9060A	1078215
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3329124003	CWMP003W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1078022	10/23/2023 05:35	ANN	SW846 6010C	1079315
		N/A	N/A	N/A		SW846 8260B	1082033
		N/A	N/A	N/A		ASTM D6919-17	1080290
		N/A	N/A	N/A		EPA 300.0	1077488
		N/A	N/A	N/A		EPA 410.4	1078341
		N/A	N/A	N/A		S4500HB-11	1078801
		N/A	N/A	N/A		SM2130B-2011	1077480
		N/A	N/A	N/A		SM2320B-2011	1078801
		N/A	N/A	N/A		SM2540C-15	1078836
		N/A	N/A	N/A		SW846 9050A	1080672
		N/A	N/A	N/A		SW846 9060A	1078215
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3329124004	CWMP004W	N/A	N/A	N/A		Field	1080593
		SW846 3015A	1078022	10/23/2023 05:35	ANN	SW846 6010C	1079315
		N/A	N/A	N/A		SW846 8260B	1082033
		N/A	N/A	N/A		ASTM D6919-17	1080290
		N/A	N/A	N/A		EPA 300.0	1077488
		N/A	N/A	N/A		EPA 410.4	1078341
		N/A	N/A	N/A		S4500HB-11	1078801
		N/A	N/A	N/A		SM2130B-2011	1077480
		N/A	N/A	N/A		SM2320B-2011	1078801
		N/A	N/A	N/A		SM2540C-15	1078836
		N/A	N/A	N/A		SW846 9050A	1080672
		N/A	N/A	N/A		SW846 9060A	1078215
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3329124005	Field Blank	SW846 3015A	1078022	10/23/2023 05:35	ANN	SW846 6010C	1079315
		N/A	N/A	N/A		SW846 8260B	1082033
		N/A	N/A	N/A		ASTM D6919-17	1080290
		N/A	N/A	N/A		EPA 300.0	1077488
		N/A	N/A	N/A		EPA 410.4	1078341
		N/A	N/A	N/A		S4500HB-11	1078801
		N/A	N/A	N/A		SM2130B-2011	1077480
		N/A	N/A	N/A		SM2320B-2011	1078801
		N/A	N/A	N/A		SM2540C-15	1078836
		N/A	N/A	N/A		SW846 9050A	1080672
		N/A	N/A	N/A		SW846 9060A	1078215
		SW846 9066	1079323	10/26/2023 08:24	AKH	SW846 9066	1079333
3329124006	Trip Blank	N/A	N/A	N/A		SW846 8260B	1082033

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CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

Generated by ALS

3329124

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 19Q Wells

Bill To: Lancaster County Solid Waste MA

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

Date Required: _____ Approved By: _____

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

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

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	*G or C	**Matrix
CWMP012W	10/20/23	1023	G	GW
CWMP002W	10/20/23	1144	G	GW
CWMP003W	10/20/23	1158	G	GW
CWMP004W	10/20/23	1214	G	GW
Field Blank	10/20/23	1440	G	DI
Trip Blank	10/20/23	1555	G	DI

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

ANALYSES/METHOD REQUESTED

Enter Number of Containers Per Sample or Field Results Below.

TOC	O-OH	8260 VOCs - Form 19Q	Field Measurements	Sample Depth for AUX Data	NH3-N, COD	Total Metals: Ca, Fe, Mn, Mg, K, Na	pH, NO3, Cl, F, SpC, SO4, Turb, TDS	Alkalinity, HCO3	
2	1	2	x	x	1	2	1	1	
2	1	2	x	x	1	2	1	1	
2	1	2	x	x	1	2	1	1	
2	1	2	x	x	1	2	1	1	
2	1	2			1	2	1	1	
		2			1	2	1	1	

Comments:

LOGGED BY(signature): DATE: TIME:

REVIEWED BY(signature): DATE: TIME:

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
[illegible] ALS	10/20/23	1555	2	10/20/23	1555
			4		
			6		
			8		
			10		

* 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

(To be completed by Receiving Lab)

Cooler Temp: _____ Therm ID: _____

No. of Coolers: _____ Y N Initial

Custody Seals Present? [ ] [ ]

COC	Temp By:	WO Temp (°C)	Therm ID
	DB	2°	571

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

Courier/T

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-