2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
08/19/2024
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: 7.94 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.50 ft — Elevation of Water Level: 445.46 ft./MSL

Sampling Depth: 33 ft — Volume of Water Column: 41.94 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/15/2024 — Sample Collection Time: 10:15

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): 3368996001 — Final Lab Analysis CompletionDate: 7/24/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP007W
Sample Date	7/15/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	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	78.9	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	10.6	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	7.9	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	10	EPA 300.0
pH-FIELD (SU)	5.18	FIELD
pH-LAB (SU)	7.42	EPA 150.1
POTASSIUM, TOTAL	2.3	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	36.6	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	573	FIELD
SPEC. COND., LAB (umhos/cm)	393	EPA 120.1
SULFATE	18.2	EPA 300.0
ALKALINITY	13	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	306	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	7.6	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.6	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP007W
Sample Date	7/15/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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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Federal Regulations, Subtitle D: 258.54 and Appendix I to Part 258.

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Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity ID (as issued by DEP): 100008

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: 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: 25.92 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.23 ft — Elevation of Water Level: 489.21 ft./MSL

Sampling Depth: 57 ft — Volume of Water Column: 59.30 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/15/2024 — Sample Collection Time: 10:33

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): 3368996002 — Final Lab Analysis CompletionDate: 7/24/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP001W
Sample Date	7/15/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	8	SM18-2321
CALCIUM, TOTAL	15.4	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	26.8	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	10.2	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	61	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	18.1	EPA 300.0
pH-FIELD (SU)	5.06	FIELD
pH-LAB (SU)	7.07	EPA 150.1
POTASSIUM, TOTAL	2.3	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	13.2	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	348	FIELD
SPEC. COND., LAB (umhos/cm)	247	EPA 120.1
SULFATE	2.6	EPA 300.0
ALKALINITY	8	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	242	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.7	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP001W
Sample Date	7/15/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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: 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: 41.18 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -0.37 ft — Elevation of Water Level: 472.25 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 145.13 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/15/2024 — Sample Collection Time: 12:45

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): 3368996003 — Final Lab Analysis CompletionDate: 7/24/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	7/15/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	19	SM18-2321
CALCIUM, TOTAL	15.8	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	60.9	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	170	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	7.2	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	48	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	7.6	EPA 300.0
pH-FIELD (SU)	5.49	FIELD
pH-LAB (SU)	7.61	EPA 150.1
POTASSIUM, TOTAL	2	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	31.9	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	437	FIELD
SPEC. COND., LAB (umhos/cm)	299	EPA 120.1
SULFATE	5.7	EPA 300.0
ALKALINITY	19	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	244	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.	CWMP005W
Sample Date	7/15/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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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QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

Casing Stickup: 2.53 ft — Elevation of Water Level: 299.41 ft./MSL

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

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/16/2024 — Sample Collection Time: 12:41

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): 3369120001 — Final Lab Analysis CompletionDate: 7/24/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP016W
Sample Date	7/16/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	10	SM18-2321
CALCIUM, TOTAL	5.6	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	2.6	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	210	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	1.3	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	8.8	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	1.3	EPA 300.0
pH-FIELD (SU)	5.81	FIELD
pH-LAB (SU)	7.24	EPA 150.1
POTASSIUM, TOTAL	0.56 ND	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	3.4	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	86	FIELD
SPEC. COND., LAB (umhos/cm)	60	EPA 120.1
SULFATE	9.5	EPA 300.0
ALKALINITY	10	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	43	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.7	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP016W
Sample Date	7/16/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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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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: 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): 7/17/2024 — Sample Collection Time: 9:51

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): 3369382001 — Final Lab Analysis CompletionDate: 7/25/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP018S
Sample Date	7/17/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	537	SM18-2321
CALCIUM, TOTAL	87.2	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	25	EPA 410.4
CHLORIDE	451	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	98	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	80.7	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	29	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	19.7	EPA 300.0
pH-FIELD (SU)	8.48	FIELD
pH-LAB (SU)	8.7	EPA 150.1
POTASSIUM, TOTAL	23.1	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	273	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	3319	FIELD
SPEC. COND., LAB (umhos/cm)	5 ND	EPA 120.1
SULFATE	32.2	EPA 300.0
ALKALINITY	537	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1310	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	9.1	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.	CWMP018S
Sample Date	7/17/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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
08/19/2024
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): 7/17/2024 — Sample Collection Time: 10:10

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): 3369382002 — Final Lab Analysis CompletionDate: 7/25/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP017S
Sample Date	7/17/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	761	SM18-2321
CALCIUM, TOTAL	92.9	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	17	EPA 410.4
CHLORIDE	571	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	1400	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	128	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	310	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	37.3	EPA 300.0
pH-FIELD (SU)	8.2	FIELD
pH-LAB (SU)	8.58	EPA 150.1
POTASSIUM, TOTAL	21.8	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	416	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	12	FIELD
SPEC. COND., LAB (umhos/cm)	5 ND	EPA 120.1
SULFATE	57.6	EPA 300.0
ALKALINITY	826	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1870	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	6.1	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	8.8	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.	CWMP017S
Sample Date	7/17/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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
08/19/2024
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: 9.22 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.70 ft — Elevation of Water Level: 394.98 ft./MSL

Sampling Depth: 16 ft — Volume of Water Column: 6.84 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 4.7

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/17/2024 — Sample Collection Time: 13:43

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3369382003 — Final Lab Analysis CompletionDate: 7/25/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP009W
Sample Date	7/17/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	31.8	EPA 350.3
BICARBONATE	571	SM18-2321
CALCIUM, TOTAL	183	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	108	EPA 410.4
CHLORIDE	641	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	35300	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	84.8	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	12600	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	2.5 ND	EPA 300.0
pH-FIELD (SU)	6.21	FIELD
pH-LAB (SU)	7.87	EPA 150.1
POTASSIUM, TOTAL	34.9	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	212	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	4197	FIELD
SPEC. COND., LAB (umhos/cm)	5 ND	EPA 120.1
SULFATE	6.5	EPA 300.0
ALKALINITY	571	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1570	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	36	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.	CWMP009W
Sample Date	7/17/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	2.9	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
08/19/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity ID (as issued by DEP): 100008

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: CWMP002W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 47.75 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -1.19 ft — Elevation of Water Level: 478.06 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 76.74 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 1.4

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/18/2024 — Sample Collection Time: 12:10

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): 3369676001 — Final Lab Analysis CompletionDate: 7/30/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP002W
Sample Date	7/18/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	83	SM18-2321
CALCIUM, TOTAL	52.9	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	105	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	300	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	17.8	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	880	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	6	EPA 300.0
pH-FIELD (SU)	5.67	FIELD
pH-LAB (SU)	7.89	EPA 150.1
POTASSIUM, TOTAL	3	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	29.9	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	817	FIELD
SPEC. COND., LAB (umhos/cm)	757	EPA 120.1
SULFATE	21.3	EPA 300.0
ALKALINITY	83	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	400	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	3.6	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.	CWMP002W
Sample Date	7/18/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	7.2	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

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
08/19/2024
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: 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: 51.89 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -1.29 ft — Elevation of Water Level: 472.32 ft./MSL

Sampling Depth: 100 ft — Volume of Water Column: 33.94 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/18/2024 — Sample Collection Time: 12:17

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): 3369676002 — Final Lab Analysis CompletionDate: 7/30/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP003W
Sample Date	7/18/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	22	SM18-2321
CALCIUM, TOTAL	19.3	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	51.9	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	8.8	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	15	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	5.1	EPA 300.0
pH-FIELD (SU)	5.5	FIELD
pH-LAB (SU)	7.49	EPA 150.1
POTASSIUM, TOTAL	2.3	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	19.8	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	412	FIELD
SPEC. COND., LAB (umhos/cm)	284	EPA 120.1
SULFATE	18.2	EPA 300.0
ALKALINITY	22	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	207	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.77	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.55	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP003W
Sample Date	7/18/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1.4	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
cis 1,2-DICHLOROETHENE	1 ND	SW846 8260B
trans 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
08/19/2024
DEP USE ONLY
Date Received

FORM 19

MUNICIPAL WASTE LANDFILL
QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity ID (as issued by DEP): 100008

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: CWMP004W — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor Township

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

Depth to Water Level: 46.81 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -1.37 ft — Elevation of Water Level: 482.72 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 136.86 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/18/2024 — Sample Collection Time: 14:27

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3369676003 — Final Lab Analysis CompletionDate: 7/30/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP004W
Sample Date	7/18/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	26	SM18-2321
CALCIUM, TOTAL	20	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	48.9	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	6.2	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	11	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	5.1	EPA 300.0
pH-FIELD (SU)	5.74	FIELD
pH-LAB (SU)	7.67	EPA 150.1
POTASSIUM, TOTAL	1.3	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	18.5	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	362	FIELD
SPEC. COND., LAB (umhos/cm)	256	EPA 120.1
SULFATE	5.4	EPA 300.0
ALKALINITY	26	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	206	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.67	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.	CWMP004W
Sample Date	7/18/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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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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: 8.68 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.10 ft — Elevation of Water Level: 352.22 ft./MSL

Sampling Depth: 17 ft — Volume of Water Column: 7.13 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 0.7

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 7/19/2024 — Sample Collection Time: 10:56

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): 3369902001 — Final Lab Analysis CompletionDate: 7/31/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP010W
Sample Date	7/19/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.17	EPA 350.3
BICARBONATE	261	SM18-2321
CALCIUM, TOTAL	86.8	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	22	EPA 410.4
CHLORIDE	491	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	950	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	65.4	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	150	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	21.6	EPA 300.0
pH-FIELD (SU)	6.62	FIELD
pH-LAB (SU)	8.32	EPA 150.1
POTASSIUM, TOTAL	16.4	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	261	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	2984	FIELD
SPEC. COND., LAB (umhos/cm)	5 ND	EPA 120.1
SULFATE	43.8	EPA 300.0
ALKALINITY	310	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1170	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	6.3	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	40	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	7/19/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

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

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: 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: 3.69 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.80 ft — Elevation of Water Level: 418.61 ft./MSL

Sampling Depth: 19 ft — Volume of Water Column: 3.12 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): 7/19/2024 — Sample Collection Time: 12:02

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): 3369902002 — Final Lab Analysis CompletionDate: 7/31/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP008W
Sample Date	7/19/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	8.26	EPA 350.3
BICARBONATE	499	SM18-2321
CALCIUM, TOTAL	81.4	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	39	EPA 410.4
CHLORIDE	91.6	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	26300	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	39.4	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	18000	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	2.5 ND	EPA 300.0
pH-FIELD (SU)	6.1	FIELD
pH-LAB (SU)	7.93	EPA 150.1
POTASSIUM, TOTAL	10.4	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	56.5	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	1421	FIELD
SPEC. COND., LAB (umhos/cm)	1030	EPA 120.1
SULFATE	7.2	EPA 300.0
ALKALINITY	499	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	546	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	14.1	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	31	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	7/19/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	2	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1.9	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
cis 1,2-DICHLOROETHENE	1 ND	SW846 8260B
trans 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

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Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: 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: 67.57 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.90 ft — Elevation of Water Level: 315.13 ft./MSL

Sampling Depth: 0 ft — Volume of Water Column: 50.42 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): 7/19/2024 — Sample Collection Time: 13:45

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): 3369902003 — Final Lab Analysis CompletionDate: 7/31/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP012W
Sample Date	7/19/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

ANALYTES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
AMMONIA-NITROGEN	0.1 ND	EPA 350.3
BICARBONATE	75	SM18-2321
CALCIUM, TOTAL	33.5	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	32.8	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	2300	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	9.3	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	460	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	7.4	EPA 300.0
pH-FIELD (SU)	6.04	FIELD
pH-LAB (SU)	7.97	EPA 150.1
POTASSIUM, TOTAL	1.6	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	14.6	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	411	FIELD
SPEC. COND., LAB (umhos/cm)	310	EPA 120.1
SULFATE	5 ND	EPA 300.0
ALKALINITY	75	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	202	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	1.3	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	26	SM 2130B

* Indicator Analyte - For comparison with detection zone analytes.
T Please indicate detection limit if analyte is not detected.
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I.D. No	100008
Monitoring Point No.	CWMP012W
Sample Date	7/19/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1 ND	SW846 8260B
1,2-DIBROMOETHANE (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.

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 3rd QTR 2024 GWMP FORM 19Q
Workorder 3368996
Report ID 342849 on 7/29/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jul 15, 2024.

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

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

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

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3368996001	CWMP007W	Ground Water	07/15/2024 10:15	07/15/2024 14:00	BGS	Analytical Laboratory Service
3368996002	CWMP001W	Ground Water	07/15/2024 10:33	07/15/2024 14:00	BGS	Analytical Laboratory Service
3368996003	CWMP005W	Ground Water	07/15/2024 12:45	07/15/2024 14:00	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
3	The QC sample type MS for method EPA 350.1 was outside the control limits for the analyte Ammonia-N, Low Level. The % Recovery was reported as 152 and the control limits were 80 to 120.
4	The QC sample type MSD for method SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 86.4 and the control limits were 90 to 110.
5	The QC sample type MS for method SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 88.9 and the control limits were 90 to 110.

Detected Results Summary

Client Sample ID	CWMP007W	Collected	07/15/2024 10:15
Lab Sample ID	3368996001	Lab Receipt	07/15/2024 14:00

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	7.94	Feet		Field	#
Dissolved Oxygen	5.21	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	453.40	Feet		Field	#
Flow Rate	1.54	gal/min		Field	#
Ground Water Elevation	445.46	ft/MSL		Field	#
Oxidation-Reduction Potential	264	mV		Field	#
pH, Field (SM4500B)	5.18	pH_Units		Field	#
Sample Depth	33.00	Feet		Field	#
Specific Conductance, Field	573	umhos/cm	1	Field	#
Temperature	13.12	Deg. C		Field	#
Total Well Depth	36.50	Feet		Field	#
Volume in Water Column	41.98	Gallons		Field	#
Water Level After Purge	8.66	Feet		Field	#
Well Volumes Purged	1.47	Vol		Field	#
METALS					
Calcium, Total	21.8	mg/L	0.11	SW846 6010C	#
Magnesium, Total	10.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0079	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.3	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	78.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	10	mg/L	1.0	EPA 300.0	#
pH	7.42	pH_Units		S4500HB-11	#
Specific Conductance	393	umhos/cm	5	SW846 9050A	#
Sulfate	18.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	306	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	7.6	mg/L	0.50	SW846 9060A	#
Turbidity	0.60	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP001W	Collected	07/15/2024 10:33
Lab Sample ID	3368996002	Lab Receipt	07/15/2024 14:00

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	25.92	Feet		Field	#
Dissolved Oxygen	8.79	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	515.13	Feet		Field	#
Flow Rate	1.91	gal/min		Field	#
Ground Water Elevation	489.21	ft/MSL		Field	#
Oxidation-Reduction Potential	323	mV		Field	#
pH, Field (SM4500B)	5.06	pH_Units		Field	#
Sample Depth	57.00	Feet		Field	#
Specific Conductance, Field	348	umhos/cm	1	Field	#
Temperature	14.08	Deg. C		Field	#
Total Well Depth	66.30	Feet		Field	#
Volume in Water Column	59.36	Gallons		Field	#
Water Level After Purge	45.62	Feet		Field	#
Well Volumes Purged	1.12	Vol		Field	#
METALS					
Calcium, Total	15.4	mg/L	0.11	SW846 6010C	#
Magnesium, Total	10.2	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.061	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.2	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	26.8	mg/L	2.0	EPA 300.0	#
Nitrate-N	18.1	mg/L	1.0	EPA 300.0	#
pH	7.07	pH_Units		S4500HB-11	#
Specific Conductance	247	umhos/cm	5	SW846 9050A	#
Sulfate	2.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	242	mg/L	25	SM2540C-15	#
Turbidity	0.70	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP005W	Collected	07/15/2024 12:45
Lab Sample ID	3368996003	Lab Receipt	07/15/2024 14:00

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	41.18	Feet		Field	#
Dissolved Oxygen	6.75	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	513.43	Feet		Field	#
Flow Rate	1.95	gal/min		Field	#
Ground Water Elevation	472.25	ft/MSL		Field	#
Oxidation-Reduction Potential	250	mV		Field	#
pH, Field (SM4500B)	5.49	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	437	umhos/cm	1	Field	#
Temperature	13.37	Deg. C		Field	#
Total Well Depth	138.92	Feet		Field	#
Volume in Water Column	143.68	Gallons		Field	#
Water Level After Purge	42.58	Feet		Field	#
Well Volumes Purged	1.29	Vol		Field	#
METALS					
Calcium, Total	15.8	mg/L	0.11	SW846 6010C	#
Iron, Total	0.17	mg/L	0.067	SW846 6010C	#
Magnesium, Total	7.2	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.048	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	31.9	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	19	mg/L	5	SM2320B-2011	#
Alkalinity, Total	19	mg/L	5	SM2320B-2011	#
Chloride	60.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	7.6	mg/L	1.0	EPA 300.0	#
pH	7.61	pH_Units		S4500HB-11	#
Specific Conductance	299	umhos/cm	5	SW846 9050A	#
Sulfate	5.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	244	mg/L	25	SM2540C-15	#

Results

Client Sample ID	CWMP007W	Collected	07/15/2024 10:15
Lab Sample ID	3368996001	Lab Receipt	07/15/2024 14:00

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	7.94		Feet		Field	1	07/15/2024 10:15	BGS	D
Dissolved Oxygen	5.21		mg/L	0.01	Field	1	07/15/2024 10:15	BGS	D
Elev Top MW Casing above MSL	453.40		Feet		Field	1	07/15/2024 10:15	BGS	D
Flow Rate	1.54		gal/min		Field	1	07/15/2024 10:15	BGS	D
Ground Water Elevation	445.46		ft/MSL		Field	1	07/15/2024 10:15	BGS	D
Oxidation-Reduction Potential	264		mV		Field	1	07/15/2024 10:15	BGS	D
pH, Field (SM4500B)	5.18		pH_Units		Field	1	07/15/2024 10:15	BGS	D
Sample Depth	33.00		Feet		Field	1	07/15/2024 10:15	BGS	D
Specific Conductance, Field	573		umhos/cm	1	Field	1	07/15/2024 10:15	BGS	D
Temperature	13.12		Deg. C		Field	1	07/15/2024 10:15	BGS	D
Total Well Depth	36.50		Feet		Field	1	07/15/2024 10:15	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	07/15/2024 10:15	BGS	D
Volume in Water Column	41.98		Gallons		Field	1	07/15/2024 10:15	BGS	D
Water Level After Purge	8.66		Feet		Field	1	07/15/2024 10:15	BGS	D
Well Volumes Purged	1.47		Vol		Field	1	07/15/2024 10:15	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	07/17/2024 10:34	MSY	J
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	07/17/2024 10:34	MSY	J
Magnesium, Total	10.6		mg/L	0.11	SW846 6010C	1	07/17/2024 10:34	MSY	J
Manganese, Total	0.0079		mg/L	0.0056	SW846 6010C	1	07/17/2024 10:34	MSY	J
Potassium, Total	2.3		mg/L	0.56	SW846 6010C	1	07/17/2024 10:34	MSY	J
Sodium, Total	36.6		mg/L	0.56	SW846 6010C	1	07/17/2024 10:34	MSY	J

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	07/16/2024 15:25	ADB	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/16/2024 15:25	ADB	H

Results

Client Sample ID	CWMP007W	Collected	07/15/2024 10:15
Lab Sample ID	3368996001	Lab Receipt	07/15/2024 14:00

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	112%	62 – 133	07/16/2024 15:25	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/16/2024 15:25	
Dibromofluoromethane	1868-53-7	101%	78 – 116	07/16/2024 15:25	
Toluene-d8	2037-26-5	98.1%	76 – 127	07/16/2024 15:25	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	13		mg/L	5	SM2320B-2011	1	07/16/2024 23:20	KMV	B
Alkalinity, Total	13	1	mg/L	5	SM2320B-2011	1	07/16/2024 23:20	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/17/2024 12:54	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/17/2024 11:40	KMS	A
Chloride	78.9		mg/L	2.0	EPA 300.0	2	07/16/2024 11:10	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	07/16/2024 11:10	J1W	B
Nitrate-N	10		mg/L	1.0	EPA 300.0	2	07/16/2024 11:10	J1W	B
pH	7.42	2	pH_Units		S4500HB-11	1	07/16/2024 23:20	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 18:43	AKH	G
Specific Conductance	393		umhos/cm	5	SW846 9050A	1	07/19/2024 16:40	LMD	B
Sulfate	18.2		mg/L	2.0	EPA 300.0	2	07/16/2024 11:10	J1W	B
Total Dissolved Solids	306		mg/L	25	SM2540C-15	1	07/16/2024 16:35	RAG	B
Total Organic Carbon (TOC)	7.6		mg/L	0.50	SW846 9060A	1	07/17/2024 02:07	PAG	E
Turbidity	0.60		NTU	0.30	SM2130B-2011	1	07/16/2024 08:10	NPF	B

Results

Client Sample ID	CWMP001W	Collected	07/15/2024 10:33
Lab Sample ID	3368996002	Lab Receipt	07/15/2024 14:00

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	25.92		Feet		Field	1	07/15/2024 10:33	BGS	D
Dissolved Oxygen	8.79		mg/L	0.01	Field	1	07/15/2024 10:33	BGS	D
Elev Top MW Casing above MSL	515.13		Feet		Field	1	07/15/2024 10:33	BGS	D
Flow Rate	1.91		gal/min		Field	1	07/15/2024 10:33	BGS	D
Ground Water Elevation	489.21		ft/MSL		Field	1	07/15/2024 10:33	BGS	D
Oxidation-Reduction Potential	323		mV		Field	1	07/15/2024 10:33	BGS	D
pH, Field (SM4500B)	5.06		pH_Units		Field	1	07/15/2024 10:33	BGS	D
Sample Depth	57.00		Feet		Field	1	07/15/2024 10:33	BGS	D
Specific Conductance, Field	348		umhos/cm	1	Field	1	07/15/2024 10:33	BGS	D
Temperature	14.08		Deg. C		Field	1	07/15/2024 10:33	BGS	D
Total Well Depth	66.30		Feet		Field	1	07/15/2024 10:33	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	07/15/2024 10:33	BGS	D
Volume in Water Column	59.36		Gallons		Field	1	07/15/2024 10:33	BGS	D
Water Level After Purge	45.62		Feet		Field	1	07/15/2024 10:33	BGS	D
Well Volumes Purged	1.12		Vol		Field	1	07/15/2024 10:33	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	15.4		mg/L	0.11	SW846 6010C	1	07/17/2024 10:35	MSY	J
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	07/17/2024 10:35	MSY	J
Magnesium, Total	10.2		mg/L	0.11	SW846 6010C	1	07/17/2024 10:35	MSY	J
Manganese, Total	0.061		mg/L	0.0056	SW846 6010C	1	07/17/2024 10:35	MSY	J
Potassium, Total	2.3		mg/L	0.56	SW846 6010C	1	07/17/2024 10:35	MSY	J
Sodium, Total	13.2		mg/L	0.56	SW846 6010C	1	07/17/2024 10:35	MSY	J

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	07/17/2024 00:12	BST	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/17/2024 00:12	BST	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:12	BST	H

Results

Client Sample ID	CWMP001W	Collected	07/15/2024 10:33
Lab Sample ID	3368996002	Lab Receipt	07/15/2024 14:00

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	98%	62 – 133	07/17/2024 00:12	
4-Bromofluorobenzene	460-00-4	96%	79 – 114	07/17/2024 00:12	
Dibromofluoromethane	1868-53-7	98.2%	78 – 116	07/17/2024 00:12	
Toluene-d8	2037-26-5	98.5%	76 – 127	07/17/2024 00:12	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	8		mg/L	5	SM2320B-2011	1	07/16/2024 23:31	KMV	B
Alkalinity, Total	8	1	mg/L	5	SM2320B-2011	1	07/16/2024 23:31	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/17/2024 12:57	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/17/2024 11:40	KMS	A
Chloride	26.8		mg/L	2.0	EPA 300.0	2	07/16/2024 11:22	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	07/16/2024 11:22	J1W	B
Nitrate-N	18.1		mg/L	1.0	EPA 300.0	2	07/16/2024 11:22	J1W	B
pH	7.07	2	pH_Units		S4500HB-11	1	07/16/2024 23:31	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 18:46	AKH	G
Specific Conductance	247		umhos/cm	5	SW846 9050A	1	07/19/2024 16:40	LMD	B
Sulfate	2.6		mg/L	2.0	EPA 300.0	2	07/16/2024 11:22	J1W	B
Total Dissolved Solids	242		mg/L	25	SM2540C-15	1	07/16/2024 16:35	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	07/17/2024 02:07	PAG	E
Turbidity	0.70		NTU	0.30	SM2130B-2011	1	07/16/2024 08:10	NPF	B

Results

Client Sample ID	CWMP005W	Collected	07/15/2024 12:45
Lab Sample ID	3368996003	Lab Receipt	07/15/2024 14:00

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	41.18		Feet		Field	1	07/15/2024 12:45	BGS	D
Dissolved Oxygen	6.75		mg/L	0.01	Field	1	07/15/2024 12:45	BGS	D
Elev Top MW Casing above MSL	513.43		Feet		Field	1	07/15/2024 12:45	BGS	D
Flow Rate	1.95		gal/min		Field	1	07/15/2024 12:45	BGS	D
Ground Water Elevation	472.25		ft/MSL		Field	1	07/15/2024 12:45	BGS	D
Oxidation-Reduction Potential	250		mV		Field	1	07/15/2024 12:45	BGS	D
pH, Field (SM4500B)	5.49		pH_Units		Field	1	07/15/2024 12:45	BGS	D
Sample Depth	130.00		Feet		Field	1	07/15/2024 12:45	BGS	D
Specific Conductance, Field	437		umhos/cm	1	Field	1	07/15/2024 12:45	BGS	D
Temperature	13.37		Deg. C		Field	1	07/15/2024 12:45	BGS	D
Total Well Depth	138.92		Feet		Field	1	07/15/2024 12:45	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	07/15/2024 12:45	BGS	D
Volume in Water Column	143.68		Gallons		Field	1	07/15/2024 12:45	BGS	D
Water Level After Purge	42.58		Feet		Field	1	07/15/2024 12:45	BGS	D
Well Volumes Purged	1.29		Vol		Field	1	07/15/2024 12:45	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	15.8		mg/L	0.11	SW846 6010C	1	07/17/2024 10:36	MSY	J
Iron, Total	0.17		mg/L	0.067	SW846 6010C	1	07/17/2024 10:36	MSY	J
Magnesium, Total	7.2		mg/L	0.11	SW846 6010C	1	07/17/2024 10:36	MSY	J
Manganese, Total	0.048		mg/L	0.0056	SW846 6010C	1	07/17/2024 10:36	MSY	J
Potassium, Total	2.0		mg/L	0.56	SW846 6010C	1	07/17/2024 10:36	MSY	J
Sodium, Total	31.9		mg/L	0.56	SW846 6010C	1	07/17/2024 10:36	MSY	J

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	07/17/2024 00:59	BST	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/17/2024 00:59	BST	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 00:59	BST	H

Results

Client Sample ID	CWMP005W	Collected	07/15/2024 12:45
Lab Sample ID	3368996003	Lab Receipt	07/15/2024 14:00

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	99.3%	62 – 133	07/17/2024 00:59	
4-Bromofluorobenzene	460-00-4	97.3%	79 – 114	07/17/2024 00:59	
Dibromofluoromethane	1868-53-7	97.8%	78 – 116	07/17/2024 00:59	
Toluene-d8	2037-26-5	99%	76 – 127	07/17/2024 00:59	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	19		mg/L	5	SM2320B-2011	1	07/16/2024 23:44	KMV	B
Alkalinity, Total	19	1	mg/L	5	SM2320B-2011	1	07/16/2024 23:44	KMV	B
Ammonia-N, Low Level	ND	ND,3	mg/L	0.10	SM 4500-NH3G	1	07/17/2024 11:57	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/17/2024 11:40	KMS	A
Chloride	60.9		mg/L	2.0	EPA 300.0	2	07/16/2024 11:33	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	07/16/2024 11:33	J1W	B
Nitrate-N	7.6		mg/L	1.0	EPA 300.0	2	07/16/2024 11:33	J1W	B
pH	7.61	2	pH_Units		S4500HB-11	1	07/16/2024 23:44	KMV	B
Phenolics	ND	ND,4,5	mg/L	0.004	SW846 9066	1	07/24/2024 19:07	AKH	G
Specific Conductance	299		umhos/cm	5	SW846 9050A	1	07/19/2024 16:40	LMD	B
Sulfate	5.7		mg/L	2.0	EPA 300.0	2	07/16/2024 11:33	J1W	B
Total Dissolved Solids	244		mg/L	25	SM2540C-15	1	07/16/2024 16:35	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	07/17/2024 02:07	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	07/16/2024 08:10	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3368996001	CWMP007W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3368996002	CWMP001W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3368996003	CWMP005W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3368996001	CWMP007W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1251711	07/16/2024 09:24	ANN	SW846 6010C	1254613
		N/A	N/A	N/A		SW846 8260B	1252913
		N/A	N/A	N/A		EPA 300.0	1252808
		N/A	N/A	N/A		EPA 410.4	1254611
		N/A	N/A	N/A		S4500HB-11	1252858
		N/A	N/A	N/A		SM 4500-NH3G	1254619
		N/A	N/A	N/A		SM2130B-2011	1252810
		N/A	N/A	N/A		SM2320B-2011	1252858
		N/A	N/A	N/A		SM2540C-15	1252847
		N/A	N/A	N/A		SW846 9050A	1255010
		N/A	N/A	N/A		SW846 9060A	1253131
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3368996002	CWMP001W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1251711	07/16/2024 09:24	ANN	SW846 6010C	1254613
		N/A	N/A	N/A		SW846 8260B	1253808
		N/A	N/A	N/A		EPA 300.0	1252808
		N/A	N/A	N/A		EPA 410.4	1254611
		N/A	N/A	N/A		S4500HB-11	1252858
		N/A	N/A	N/A		SM 4500-NH3G	1254619
		N/A	N/A	N/A		SM2130B-2011	1252810
		N/A	N/A	N/A		SM2320B-2011	1252858
		N/A	N/A	N/A		SM2540C-15	1252847
		N/A	N/A	N/A		SW846 9050A	1255010
		N/A	N/A	N/A		SW846 9060A	1253131
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3368996003	CWMP005W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1251711	07/16/2024 09:24	ANN	SW846 6010C	1254613
		N/A	N/A	N/A		SW846 8260B	1253808
		N/A	N/A	N/A		EPA 300.0	1252808
		N/A	N/A	N/A		EPA 410.4	1254611
		N/A	N/A	N/A		S4500HB-11	1252858
		N/A	N/A	N/A		SM 4500-NH3G	1254619
		N/A	N/A	N/A		SM2130B-2011	1252810
		N/A	N/A	N/A		SM2320B-2011	1252858
		N/A	N/A	N/A		SM2540C-15	1252847
		N/A	N/A	N/A		SW846 9050A	1255010
		N/A	N/A	N/A		SW846 9060A	1253131
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009

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

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

3368996
Logged By: DXB
PM: SJB

of

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 PO Box 4424
Lancaster PA 17604

Contact: Dan Brown
Phone#: 717-735-0193
Project Name/#: Creswell/GWMP Form 19Q
Bill To: Lancaster County Solid Waste MA
Purchase Order #:

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

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	1L	500ml			250ml	125ml	
	Preservative	HCL	H2SO4	UNP	UNP	UNP			H2SO4	HNO3	

Orthophosphate Filtered? Yes No Hexavalent Chromium Filtered? Yes No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	8260 VOCs - Form 19Q	pH, CL, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, HCO3	FM	Sample Debth for AUX Data	NH3-N, COD	Total Metals Ca, Fe, Mn, Mg, K, Na	
							Enter Number of Containers Per Sample or Field Results Below.									
1	CWMP007W	7/15/24	1015		G	GW	2	1	2	1	1	x	x	1	2	
2	CWMP001W	7/15/24	1033		G	GW	2	1	2	1	1	x	x	1	2	
3	CWMP005W	7/15/24	1245		G	GW	2	1	2	1	1	x	x	1	2	
4																
5																
6																
7																
8																
9																
10																

(Receiving Lab)
Temp Taken By: CW Therm ID: 571 WO Temp (°C) 4
Receipt Info completed by: DAG WV Containers 0-6°C Y N NA

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

Deviations? NO YES
If YES, llist below:

NJ ≤ 4 days? ~~Y~~ ~~N~~
Courier/Tracking #
Client contact:
Date/Tech:

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

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

Sample/COC Remarks

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

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

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
7-15-24	1400	1	[illegible] ALS	2	AJ ALS
		3		4	
		5		6	
		7		8	
		9		10	

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

EDDs
[ ] Excel Summary
[ ] Equis
[ ] Custom

Sample Disposal
Lab [x]
Special [ ]

EDDS: Format Type

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

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

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

Rev 07.06.2023

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

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

Project 3rd QTR 2024 GWMP FORM 19Q
Workorder 3369676
Report ID 343576 on 7/31/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jul 18, 2024.

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

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

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

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3369676001	CWMP002W	Ground Water	07/18/2024 12:10	07/18/2024 16:05	BGS	Analytical Laboratory Service
3369676002	CWMP003W	Ground Water	07/18/2024 12:17	07/18/2024 16:05	BGS	Analytical Laboratory Service
3369676003	CWMP004W	Ground Water	07/18/2024 14:27	07/18/2024 16:05	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.

Detected Results Summary

Client Sample ID	CWMP002W	Collected	07/18/2024 12:10
Lab Sample ID	3369676001	Lab Receipt	07/18/2024 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	47.75	Feet		Field	#
Dissolved Oxygen	2.96	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	525.81	Feet		Field	#
Flow Rate	1.34	gal/min		Field	#
Ground Water Elevation	478.06	ft/MSL		Field	#
Oxidation-Reduction Potential	161	mV		Field	#
pH, Field (SM4500B)	5.67	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	817	umhos/cm	1	Field	#
Temperature	14.24	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Volume in Water Column	76.81	Gallons		Field	#
Water Level After Purge	77.39	Feet		Field	#
Well Volumes Purged	1.40	Vol		Field	#
METALS					
Calcium, Total	52.9	mg/L	0.11	SW846 6010C	#
Iron, Total	0.30	mg/L	0.067	SW846 6010C	#
Magnesium, Total	17.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.88	mg/L	0.0056	SW846 6010C	#
Potassium, Total	3.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	29.9	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	7.2	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	83	mg/L	5	SM2320B-2011	#
Alkalinity, Total	83	mg/L	5	SM2320B-2011	#
Chloride	105	mg/L	2.0	EPA 300.0	#
Nitrate-N	6.0	mg/L	1.0	EPA 300.0	#
pH	7.89	pH_Units		S4500HB-11	#
Specific Conductance	757	umhos/cm	5	SW846 9050A	#
Sulfate	21.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	400	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	3.6	mg/L	0.50	SW846 9060A	#
Turbidity	0.65	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP003W	Collected	07/18/2024 12:17
Lab Sample ID	3369676002	Lab Receipt	07/18/2024 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	51.89	Feet		Field	#
Dissolved Oxygen	5.20	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	524.21	Feet		Field	#
Flow Rate	1.72	gal/min		Field	#
Ground Water Elevation	472.32	ft/MSL		Field	#
Oxidation-Reduction Potential	286	mV		Field	#
pH, Field (SM4500B)	5.50	pH_Units		Field	#
Sample Depth	100.00	Feet		Field	#
Specific Conductance, Field	412	umhos/cm	1	Field	#
Temperature	14.41	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
Turbidity, Field	1	NTU	1	Field	#
Volume in Water Column	129.52	Gallons		Field	#
Water Level After Purge	67.08	Feet		Field	#
Well Volumes Purged	1.13	Vol		Field	#
METALS					
Calcium, Total	19.3	mg/L	0.11	SW846 6010C	#
Magnesium, Total	8.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.015	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	19.8	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.4	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	22	mg/L	5	SM2320B-2011	#
Alkalinity, Total	22	mg/L	5	SM2320B-2011	#
Chloride	51.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.1	mg/L	1.0	EPA 300.0	#
pH	7.49	pH_Units		S4500HB-11	#
Specific Conductance	284	umhos/cm	5	SW846 9050A	#
Sulfate	18.2	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	207	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.77	mg/L	0.50	SW846 9060A	#
Turbidity	0.55	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP004W	Collected	07/18/2024 14:27
Lab Sample ID	3369676003	Lab Receipt	07/18/2024 16:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	46.81	Feet		Field	#
Dissolved Oxygen	7.32	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	529.53	Feet		Field	#
Flow Rate	1.61	gal/min		Field	#
Ground Water Elevation	482.72	ft/MSL		Field	#
Oxidation-Reduction Potential	286	mV		Field	#
pH, Field (SM4500B)	5.74	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	362	umhos/cm	1	Field	#
Temperature	14.73	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
Volume in Water Column	136.99	Gallons		Field	#
Water Level After Purge	53.54	Feet		Field	#
Well Volumes Purged	1.12	Vol		Field	#
METALS					
Calcium, Total	20.0	mg/L	0.11	SW846 6010C	#
Magnesium, Total	6.2	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.011	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	18.5	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	26	mg/L	5	SM2320B-2011	#
Alkalinity, Total	26	mg/L	5	SM2320B-2011	#
Chloride	48.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.1	mg/L	1.0	EPA 300.0	#
pH	7.67	pH_Units		S4500HB-11	#
Specific Conductance	256	umhos/cm	5	SW846 9050A	#
Sulfate	5.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	206	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.67	mg/L	0.50	SW846 9060A	#
Turbidity	0.65	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP002W	Collected	07/18/2024 12:10
Lab Sample ID	3369676001	Lab Receipt	07/18/2024 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	47.75		Feet		Field	1	07/18/2024 12:10	BGS	D
Dissolved Oxygen	2.96		mg/L	0.01	Field	1	07/18/2024 12:10	BGS	D
Elev Top MW Casing above MSL	525.81		Feet		Field	1	07/18/2024 12:10	BGS	D
Flow Rate	1.34		gal/min		Field	1	07/18/2024 12:10	BGS	D
Ground Water Elevation	478.06		ft/MSL		Field	1	07/18/2024 12:10	BGS	D
Oxidation-Reduction Potential	161		mV		Field	1	07/18/2024 12:10	BGS	D
pH, Field (SM4500B)	5.67		pH_Units		Field	1	07/18/2024 12:10	BGS	D
Sample Depth	85.00		Feet		Field	1	07/18/2024 12:10	BGS	D
Specific Conductance, Field	817		umhos/cm	1	Field	1	07/18/2024 12:10	BGS	D
Temperature	14.24		Deg. C		Field	1	07/18/2024 12:10	BGS	D
Total Well Depth	100.00		Feet		Field	1	07/18/2024 12:10	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	07/18/2024 12:10	BGS	D
Volume in Water Column	76.81		Gallons		Field	1	07/18/2024 12:10	BGS	D
Water Level After Purge	77.39		Feet		Field	1	07/18/2024 12:10	BGS	D
Well Volumes Purged	1.40		Vol		Field	1	07/18/2024 12:10	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	52.9		mg/L	0.11	SW846 6010C	1	07/22/2024 12:19	MSY	J1
Iron, Total	0.30		mg/L	0.067	SW846 6010C	1	07/22/2024 12:19	MSY	J1
Magnesium, Total	17.8		mg/L	0.11	SW846 6010C	1	07/22/2024 12:19	MSY	J1
Manganese, Total	0.88		mg/L	0.0056	SW846 6010C	1	07/22/2024 12:19	MSY	J1
Potassium, Total	3.0		mg/L	0.56	SW846 6010C	1	07/22/2024 12:19	MSY	J1
Sodium, Total	29.9		mg/L	0.56	SW846 6010C	1	07/22/2024 12:19	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
1,1-Dichloroethane	7.2		ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/30/2024 04:46	BST	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 04:46	BST	H

Results

Client Sample ID	CWMP002W	Collected	07/18/2024 12:10
Lab Sample ID	3369676001	Lab Receipt	07/18/2024 16:05

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	07/30/2024 04:46	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	07/30/2024 04:46	
Dibromofluoromethane	1868-53-7	102%	78 – 116	07/30/2024 04:46	
Toluene-d8	2037-26-5	100%	76 – 127	07/30/2024 04:46	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	83		mg/L	5	SM2320B-2011	1	07/23/2024 14:57	KMV	B
Alkalinity, Total	83	1	mg/L	5	SM2320B-2011	1	07/23/2024 14:57	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/24/2024 14:03	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/23/2024 13:00	KMS	A
Chloride	105		mg/L	2.0	EPA 300.0	2	07/19/2024 17:13	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	07/19/2024 17:13	J1W	B
Nitrate-N	6.0		mg/L	1.0	EPA 300.0	2	07/19/2024 17:13	J1W	B
pH	7.89	2	pH_Units		S4500HB-11	1	07/23/2024 14:57	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 14:03	AKH	G
Specific Conductance	757		umhos/cm	5	SW846 9050A	1	07/19/2024 14:47	LMD	B
Sulfate	21.3		mg/L	2.0	EPA 300.0	2	07/19/2024 17:13	J1W	B
Total Dissolved Solids	400		mg/L	25	SM2540C-15	1	07/22/2024 15:50	RAG	B
Total Organic Carbon (TOC)	3.6		mg/L	0.50	SW846 9060A	1	07/22/2024 23:16	PAG	E
Turbidity	0.65		NTU	0.30	SM2130B-2011	1	07/19/2024 10:10	NPF	B

Results

Client Sample ID	CWMP003W	Collected	07/18/2024 12:17
Lab Sample ID	3369676002	Lab Receipt	07/18/2024 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	51.89		Feet		Field	1	07/18/2024 12:17	BGS	D
Dissolved Oxygen	5.20		mg/L	0.01	Field	1	07/18/2024 12:17	BGS	D
Elev Top MW Casing above MSL	524.21		Feet		Field	1	07/18/2024 12:17	BGS	D
Flow Rate	1.72		gal/min		Field	1	07/18/2024 12:17	BGS	D
Ground Water Elevation	472.32		ft/MSL		Field	1	07/18/2024 12:17	BGS	D
Oxidation-Reduction Potential	286		mV		Field	1	07/18/2024 12:17	BGS	D
pH, Field (SM4500B)	5.50		pH_Units		Field	1	07/18/2024 12:17	BGS	D
Sample Depth	100.00		Feet		Field	1	07/18/2024 12:17	BGS	D
Specific Conductance, Field	412		umhos/cm	1	Field	1	07/18/2024 12:17	BGS	D
Temperature	14.41		Deg. C		Field	1	07/18/2024 12:17	BGS	D
Total Well Depth	140.00		Feet		Field	1	07/18/2024 12:17	BGS	D
Turbidity, Field	1		NTU	1	Field	1	07/18/2024 12:17	BGS	D
Volume in Water Column	129.52		Gallons		Field	1	07/18/2024 12:17	BGS	D
Water Level After Purge	67.08		Feet		Field	1	07/18/2024 12:17	BGS	D
Well Volumes Purged	1.13		Vol		Field	1	07/18/2024 12:17	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	19.3		mg/L	0.11	SW846 6010C	1	07/22/2024 12:21	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	07/22/2024 12:21	MSY	J1
Magnesium, Total	8.8		mg/L	0.11	SW846 6010C	1	07/22/2024 12:21	MSY	J1
Manganese, Total	0.015		mg/L	0.0056	SW846 6010C	1	07/22/2024 12:21	MSY	J1
Potassium, Total	2.3		mg/L	0.56	SW846 6010C	1	07/22/2024 12:21	MSY	J1
Sodium, Total	19.8		mg/L	0.56	SW846 6010C	1	07/22/2024 12:21	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
1,1-Dichloroethane	1.4		ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/30/2024 05:09	BST	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:09	BST	H

Results

Client Sample ID	CWMP003W	Collected	07/18/2024 12:17
Lab Sample ID	3369676002	Lab Receipt	07/18/2024 16:05

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	07/30/2024 05:09	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/30/2024 05:09	
Dibromofluoromethane	1868-53-7	102%	78 – 116	07/30/2024 05:09	
Toluene-d8	2037-26-5	99.8%	76 – 127	07/30/2024 05:09	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	22		mg/L	5	SM2320B-2011	1	07/23/2024 15:10	KMV	B
Alkalinity, Total	22	1	mg/L	5	SM2320B-2011	1	07/23/2024 15:10	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/23/2024 13:24	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/23/2024 13:00	KMS	A
Chloride	51.9		mg/L	2.0	EPA 300.0	2	07/19/2024 17:25	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	07/19/2024 17:25	J1W	B
Nitrate-N	5.1		mg/L	1.0	EPA 300.0	2	07/19/2024 17:25	J1W	B
pH	7.49	2	pH_Units		S4500HB-11	1	07/23/2024 15:10	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 14:11	AKH	G
Specific Conductance	284		umhos/cm	5	SW846 9050A	1	07/19/2024 14:47	LMD	B
Sulfate	18.2		mg/L	2.0	EPA 300.0	2	07/19/2024 17:25	J1W	B
Total Dissolved Solids	207		mg/L	25	SM2540C-15	1	07/22/2024 15:50	RAG	B
Total Organic Carbon (TOC)	0.77		mg/L	0.50	SW846 9060A	1	07/22/2024 23:16	PAG	E
Turbidity	0.55		NTU	0.30	SM2130B-2011	1	07/19/2024 10:10	NPF	B

Results

Client Sample ID	CWMP004W	Collected	07/18/2024 14:27
Lab Sample ID	3369676003	Lab Receipt	07/18/2024 16:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	46.81		Feet		Field	1	07/18/2024 14:27	BGS	D
Dissolved Oxygen	7.32		mg/L	0.01	Field	1	07/18/2024 14:27	BGS	D
Elev Top MW Casing above MSL	529.53		Feet		Field	1	07/18/2024 14:27	BGS	D
Flow Rate	1.61		gal/min		Field	1	07/18/2024 14:27	BGS	D
Ground Water Elevation	482.72		ft/MSL		Field	1	07/18/2024 14:27	BGS	D
Oxidation-Reduction Potential	286		mV		Field	1	07/18/2024 14:27	BGS	D
pH, Field (SM4500B)	5.74		pH_Units		Field	1	07/18/2024 14:27	BGS	D
Sample Depth	130.00		Feet		Field	1	07/18/2024 14:27	BGS	D
Specific Conductance, Field	362		umhos/cm	1	Field	1	07/18/2024 14:27	BGS	D
Temperature	14.73		Deg. C		Field	1	07/18/2024 14:27	BGS	D
Total Well Depth	140.00		Feet		Field	1	07/18/2024 14:27	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	07/18/2024 14:27	BGS	D
Volume in Water Column	136.99		Gallons		Field	1	07/18/2024 14:27	BGS	D
Water Level After Purge	53.54		Feet		Field	1	07/18/2024 14:27	BGS	D
Well Volumes Purged	1.12		Vol		Field	1	07/18/2024 14:27	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	20.0		mg/L	0.11	SW846 6010C	1	07/22/2024 12:22	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	07/22/2024 12:22	MSY	J1
Magnesium, Total	6.2		mg/L	0.11	SW846 6010C	1	07/22/2024 12:22	MSY	J1
Manganese, Total	0.011		mg/L	0.0056	SW846 6010C	1	07/22/2024 12:22	MSY	J1
Potassium, Total	1.3		mg/L	0.56	SW846 6010C	1	07/22/2024 12:22	MSY	J1
Sodium, Total	18.5		mg/L	0.56	SW846 6010C	1	07/22/2024 12:22	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/30/2024 05:32	BST	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/30/2024 05:32	BST	H

Results

Client Sample ID	CWMP004W	Collected	07/18/2024 14:27
Lab Sample ID	3369676003	Lab Receipt	07/18/2024 16:05

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	105%	62 – 133	07/30/2024 05:32	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/30/2024 05:32	
Dibromofluoromethane	1868-53-7	102%	78 – 116	07/30/2024 05:32	
Toluene-d8	2037-26-5	99.8%	76 – 127	07/30/2024 05:32	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	26		mg/L	5	SM2320B-2011	1	07/23/2024 15:30	KMV	B
Alkalinity, Total	26	1	mg/L	5	SM2320B-2011	1	07/23/2024 15:30	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/24/2024 14:00	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/23/2024 13:00	KMS	A
Chloride	48.9		mg/L	2.0	EPA 300.0	2	07/19/2024 17:59	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	07/19/2024 17:59	J1W	B
Nitrate-N	5.1		mg/L	1.0	EPA 300.0	2	07/19/2024 17:59	J1W	B
pH	7.67	2	pH_Units		S4500HB-11	1	07/23/2024 15:30	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 14:35	AKH	G
Specific Conductance	256		umhos/cm	5	SW846 9050A	1	07/19/2024 14:47	LMD	B
Sulfate	5.4		mg/L	2.0	EPA 300.0	2	07/19/2024 17:59	J1W	B
Total Dissolved Solids	206		mg/L	25	SM2540C-15	1	07/22/2024 15:50	RAG	B
Total Organic Carbon (TOC)	0.67		mg/L	0.50	SW846 9060A	1	07/22/2024 23:16	PAG	E
Turbidity	0.65		NTU	0.30	SM2130B-2011	1	07/19/2024 10:10	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3369676001	CWMP002W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3369676002	CWMP003W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3369676003	CWMP004W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3369676001	CWMP002W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1257710	07/19/2024 04:40	ANN	SW846 6010C	1259381
		N/A	N/A	N/A		SW846 8260B	1262175
		N/A	N/A	N/A		EPA 300.0	1258229
		N/A	N/A	N/A		EPA 410.4	1259956
		N/A	N/A	N/A		S4500HB-11	1259957
		N/A	N/A	N/A		SM 4500-NH3G	1260432
		N/A	N/A	N/A		SM2130B-2011	1258210
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1259333
		N/A	N/A	N/A		SW846 9050A	1258308
		N/A	N/A	N/A		SW846 9060A	1259401
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3369676002	CWMP003W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1257710	07/19/2024 04:40	ANN	SW846 6010C	1259381
		N/A	N/A	N/A		SW846 8260B	1262175
		N/A	N/A	N/A		EPA 300.0	1258229
		N/A	N/A	N/A		EPA 410.4	1259956
		N/A	N/A	N/A		S4500HB-11	1259957
		N/A	N/A	N/A		SM 4500-NH3G	1259919
		N/A	N/A	N/A		SM2130B-2011	1258210
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1259333
		N/A	N/A	N/A		SW846 9050A	1258308
		N/A	N/A	N/A		SW846 9060A	1259401
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3369676003	CWMP004W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1257710	07/19/2024 04:40	ANN	SW846 6010C	1259381
		N/A	N/A	N/A		SW846 8260B	1262175
		N/A	N/A	N/A		EPA 300.0	1258229
		N/A	N/A	N/A		EPA 410.4	1259956
		N/A	N/A	N/A		S4500HB-11	1259957
		N/A	N/A	N/A		SM 4500-NH3G	1260432
		N/A	N/A	N/A		SM2130B-2011	1258210
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1259333
		N/A	N/A	N/A		SW846 9050A	1258308
		N/A	N/A	N/A		SW846 9060A	1259401
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009

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

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 3369676 Logged By: DIG PM: SJB

ALS Q: ____ of ____

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO Box 4424
Lancaster PA 17604

Contact: Dan Brown
Phone#: 717-735-0193
Project Name/#: Creswell/GWMP Form 19Q
Bill To: Lancaster County Solid Waste MA
Purchase Order #:

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

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	1L	500ml			250ml	125ml	
	Preservative	HCL	H2SO4	UNP	UNP	UNP			H2SO4	HNO3	
	Orthophosphate Filtered?		Yes	No	Hexavalent Chromium Filtered?					Yes	No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	8260 VOCs - Form 19Q	pH, Cl, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, HCO3	FM	Sample Depth for AUX Data	NH3-N, COD	Total Metals Ca, Fe, Mn, Mg, K, Na	
							Enter Number of Containers Per Sample or Field Results Below.									
1	CWMP002W	7/18/24	1210		G	GW	2	1	2	1	1	x	x	1	2	
2	CWMP003W	7/18/24	1217		G	GW	2	1	2	1	1	x	x	1	2	
3	CWMP004W	7/18/24	1427		G	GW	2	1	2	1	1	x	x	1	2	
4																
5																
6																
7																
8																
9																
10																

Circle Sample Collector: ALS Tech / Client
Name: DG Shank ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
7-18-24	1605	1	DG Shank ALS	2	DAG/ALS
		3		4	
		5		6	
		7		8	
		9		10	

Temp Taken By: DAG Therm ID: 524 WO Temp (°C) 3

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

Cooler Custody Seals Intact	Y	N	NA	Deviations? NO YES
Sample Custody Seal Intact	Y	N	NA	If YES, list below.
Received on Ice	Y	N	NA	
Coolers & Samples Intact	Y	N		
Correct Containers Provided	Y	N		
Sample Label/COC Agree	Y	N		
Adequate Sample Volumes	Y	N		
VOA only: Trip Blank	Y	N	NA	

NJ ≤ 4 days? Y N
Courier/Tracking #

Client contact: Date/Tech

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

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

Sample/COC Remarks

Contains Short Hold Testing YES NO

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

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

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

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

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

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

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

Rev 07.06.2023

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

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

Project 3rd QTR 2024 GWMP FORM 19Q
Workorder 3369902
Report ID 344022 on 8/2/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jul 19, 2024.

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

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

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

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3369902001	CWMP010W	Ground Water	07/19/2024 10:56	07/19/2024 16:10	BGS	Analytical Laboratory Service
3369902002	CWMP008W	Ground Water	07/19/2024 12:02	07/19/2024 16:10	BGS	Analytical Laboratory Service
3369902003	CWMP012W	Ground Water	07/19/2024 13:45	07/19/2024 16:10	BGS	Analytical Laboratory Service
3369902004	Field Blank	Water	07/19/2024 14:30	07/19/2024 16:10	BGS	Analytical Laboratory Service
3369902005	Trip Blank	Water	07/19/2024 16:10	07/19/2024 16:10	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The QC sample type MSD for method EPA 300.0 was outside the control limits for the analyte Chloride. The % Recovery was reported as 67.2 and the control limits were 80 to 120.
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	CWMP010W	Collected	07/19/2024 10:56
Lab Sample ID	3369902001	Lab Receipt	07/19/2024 16:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	8.68	Feet		Field	#
Dissolved Oxygen	3.99	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	360.90	Feet		Field	#
Flow Rate	0.15	gal/min		Field	#
Ground Water Elevation	352.22	ft/MSL		Field	#
Oxidation-Reduction Potential	90	mV		Field	#
pH, Field (SM4500B)	6.62	pH_Units		Field	#
Sample Depth	17.00	Feet		Field	#
Specific Conductance, Field	2984	umhos/cm	1	Field	#
Temperature	17.31	Deg. C		Field	#
Total Well Depth	19.60	Feet		Field	#
Turbidity, Field	2	NTU	1	Field	#
Volume in Water Column	7.10	Gallons		Field	#
Water Level After Purge	13.05	Feet		Field	#
Well Volumes Purged	0.66	Vol		Field	#
METALS					
Calcium, Total	86.8	mg/L	0.11	SW846 6010C	#
Iron, Total	0.95	mg/L	0.067	SW846 6010C	#
Magnesium, Total	65.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.15	mg/L	0.0056	SW846 6010C	#
Potassium, Total	16.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	261	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	261	mg/L	5	SM2320B-2011	#
Alkalinity, Total	310	mg/L	5	SM2320B-2011	#
Ammonia-N, Low Level	0.17	mg/L	0.10	SM 4500-NH3G	#
Chemical Oxygen Demand (COD)	22	mg/L	15	EPA 410.4	#
Chloride	491	mg/L	10.0	EPA 300.0	#
Nitrate-N	21.6	mg/L	2.5	EPA 300.0	#
pH	8.32	pH_Units		S4500HB-11	#
Sulfate	43.8	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1170	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	6.3	mg/L	0.50	SW846 9060A	#
Turbidity	40	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP008W	Collected	07/19/2024 12:02
Lab Sample ID	3369902002	Lab Receipt	07/19/2024 16:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	3.69	Feet		Field	#
Dissolved Oxygen	0.40	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	422.30	Feet		Field	#
Flow Rate	0.89	gal/min		Field	#
Ground Water Elevation	418.61	ft/MSL		Field	#
Oxidation-Reduction Potential	-78	mV		Field	#
pH, Field (SM4500B)	6.10	pH_Units		Field	#
Sample Depth	19.00	Feet		Field	#
Specific Conductance, Field	1421	umhos/cm	1	Field	#
Temperature	15.64	Deg. C		Field	#
Total Well Depth	22.80	Feet		Field	#
Volume in Water Column	3.06	Gallons		Field	#
Water Level After Purge	14.45	Feet		Field	#
Well Volumes Purged	5.82	Vol		Field	#
METALS					
Calcium, Total	81.4	mg/L	0.11	SW846 6010C	#
Iron, Total	26.3	mg/L	0.067	SW846 6010C	#
Magnesium, Total	39.4	mg/L	0.11	SW846 6010C	#
Manganese, Total	18.0	mg/L	0.0056	SW846 6010C	#
Potassium, Total	10.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	56.5	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.9	ug/L	1.0	SW846 8260B	#
Benzene	2.0	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	499	mg/L	50	SM2320B-2011	#
Alkalinity, Total	499	mg/L	50	SM2320B-2011	#
Ammonia-N, Low Level	8.26	mg/L	0.50	SM 4500-NH3G	#
Chemical Oxygen Demand (COD)	39	mg/L	15	EPA 410.4	#
Chloride	91.6	mg/L	5.0	EPA 300.0	#
pH	7.93	pH_Units		S4500HB-11	#
Specific Conductance	1030	umhos/cm	5	SW846 9050A	#
Sulfate	7.2	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	546	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	14.1	mg/L	5.0	SW846 9060A	#
Turbidity	31	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP012W	Collected	07/19/2024 13:45
Lab Sample ID	3369902003	Lab Receipt	07/19/2024 16:10

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	67.57	Feet		Field	#
Dissolved Oxygen	3.71	mg/L	0.01	Field	#
Oxidation-Reduction Potential	121	mV		Field	#
pH, Field (SM4500B)	6.04	pH_Units		Field	#
Specific Conductance, Field	411	umhos/cm	1	Field	#
Temperature	14.74	Deg. C		Field	#
Turbidity, Field	708	NTU	1	Field	#
METALS					
Calcium, Total	33.5	mg/L	0.11	SW846 6010C	#
Iron, Total	2.3	mg/L	0.067	SW846 6010C	#
Magnesium, Total	9.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.46	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	14.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	75	mg/L	5	SM2320B-2011	#
Alkalinity, Total	75	mg/L	5	SM2320B-2011	#
Chloride	32.8	mg/L	5.0	EPA 300.0	#
Nitrate-N	7.4	mg/L	2.5	EPA 300.0	#
pH	7.97	pH_Units		S4500HB-11	#
Specific Conductance	310	umhos/cm	5	SW846 9050A	#
Total Dissolved Solids	202	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	1.3	mg/L	0.50	SW846 9060A	#
Turbidity	26	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	Field Blank	Collected	07/19/2024 14:30
Lab Sample ID	3369902004	Lab Receipt	07/19/2024 16:10

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
Ammonia-N, Low Level	0.11	mg/L	0.10	SM 4500-NH3G	#
pH	6.13	pH_Units		S4500HB-11	#
Total Organic Carbon (TOC)	0.82	mg/L	0.50	SW846 9060A	#
Turbidity	0.40	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP010W	Collected	07/19/2024 10:56
Lab Sample ID	3369902001	Lab Receipt	07/19/2024 16:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	8.68		Feet		Field	1	07/19/2024 10:56	BGS	D
Dissolved Oxygen	3.99		mg/L	0.01	Field	1	07/19/2024 10:56	BGS	D
Elev Top MW Casing above MSL	360.90		Feet		Field	1	07/19/2024 10:56	BGS	D
Flow Rate	0.15		gal/min		Field	1	07/19/2024 10:56	BGS	D
Ground Water Elevation	352.22		ft/MSL		Field	1	07/19/2024 10:56	BGS	D
Oxidation-Reduction Potential	90		mV		Field	1	07/19/2024 10:56	BGS	D
pH, Field (SM4500B)	6.62		pH_Units		Field	1	07/19/2024 10:56	BGS	D
Sample Depth	17.00		Feet		Field	1	07/19/2024 10:56	BGS	D
Specific Conductance, Field	2984		umhos/cm	1	Field	1	07/19/2024 10:56	BGS	D
Temperature	17.31		Deg. C		Field	1	07/19/2024 10:56	BGS	D
Total Well Depth	19.60		Feet		Field	1	07/19/2024 10:56	BGS	D
Turbidity, Field	2		NTU	1	Field	1	07/19/2024 10:56	BGS	D
Volume in Water Column	7.10		Gallons		Field	1	07/19/2024 10:56	BGS	D
Water Level After Purge	13.05		Feet		Field	1	07/19/2024 10:56	BGS	D
Well Volumes Purged	0.66		Vol		Field	1	07/19/2024 10:56	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	86.8		mg/L	0.11	SW846 6010C	1	07/26/2024 09:37	MSY	J1
Iron, Total	0.95		mg/L	0.067	SW846 6010C	1	07/26/2024 09:37	MSY	J1
Magnesium, Total	65.4		mg/L	0.11	SW846 6010C	1	07/26/2024 09:37	MSY	J1
Manganese, Total	0.15		mg/L	0.0056	SW846 6010C	1	07/26/2024 09:37	MSY	J1
Potassium, Total	16.4		mg/L	0.56	SW846 6010C	1	07/26/2024 09:37	MSY	J1
Sodium, Total	261		mg/L	0.56	SW846 6010C	1	07/26/2024 09:37	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:13	ILY	H

Results

Client Sample ID	CWMP010W	Collected	07/19/2024 10:56
Lab Sample ID	3369902001	Lab Receipt	07/19/2024 16:10

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	07/31/2024 17:13	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/31/2024 17:13	
Dibromofluoromethane	1868-53-7	100%	78 – 116	07/31/2024 17:13	
Toluene-d8	2037-26-5	101%	76 – 127	07/31/2024 17:13	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	261		mg/L	5	SM2320B-2011	1	07/23/2024 19:31	KMV	B
Alkalinity, Total	310	1	mg/L	5	SM2320B-2011	1	07/23/2024 19:31	KMV	B
Ammonia-N, Low Level	0.17		mg/L	0.10	SM 4500-NH3G	1	07/24/2024 13:21	AYS	A
Chemical Oxygen Demand (COD)	22		mg/L	15	EPA 410.4	1	07/23/2024 13:00	KMS	A
Chloride	491	2	mg/L	10.0	EPA 300.0	10	07/24/2024 20:21	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	07/20/2024 10:51	GMM	B
Nitrate-N	21.6		mg/L	2.5	EPA 300.0	5	07/20/2024 10:51	GMM	B
pH	8.32	3	pH_Units		S4500HB-11	1	07/23/2024 19:31	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 12:12	AKH	G
Specific Conductance	ND	ND	umhos/cm	5	SW846 9050A	1	07/23/2024 14:38	LMD	B
Sulfate	43.8		mg/L	5.0	EPA 300.0	5	07/20/2024 10:51	GMM	B
Total Dissolved Solids	1170		mg/L	25	SM2540C-15	1	07/23/2024 16:20	RAG	B
Total Organic Carbon (TOC)	6.3		mg/L	0.50	SW846 9060A	1	07/22/2024 23:16	PAG	E
Turbidity	40		NTU	0.30	SM2130B-2011	1	07/20/2024 07:55	NPF	B

Results

Client Sample ID	CWMP008W	Collected	07/19/2024 12:02
Lab Sample ID	3369902002	Lab Receipt	07/19/2024 16:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	3.69		Feet		Field	1	07/19/2024 12:02	BGS	D
Dissolved Oxygen	0.40		mg/L	0.01	Field	1	07/19/2024 12:02	BGS	D
Elev Top MW Casing above MSL	422.30		Feet		Field	1	07/19/2024 12:02	BGS	D
Flow Rate	0.89		gal/min		Field	1	07/19/2024 12:02	BGS	D
Ground Water Elevation	418.61		ft/MSL		Field	1	07/19/2024 12:02	BGS	D
Oxidation-Reduction Potential	-78		mV		Field	1	07/19/2024 12:02	BGS	D
pH, Field (SM4500B)	6.10		pH_Units		Field	1	07/19/2024 12:02	BGS	D
Sample Depth	19.00		Feet		Field	1	07/19/2024 12:02	BGS	D
Specific Conductance, Field	1421		umhos/cm	1	Field	1	07/19/2024 12:02	BGS	D
Temperature	15.64		Deg. C		Field	1	07/19/2024 12:02	BGS	D
Total Well Depth	22.80		Feet		Field	1	07/19/2024 12:02	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	07/19/2024 12:02	BGS	D
Volume in Water Column	3.06		Gallons		Field	1	07/19/2024 12:02	BGS	D
Water Level After Purge	14.45		Feet		Field	1	07/19/2024 12:02	BGS	D
Well Volumes Purged	5.82		Vol		Field	1	07/19/2024 12:02	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	81.4	4	mg/L	0.11	SW846 6010C	1	07/26/2024 09:38	MSY	J1
Iron, Total	26.3	4	mg/L	0.067	SW846 6010C	1	07/26/2024 09:38	MSY	J1
Magnesium, Total	39.4	4	mg/L	0.11	SW846 6010C	1	07/26/2024 09:38	MSY	J1
Manganese, Total	18.0	4	mg/L	0.0056	SW846 6010C	1	07/26/2024 09:38	MSY	J1
Potassium, Total	10.4		mg/L	0.56	SW846 6010C	1	07/26/2024 09:38	MSY	J1
Sodium, Total	56.5		mg/L	0.56	SW846 6010C	1	07/26/2024 09:38	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
1,1-Dichloroethane	1.9		ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
Benzene	2.0		ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:33	ILY	H

Results

Client Sample ID	CWMP008W	Collected	07/19/2024 12:02
Lab Sample ID	3369902002	Lab Receipt	07/19/2024 16:10

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	102%	62 – 133	07/31/2024 17:33	
4-Bromofluorobenzene	460-00-4	94.3%	79 – 114	07/31/2024 17:33	
Dibromofluoromethane	1868-53-7	98.2%	78 – 116	07/31/2024 17:33	
Toluene-d8	2037-26-5	96.2%	76 – 127	07/31/2024 17:33	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	499		mg/L	50	SM2320B-2011	10	07/25/2024 17:16	KMV	B
Alkalinity, Total	499	1	mg/L	50	SM2320B-2011	10	07/25/2024 17:16	KMV	B
Ammonia-N, Low Level	8.26		mg/L	0.50	SM 4500-NH3G	5	07/24/2024 13:38	AYS	A
Chemical Oxygen Demand (COD)	39		mg/L	15	EPA 410.4	1	07/23/2024 13:00	KMS	A
Chloride	91.6		mg/L	5.0	EPA 300.0	5	07/20/2024 11:03	GMM	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	07/20/2024 11:03	GMM	B
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	07/20/2024 11:03	GMM	B
pH	7.93	3	pH_Units		S4500HB-11	1	07/23/2024 19:44	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 12:04	AKH	G
Specific Conductance	1030		umhos/cm	5	SW846 9050A	1	07/23/2024 14:38	LMD	B
Sulfate	7.2		mg/L	5.0	EPA 300.0	5	07/20/2024 11:03	GMM	B
Total Dissolved Solids	546		mg/L	25	SM2540C-15	1	07/23/2024 16:20	RAG	B
Total Organic Carbon (TOC)	14.1		mg/L	5.0	SW846 9060A	10	07/22/2024 23:16	PAG	E
Turbidity	31		NTU	0.30	SM2130B-2011	1	07/20/2024 07:55	NPF	B

Results

Client Sample ID	CWMP012W	Collected	07/19/2024 13:45
Lab Sample ID	3369902003	Lab Receipt	07/19/2024 16:10

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	67.57		Feet		Field	1	07/19/2024 13:45	BGS	D
Dissolved Oxygen	3.71		mg/L	0.01	Field	1	07/19/2024 13:45	BGS	D
Oxidation-Reduction Potential	121		mV		Field	1	07/19/2024 13:45	BGS	D
pH, Field (SM4500B)	6.04		pH_Units		Field	1	07/19/2024 13:45	BGS	D
Specific Conductance, Field	411		umhos/cm	1	Field	1	07/19/2024 13:45	BGS	D
Temperature	14.74		Deg. C		Field	1	07/19/2024 13:45	BGS	D
Turbidity, Field	708		NTU	1	Field	1	07/19/2024 13:45	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	33.5		mg/L	0.11	SW846 6010C	1	07/26/2024 09:57	MSY	J1
Iron, Total	2.3		mg/L	0.067	SW846 6010C	1	07/26/2024 09:57	MSY	J1
Magnesium, Total	9.3		mg/L	0.11	SW846 6010C	1	07/26/2024 09:57	MSY	J1
Manganese, Total	0.46		mg/L	0.0056	SW846 6010C	1	07/26/2024 09:57	MSY	J1
Potassium, Total	1.6		mg/L	0.56	SW846 6010C	1	07/26/2024 09:57	MSY	J1
Sodium, Total	14.6		mg/L	0.56	SW846 6010C	1	07/26/2024 09:57	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 17:53	ILY	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.4%	62 – 133	07/31/2024 17:53	
4-Bromofluorobenzene	460-00-4	97.2%	79 – 114	07/31/2024 17:53	
Dibromofluoromethane	1868-53-7	94.2%	78 – 116	07/31/2024 17:53	
Toluene-d8	2037-26-5	98.6%	76 – 127	07/31/2024 17:53	

WET CHEMISTRY

Results

Client Sample ID	CWMP012W	Collected	07/19/2024 13:45
Lab Sample ID	3369902003	Lab Receipt	07/19/2024 16:10

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	75		mg/L	5	SM2320B-2011	1	07/23/2024 19:55	KMV	B
Alkalinity, Total	75	1	mg/L	5	SM2320B-2011	1	07/23/2024 19:55	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/23/2024 13:51	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/23/2024 13:00	KMS	A
Chloride	32.8		mg/L	5.0	EPA 300.0	5	07/20/2024 11:14	GMM	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	07/20/2024 11:14	GMM	B
Nitrate-N	7.4		mg/L	2.5	EPA 300.0	5	07/20/2024 11:14	GMM	B
pH	7.97	3	pH_Units		S4500HB-11	1	07/23/2024 19:55	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 12:00	AKH	G
Specific Conductance	310		umhos/cm	5	SW846 9050A	1	07/23/2024 14:38	LMD	B
Sulfate	ND	ND	mg/L	5.0	EPA 300.0	5	07/20/2024 11:14	GMM	B
Total Dissolved Solids	202		mg/L	25	SM2540C-15	1	07/24/2024 15:50	RAG	B
Total Organic Carbon (TOC)	1.3		mg/L	0.50	SW846 9060A	1	07/23/2024 18:51	PAG	E
Turbidity	26		NTU	0.30	SM2130B-2011	1	07/20/2024 07:55	NPF	B

Results

Client Sample ID	Field Blank	Collected	07/19/2024 14:30
Lab Sample ID	3369902004	Lab Receipt	07/19/2024 16:10

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	07/26/2024 10:03	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	07/26/2024 10:03	MSY	J1
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	07/26/2024 10:03	MSY	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	07/26/2024 10:03	MSY	J1
Potassium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	07/26/2024 10:03	MSY	J1
Sodium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	07/26/2024 10:03	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:35	ILY	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.4%	62 – 133	07/31/2024 11:35	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	07/31/2024 11:35	
Dibromofluoromethane	1868-53-7	96%	78 – 116	07/31/2024 11:35	
Toluene-d8	2037-26-5	100%	76 – 127	07/31/2024 11:35	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND	mg/L	5	SM2320B-2011	1	07/23/2024 20:03	KMV	B
Alkalinity, Total	ND	ND,1	mg/L	5	SM2320B-2011	1	07/23/2024 20:03	KMV	B
Ammonia-N, Low Level	0.11		mg/L	0.10	SM 4500-NH3G	1	07/24/2024 13:30	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/23/2024 13:00	KMS	A
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	07/20/2024 11:26	GMM	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	07/20/2024 11:26	GMM	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	07/20/2024 11:26	GMM	B
pH	6.13	3	pH_Units		S4500HB-11	1	07/23/2024 20:03	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 12:08	AKH	G

Results

Client Sample ID	Field Blank	Collected	07/19/2024 14:30
Lab Sample ID	3369902004	Lab Receipt	07/19/2024 16:10

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	07/23/2024 14:38	LMD	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	07/20/2024 11:26	GMM	B
Total Dissolved Solids	ND	ND	mg/L	25	SM2540C-15	1	07/24/2024 15:50	RAG	B
Total Organic Carbon (TOC)	0.82		mg/L	0.50	SW846 9060A	1	07/23/2024 18:51	PAG	E
Turbidity	0.40		NTU	0.30	SM2130B-2011	1	07/20/2024 07:55	NPF	B

Results

Client Sample ID	Trip Blank	Collected	07/19/2024 16:10
Lab Sample ID	3369902005	Lab Receipt	07/19/2024 16:10

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/31/2024 11:55	ILY	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	07/31/2024 11:55	
4-Bromofluorobenzene	460-00-4	93.9%	79 – 114	07/31/2024 11:55	
Dibromofluoromethane	1868-53-7	97.9%	78 – 116	07/31/2024 11:55	
Toluene-d8	2037-26-5	99.8%	76 – 127	07/31/2024 11:55	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3369902001	CWMP010W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3369902002	CWMP008W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3369902003	CWMP012W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3369902004	Field Blank	SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3369902005	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
3369902001	CWMP010W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1260650	07/25/2024 08:24	ANN	SW846 6010C	1261155
		N/A	N/A	N/A		SW846 8260B	1263068
		N/A	N/A	N/A		EPA 300.0	1258912
		N/A	N/A	N/A		EPA 300.0	1260411
		N/A	N/A	N/A		EPA 410.4	1259956
		N/A	N/A	N/A		S4500HB-11	1259957
		N/A	N/A	N/A		SM 4500-NH3G	1260432
		N/A	N/A	N/A		SM2130B-2011	1258909
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1259946
		N/A	N/A	N/A		SW846 9050A	1260208
		N/A	N/A	N/A		SW846 9060A	1259401
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3369902002	CWMP008W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1260650	07/25/2024 08:24	ANN	SW846 6010C	1261155
		N/A	N/A	N/A		SW846 8260B	1263068
		N/A	N/A	N/A		EPA 300.0	1258912
		N/A	N/A	N/A		EPA 410.4	1259956
		N/A	N/A	N/A		S4500HB-11	1259957
		N/A	N/A	N/A		SM 4500-NH3G	1260432
		N/A	N/A	N/A		SM2130B-2011	1258909
		N/A	N/A	N/A		SM2320B-2011	1260776
		N/A	N/A	N/A		SM2540C-15	1259946
		N/A	N/A	N/A		SW846 9050A	1260208
		N/A	N/A	N/A		SW846 9060A	1259399
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3369902003	CWMP012W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1260650	07/25/2024 08:24	ANN	SW846 6010C	1261155
		N/A	N/A	N/A		SW846 8260B	1263068
		N/A	N/A	N/A		EPA 300.0	1258912
		N/A	N/A	N/A		EPA 410.4	1259956
		N/A	N/A	N/A		S4500HB-11	1259957
		N/A	N/A	N/A		SM 4500-NH3G	1259916
		N/A	N/A	N/A		SM2130B-2011	1258909
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1260442
		N/A	N/A	N/A		SW846 9050A	1260208
		N/A	N/A	N/A		SW846 9060A	1259945
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3369902004	Field Blank	SW846 3015A	1260650	07/25/2024 08:24	ANN	SW846 6010C	1261155
		N/A	N/A	N/A		SW846 8260B	1263068
		N/A	N/A	N/A		EPA 300.0	1258912
		N/A	N/A	N/A		EPA 410.4	1259956
		N/A	N/A	N/A		S4500HB-11	1259957
		N/A	N/A	N/A		SM 4500-NH3G	1260432
		N/A	N/A	N/A		SM2130B-2011	1258909
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1260442
		N/A	N/A	N/A		SW846 9050A	1260208
		N/A	N/A	N/A		SW846 9060A	1259945
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3369902005	Trip Blank	N/A	N/A	N/A		SW846 8260B	1263068

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

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

3369902
Logged By: SLS
PM: SJB

2 of

(For Receiving Lab)

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO Box 4424
Lancaster PA 17604

Contact: Dan Brown
Phone#: 717-735-0193
Project Name/#: Creswell/GWMP Form 19Q
Bill To: Lancaster County Solid Waste MA
Purchase Order #:

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

Date Required: Approved?
Email? [x] dbrown@lcswma.org

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	1L	500ml			250ml	125ml	
	Preservative	HCL	H2SO4	UNP	UNP	UNP			H2SO4	HNO3	
	Orthophosphate Filtered?		Yes		No	Hexavalent Chromium Filtered?				Yes	No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	8260 VOCs - Form 19Q	pH, CL, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, HCO3	FM	Sample Debth for AUX Data	NH3-N, COD	Total Metals Ca, Fe, Mn, Mg, K, Na	
							Enter Number of Containers Per Sample or Field Results Below.									
1	CWMP010W	7/19/24	1056		G	GW	2	1	2	1	1	x	x	1	2	
2	CWMP008W	7/19/24	1202		G	GW	2	1	2	1	1	x	x	1	2	
3	CWMP012W	7/19/24	1345		G	GW	2	1	2	1	1	x	x	1	2	
4	Field Blank	7/19/24	1430		G	DI	2	1	2	1	1		x	1	2	
5	Trip Blank	7/19/24	1610		G	DI			2							
6																
7																
8																
9																
10																

Temp Taken By: Therm ID: WO Temp (°C)

Temp By:	WO Temp (°C)	Therm ID
DB	3	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		
NJ≤ 4 Days?			
Rad Screen (uCi)			
Courier/Tracking #:			

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

iners 0-6°C Y N NA
Deviations? NO YES
If YES, list below:

Client contact:
Date/Tech:

Rad Screen (uCi)
lew Source? Y N
ew Source Contact:

PWS Contact: PWS Phone #:

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

Sample/COC Remarks

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

Circle Sample Collector: ALS Tech / Client
Name: K Rhoade ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
7-19-24	1610	1	K Rhoade ALS	2	
		3		4	
		5		6	
		7		8	
		9		10	

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

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

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

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

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

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

Rev 07.06.2023

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

Analytical Results Report For

Lancaster County Solid Waste Authority

Project 3rd QTR 2024 GWMP FORM 19Q
Workorder 3369382
Report ID 342885 on 7/30/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jul 17, 2024.

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

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

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

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3369382001	CWMP018S	Ground Water	07/17/2024 09:51	07/17/2024 14:55	BGS	Analytical Laboratory Service
3369382002	CWMP017S	Ground Water	07/17/2024 10:10	07/17/2024 14:55	BGS	Analytical Laboratory Service
3369382003	CWMP009W	Ground Water	07/17/2024 13:43	07/17/2024 14:55	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
3	The QC sample type MS for method SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 82.8 and the control limits were 90 to 110.
4	This sample was reran out of hold within the instrument's calibration range, for the analyte Nitrate/Nitrite -N, and confirms the initial in-hold reported result.

Detected Results Summary

Client Sample ID	CWMP018S	Collected	07/17/2024 09:51
Lab Sample ID	3369382001	Lab Receipt	07/17/2024 14:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	8.00	mg/L	0.01	Field	#
Oxidation-Reduction Potential	210	mV		Field	#
pH, Field (SM4500B)	8.48	pH_Units		Field	#
Specific Conductance, Field	3319	umhos/cm	1	Field	#
Temperature	24.27	Deg. C		Field	#
Turbidity, Field	2	NTU	1	Field	#
METALS					
Calcium, Total	87.2	mg/L	0.11	SW846 6010C	#
Iron, Total	0.098	mg/L	0.067	SW846 6010C	#
Magnesium, Total	80.7	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.029	mg/L	0.0056	SW846 6010C	#
Potassium, Total	23.1	mg/L	0.56	SW846 6010C	#
Sodium, Total	273	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	537	mg/L	50	SM2320B-2011	#
Alkalinity, Total	537	mg/L	50	SM2320B-2011	#
Chemical Oxygen Demand (COD)	25	mg/L	15	EPA 410.4	#
Chloride	451	mg/L	5.0	EPA 300.0	#
Nitrate-N	19.7	mg/L	2.5	EPA 300.0	#
pH	8.70	pH_Units		S4500HB-11	#
Sulfate	32.2	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1310	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	9.1	mg/L	0.50	SW846 9060A	#
Turbidity	1.4	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP017S	Collected	07/17/2024 10:10
Lab Sample ID	3369382002	Lab Receipt	07/17/2024 14:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	7.33	mg/L	0.01	Field	#
Oxidation-Reduction Potential	211	mV		Field	#
pH, Field (SM4500B)	8.20	pH_Units		Field	#
Specific Conductance, Field	12	umhos/cm	1	Field	#
Temperature	26.95	Deg. C		Field	#
Turbidity, Field	9	NTU	1	Field	#
METALS					
Calcium, Total	92.9	mg/L	0.11	SW846 6010C	#
Iron, Total	1.4	mg/L	0.067	SW846 6010C	#
Magnesium, Total	128	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.31	mg/L	0.0056	SW846 6010C	#
Potassium, Total	21.8	mg/L	0.56	SW846 6010C	#
Sodium, Total	416	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	761	mg/L	50	SM2320B-2011	#
Alkalinity, Total	826	mg/L	50	SM2320B-2011	#
Chemical Oxygen Demand (COD)	17	mg/L	15	EPA 410.4	#
Chloride	571	mg/L	10.0	EPA 300.0	#
Nitrate-N	37.3	mg/L	2.5	EPA 300.0	#
pH	8.58	pH_Units		S4500HB-11	#
Sulfate	57.6	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1870	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	6.1	mg/L	0.50	SW846 9060A	#
Turbidity	8.8	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP009W	Collected	07/17/2024 13:43
Lab Sample ID	3369382003	Lab Receipt	07/17/2024 14:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	9.22	Feet		Field	#
Dissolved Oxygen	0.11	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	404.20	Feet		Field	#
Flow Rate	1.59	gal/min		Field	#
Ground Water Elevation	394.98	ft/MSL		Field	#
Oxidation-Reduction Potential	-62	mV		Field	#
pH, Field (SM4500B)	6.21	pH_Units		Field	#
Sample Depth	16.00	Feet		Field	#
Specific Conductance, Field	4197	umhos/cm	1	Field	#
Temperature	15.42	Deg. C		Field	#
Total Well Depth	19.70	Feet		Field	#
Volume in Water Column	6.81	Gallons		Field	#
Water Level After Purge	11.12	Feet		Field	#
Well Volumes Purged	4.68	Vol		Field	#
METALS					
Calcium, Total	183	mg/L	0.11	SW846 6010C	#
Iron, Total	35.3	mg/L	0.067	SW846 6010C	#
Magnesium, Total	84.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	12.6	mg/L	0.0056	SW846 6010C	#
Potassium, Total	34.9	mg/L	0.56	SW846 6010C	#
Sodium, Total	212	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
Benzene	2.9	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	571	mg/L	50	SM2320B-2011	#
Alkalinity, Total	571	mg/L	50	SM2320B-2011	#
Ammonia-N, Low Level	31.8	mg/L	2.50	SM 4500-NH3G	#
Chemical Oxygen Demand (COD)	108	mg/L	15	EPA 410.4	#
Chloride	641	mg/L	10.0	EPA 300.0	#
pH	7.87	pH_Units		S4500HB-11	#
Sulfate	6.5	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1570	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	36.0	mg/L	5.0	SW846 9060A	#
Turbidity	50	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP018S	Collected	07/17/2024 09:51
Lab Sample ID	3369382001	Lab Receipt	07/17/2024 14:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	8.00		mg/L	0.01	Field	1	07/17/2024 09:51	BGS	D
Oxidation-Reduction Potential	210		mV		Field	1	07/17/2024 09:51	BGS	D
pH, Field (SM4500B)	8.48		pH_Units		Field	1	07/17/2024 09:51	BGS	D
Specific Conductance, Field	3319		umhos/cm	1	Field	1	07/17/2024 09:51	BGS	D
Temperature	24.27		Deg. C		Field	1	07/17/2024 09:51	BGS	D
Turbidity, Field	2		NTU	1	Field	1	07/17/2024 09:51	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	87.2		mg/L	0.11	SW846 6010C	1	07/22/2024 12:10	MSY	J1
Iron, Total	0.098		mg/L	0.067	SW846 6010C	1	07/22/2024 12:10	MSY	J1
Magnesium, Total	80.7		mg/L	0.11	SW846 6010C	1	07/22/2024 12:10	MSY	J1
Manganese, Total	0.029		mg/L	0.0056	SW846 6010C	1	07/22/2024 12:10	MSY	J1
Potassium, Total	23.1		mg/L	0.56	SW846 6010C	1	07/22/2024 12:10	MSY	J1
Sodium, Total	273		mg/L	0.56	SW846 6010C	1	07/22/2024 12:10	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:00	ADB	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	96.7%	62 – 133	07/25/2024 17:00	
4-Bromofluorobenzene	460-00-4	91.8%	79 – 114	07/25/2024 17:00	
Dibromofluoromethane	1868-53-7	89.1%	78 – 116	07/25/2024 17:00	
Toluene-d8	2037-26-5	93.9%	76 – 127	07/25/2024 17:00	

WET CHEMISTRY

Results

Client Sample ID	CWMP018S	Collected	07/17/2024 09:51
Lab Sample ID	3369382001	Lab Receipt	07/17/2024 14:55

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	537		mg/L	50	SM2320B-2011	10	07/23/2024 12:55	KMV	B
Alkalinity, Total	537	1	mg/L	50	SM2320B-2011	10	07/23/2024 12:55	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/23/2024 13:06	AYS	A
Chemical Oxygen Demand (COD)	25		mg/L	15	EPA 410.4	1	07/22/2024 11:30	KMS	A
Chloride	451		mg/L	5.0	EPA 300.0	5	07/18/2024 15:09	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	07/18/2024 15:09	J1W	B
Nitrate-N	19.7		mg/L	2.5	EPA 300.0	5	07/18/2024 15:09	J1W	B
pH	8.70	2	pH_Units		S4500HB-11	1	07/18/2024 21:42	KMV	B
Phenolics	ND	ND,3	mg/L	0.004	SW846 9066	1	07/24/2024 16:22	AKH	G
Specific Conductance	ND	ND	umhos/cm	5	SW846 9050A	1	07/19/2024 14:47	LMD	B
Sulfate	32.2		mg/L	5.0	EPA 300.0	5	07/18/2024 15:09	J1W	B
Total Dissolved Solids	1310		mg/L	25	SM2540C-15	1	07/18/2024 16:25	RAG	B
Total Organic Carbon (TOC)	9.1		mg/L	0.50	SW846 9060A	1	07/19/2024 11:29	PAG	E
Turbidity	1.4		NTU	0.30	SM2130B-2011	1	07/18/2024 10:57	NPF	B

Results

Client Sample ID	CWMP017S	Collected	07/17/2024 10:10
Lab Sample ID	3369382002	Lab Receipt	07/17/2024 14:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	7.33		mg/L	0.01	Field	1	07/17/2024 10:10	BGS	D
Oxidation-Reduction Potential	211		mV		Field	1	07/17/2024 10:10	BGS	D
pH, Field (SM4500B)	8.20		pH_Units		Field	1	07/17/2024 10:10	BGS	D
Specific Conductance, Field	12		umhos/cm	1	Field	1	07/17/2024 10:10	BGS	D
Temperature	26.95		Deg. C		Field	1	07/17/2024 10:10	BGS	D
Turbidity, Field	9		NTU	1	Field	1	07/17/2024 10:10	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	92.9		mg/L	0.11	SW846 6010C	1	07/22/2024 12:11	MSY	J1
Iron, Total	1.4		mg/L	0.067	SW846 6010C	1	07/22/2024 12:11	MSY	J1
Magnesium, Total	128		mg/L	0.11	SW846 6010C	1	07/22/2024 12:11	MSY	J1
Manganese, Total	0.31		mg/L	0.0056	SW846 6010C	1	07/22/2024 12:11	MSY	J1
Potassium, Total	21.8		mg/L	0.56	SW846 6010C	1	07/22/2024 12:11	MSY	J1
Sodium, Total	416		mg/L	0.56	SW846 6010C	1	07/22/2024 12:11	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:20	ADB	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	98.1%	62 – 133	07/25/2024 17:20	
4-Bromofluorobenzene	460-00-4	92.6%	79 – 114	07/25/2024 17:20	
Dibromofluoromethane	1868-53-7	89.8%	78 – 116	07/25/2024 17:20	
Toluene-d8	2037-26-5	94.5%	76 – 127	07/25/2024 17:20	

WET CHEMISTRY

Results

Client Sample ID	CWMP017S	Collected	07/17/2024 10:10
Lab Sample ID	3369382002	Lab Receipt	07/17/2024 14:55

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	761		mg/L	50	SM2320B-2011	10	07/23/2024 13:06	KMV	B
Alkalinity, Total	826	1	mg/L	50	SM2320B-2011	10	07/23/2024 13:06	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/22/2024 16:05	AYS	A
Chemical Oxygen Demand (COD)	17		mg/L	15	EPA 410.4	1	07/22/2024 11:30	KMS	A
Chloride	571		mg/L	10.0	EPA 300.0	10	07/24/2024 19:01	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	07/18/2024 15:21	J1W	B
Nitrate-N	37.3	4	mg/L	2.5	EPA 300.0	5	07/18/2024 15:21	J1W	B
pH	8.58	2	pH_Units		S4500HB-11	1	07/18/2024 22:06	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 16:48	AKH	G
Specific Conductance	ND	ND	umhos/cm	5	SW846 9050A	1	07/19/2024 14:47	LMD	B
Sulfate	57.6		mg/L	5.0	EPA 300.0	5	07/18/2024 15:21	J1W	B
Total Dissolved Solids	1870		mg/L	25	SM2540C-15	1	07/18/2024 16:25	RAG	B
Total Organic Carbon (TOC)	6.1		mg/L	0.50	SW846 9060A	1	07/19/2024 11:29	PAG	E
Turbidity	8.8		NTU	0.30	SM2130B-2011	1	07/18/2024 10:57	NPF	B

Results

Client Sample ID	CWMP009W	Collected	07/17/2024 13:43
Lab Sample ID	3369382003	Lab Receipt	07/17/2024 14:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	9.22		Feet		Field	1	07/17/2024 13:43	BGS	D
Dissolved Oxygen	0.11		mg/L	0.01	Field	1	07/17/2024 13:43	BGS	D
Elev Top MW Casing above MSL	404.20		Feet		Field	1	07/17/2024 13:43	BGS	D
Flow Rate	1.59		gal/min		Field	1	07/17/2024 13:43	BGS	D
Ground Water Elevation	394.98		ft/MSL		Field	1	07/17/2024 13:43	BGS	D
Oxidation-Reduction Potential	-62		mV		Field	1	07/17/2024 13:43	BGS	D
pH, Field (SM4500B)	6.21		pH_Units		Field	1	07/17/2024 13:43	BGS	D
Sample Depth	16.00		Feet		Field	1	07/17/2024 13:43	BGS	D
Specific Conductance, Field	4197		umhos/cm	1	Field	1	07/17/2024 13:43	BGS	D
Temperature	15.42		Deg. C		Field	1	07/17/2024 13:43	BGS	D
Total Well Depth	19.70		Feet		Field	1	07/17/2024 13:43	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	07/17/2024 13:43	BGS	D
Volume in Water Column	6.81		Gallons		Field	1	07/17/2024 13:43	BGS	D
Water Level After Purge	11.12		Feet		Field	1	07/17/2024 13:43	BGS	D
Well Volumes Purged	4.68		Vol		Field	1	07/17/2024 13:43	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	183		mg/L	0.11	SW846 6010C	1	07/22/2024 12:12	MSY	J1
Iron, Total	35.3		mg/L	0.067	SW846 6010C	1	07/22/2024 12:12	MSY	J1
Magnesium, Total	84.8		mg/L	0.11	SW846 6010C	1	07/22/2024 12:12	MSY	J1
Manganese, Total	12.6		mg/L	0.0056	SW846 6010C	1	07/22/2024 12:12	MSY	J1
Potassium, Total	34.9		mg/L	0.56	SW846 6010C	1	07/22/2024 12:12	MSY	J1
Sodium, Total	212		mg/L	0.56	SW846 6010C	1	07/22/2024 12:12	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
Benzene	2.9		ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/25/2024 17:40	ADB	H

Results

Client Sample ID	CWMP009W	Collected	07/17/2024 13:43
Lab Sample ID	3369382003	Lab Receipt	07/17/2024 14:55

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	07/25/2024 17:40	
4-Bromofluorobenzene	460-00-4	89%	79 – 114	07/25/2024 17:40	
Dibromofluoromethane	1868-53-7	93%	78 – 116	07/25/2024 17:40	
Toluene-d8	2037-26-5	94.8%	76 – 127	07/25/2024 17:40	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	571		mg/L	50	SM2320B-2011	10	07/23/2024 13:18	KMV	B
Alkalinity, Total	571	1	mg/L	50	SM2320B-2011	10	07/23/2024 13:18	KMV	B
Ammonia-N, Low Level	31.8		mg/L	2.50	SM 4500-NH3G	25	07/23/2024 17:51	AYS	A
Chemical Oxygen Demand (COD)	108		mg/L	15	EPA 410.4	1	07/22/2024 11:30	KMS	A
Chloride	641		mg/L	10.0	EPA 300.0	10	07/24/2024 19:12	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	07/18/2024 15:34	J1W	B
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	07/18/2024 15:34	J1W	B
pH	7.87	2	pH_Units		S4500HB-11	1	07/18/2024 22:18	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 16:44	AKH	G
Specific Conductance	ND	ND	umhos/cm	5	SW846 9050A	1	07/19/2024 14:47	LMD	B
Sulfate	6.5		mg/L	5.0	EPA 300.0	5	07/18/2024 15:34	J1W	B
Total Dissolved Solids	1570		mg/L	25	SM2540C-15	1	07/18/2024 16:25	RAG	B
Total Organic Carbon (TOC)	36.0		mg/L	5.0	SW846 9060A	10	07/19/2024 11:29	PAG	E
Turbidity	50		NTU	0.30	SM2130B-2011	1	07/18/2024 10:57	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3369382001	CWMP018S	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3369382002	CWMP017S	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	
3369382003	CWMP009W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3369382001	CWMP018S	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1257710	07/19/2024 04:40	ANN	SW846 6010C	1259381
		N/A	N/A	N/A		SW846 8260B	1260737
		N/A	N/A	N/A		EPA 300.0	1256513
		N/A	N/A	N/A		EPA 410.4	1259309
		N/A	N/A	N/A		S4500HB-11	1256942
		N/A	N/A	N/A		SM 4500-NH3G	1259916
		N/A	N/A	N/A		SM2130B-2011	1256519
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1256815
		N/A	N/A	N/A		SW846 9050A	1258308
		N/A	N/A	N/A		SW846 9060A	1257009
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3369382002	CWMP017S	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1257710	07/19/2024 04:40	ANN	SW846 6010C	1259381
		N/A	N/A	N/A		SW846 8260B	1260737
		N/A	N/A	N/A		EPA 300.0	1256513
		N/A	N/A	N/A		EPA 300.0	1260411
		N/A	N/A	N/A		EPA 410.4	1259309
		N/A	N/A	N/A		S4500HB-11	1256942
		N/A	N/A	N/A		SM 4500-NH3G	1258294
		N/A	N/A	N/A		SM2130B-2011	1256519
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1256815
		N/A	N/A	N/A		SW846 9050A	1258308
		N/A	N/A	N/A		SW846 9060A	1257009
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009
3369382003	CWMP009W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1257710	07/19/2024 04:40	ANN	SW846 6010C	1259381
		N/A	N/A	N/A		SW846 8260B	1260737
		N/A	N/A	N/A		EPA 300.0	1256513
		N/A	N/A	N/A		EPA 300.0	1260411
		N/A	N/A	N/A		EPA 410.4	1259309
		N/A	N/A	N/A		S4500HB-11	1256942
		N/A	N/A	N/A		SM 4500-NH3G	1259916
		N/A	N/A	N/A		SM2130B-2011	1256519
		N/A	N/A	N/A		SM2320B-2011	1259957
		N/A	N/A	N/A		SM2540C-15	1256815
		N/A	N/A	N/A		SW846 9050A	1258308
		N/A	N/A	N/A		SW846 9060A	1257009
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009

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

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

3369382

Logged By: SLS
PM: SJB

Page 2 of

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO Box 4424
Lancaster PA 17604

Contact: Dan Brown
Phone#: 717-735-0193
Project Name/#: Creswell/GWMP Form 19Q
Bill To: Lancaster County Solid Waste MA
Purchase Order #:

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

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	500 ~~250~~ mL DAG 7/17/24	250 ~~500~~ ml			250ml	125ml	
	Preservative	HCL	H2SO4	UNP	UNP	UNP			H2SO4	HNO3	

Orthophosphate Filtered? Yes No Hexavalent Chromium Filtered? Yes No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	8260 VOCs - Form 19Q	pH, CL, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, HCO3	FM	Sample Debth for AUX Data	NH3-N, COD	Total Metals Ca, Fe, Mn, Mg, K, Na	
	Enter Number of Containers Per Sample or Field Results Below.															
1	CWMP018S	7/17/24	0951		G	GW	2	1	2	1	1	x	x	1	2	
2	CWMP017S	7/17/24	1010		G	GW	2	1	2	1	1	x	x	1	2	
3	CWMP009W	7/17/24	1343		G	GW	2	1	2	1	1	x	x	1	2	
4																
5																
6																
7																
8																
9																
10																

(Completed by Receiving Lab)
Temp Taken By: DAG Therm ID: 520 WO Temp (°C) 6
Receipt Info completed by: DAG WV Containers 0-6°C Y N NA
Cooler Custody Seals Intact Y N NA Deviations? NO YES
Sample Custody Seal Intact Y N NA If YES, list below:
Received on Ice Y N NA bottle size
Coolers & Samples Intact Y N
Correct Containers Provided Y N
Sample Label/COC Agree Y N
Adequate Sample Volumes Y N
VOA only: Trip Blank Y N NA DAG 7/17/24
NJ ≤ 4 days? Y N Client contact:
Courier/Tracking # Date/Tech:

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

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

Sample/COC Remarks

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

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

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
7-17-24	1465	1	[signature] ALS	2	DAG/ALS
		3		4	
		5		6	
		7		8	
		9		10	

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

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

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

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

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

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

Rev 07.06.2023

Main Site: 301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 | Fax: 717-944-1430 |

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343, NJ PA101

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

Project 3rd QTR 2024 GWMP FORM 19Q
Workorder 3369120
Report ID 342847 on 7/29/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Jul 16, 2024.

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

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

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

ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

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

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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3369120001	CWMP016W	Ground Water	07/16/2024 12:41	07/16/2024 14:05	BGS	Analytical Laboratory Service

Reference

Notes

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

Standard Acronyms/Flags

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

Project Notations

Sample Notations

Lab ID	Sample ID

Result Notations

Notation Ref.	
1	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
2	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.

Detected Results Summary

Client Sample ID	CWMP016W	Collected	07/16/2024 12:41
Lab Sample ID	3369120001	Lab Receipt	07/16/2024 14:05

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	12.56	Feet		Field	#
Dissolved Oxygen	9.25	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	311.97	Feet		Field	#
Flow Rate	1.73	gal/min		Field	#
Ground Water Elevation	299.41	ft/MSL		Field	#
Oxidation-Reduction Potential	302	mV		Field	#
pH, Field (SM4500B)	5.81	pH_Units		Field	#
Sample Depth	71.00	Feet		Field	#
Specific Conductance, Field	86	umhos/cm	1	Field	#
Temperature	12.80	Deg. C		Field	#
Total Well Depth	73.52	Feet		Field	#
Turbidity, Field	2	NTU	1	Field	#
Volume in Water Column	89.61	Gallons		Field	#
Water Level After Purge	19.26	Feet		Field	#
Well Volumes Purged	1.45	Vol		Field	#
METALS					
Calcium, Total	5.6	mg/L	0.11	SW846 6010C	#
Iron, Total	0.21	mg/L	0.067	SW846 6010C	#
Magnesium, Total	1.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0088	mg/L	0.0056	SW846 6010C	#
Sodium, Total	3.4	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	10	mg/L	5	SM2320B-2011	#
Alkalinity, Total	10	mg/L	5	SM2320B-2011	#
Chloride	2.6	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.3	mg/L	1.0	EPA 300.0	#
pH	7.24	pH_Units		S4500HB-11	#
Specific Conductance	60	umhos/cm	5	SW846 9050A	#
Sulfate	9.5	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	43	mg/L	25	SM2540C-15	#
Turbidity	1.7	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP016W	Collected	07/16/2024 12:41
Lab Sample ID	3369120001	Lab Receipt	07/16/2024 14:05

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	12.56		Feet		Field	1	07/16/2024 12:41	BGS	D
Dissolved Oxygen	9.25		mg/L	0.01	Field	1	07/16/2024 12:41	BGS	D
Elev Top MW Casing above MSL	311.97		Feet		Field	1	07/16/2024 12:41	BGS	D
Flow Rate	1.73		gal/min		Field	1	07/16/2024 12:41	BGS	D
Ground Water Elevation	299.41		ft/MSL		Field	1	07/16/2024 12:41	BGS	D
Oxidation-Reduction Potential	302		mV		Field	1	07/16/2024 12:41	BGS	D
pH, Field (SM4500B)	5.81		pH_Units		Field	1	07/16/2024 12:41	BGS	D
Sample Depth	71.00		Feet		Field	1	07/16/2024 12:41	BGS	D
Specific Conductance, Field	86		umhos/cm	1	Field	1	07/16/2024 12:41	BGS	D
Temperature	12.80		Deg. C		Field	1	07/16/2024 12:41	BGS	D
Total Well Depth	73.52		Feet		Field	1	07/16/2024 12:41	BGS	D
Turbidity, Field	2		NTU	1	Field	1	07/16/2024 12:41	BGS	D
Volume in Water Column	89.61		Gallons		Field	1	07/16/2024 12:41	BGS	D
Water Level After Purge	19.26		Feet		Field	1	07/16/2024 12:41	BGS	D
Well Volumes Purged	1.45		Vol		Field	1	07/16/2024 12:41	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	5.6		mg/L	0.11	SW846 6010C	1	07/22/2024 12:05	MSY	J1
Iron, Total	0.21		mg/L	0.067	SW846 6010C	1	07/22/2024 12:05	MSY	J1
Magnesium, Total	1.3		mg/L	0.11	SW846 6010C	1	07/22/2024 12:05	MSY	J1
Manganese, Total	0.0088		mg/L	0.0056	SW846 6010C	1	07/22/2024 12:05	MSY	J1
Potassium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	07/22/2024 12:05	MSY	J1
Sodium, Total	3.4		mg/L	0.56	SW846 6010C	1	07/22/2024 12:05	MSY	J1

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	07/17/2024 01:45	BST	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	07/17/2024 01:45	BST	H

Results

Client Sample ID	CWMP016W	Collected	07/16/2024 12:41
Lab Sample ID	3369120001	Lab Receipt	07/16/2024 14:05

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	99.9%	62 – 133	07/17/2024 01:45	
4-Bromofluorobenzene	460-00-4	98.3%	79 – 114	07/17/2024 01:45	
Dibromofluoromethane	1868-53-7	100%	78 – 116	07/17/2024 01:45	
Toluene-d8	2037-26-5	99.8%	76 – 127	07/17/2024 01:45	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	10		mg/L	5	SM2320B-2011	1	07/18/2024 16:38	KMV	B
Alkalinity, Total	10	1	mg/L	5	SM2320B-2011	1	07/18/2024 16:38	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	07/18/2024 12:38	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	07/22/2024 11:30	KMS	A
Chloride	2.6		mg/L	2.0	EPA 300.0	2	07/18/2024 23:00	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	07/18/2024 23:00	J1W	B
Nitrate-N	1.3		mg/L	1.0	EPA 300.0	2	07/18/2024 23:00	J1W	B
pH	7.24	2	pH_Units		S4500HB-11	1	07/18/2024 16:38	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	07/24/2024 18:39	AKH	G
Specific Conductance	60		umhos/cm	5	SW846 9050A	1	07/19/2024 14:47	LMD	B
Sulfate	9.5		mg/L	2.0	EPA 300.0	2	07/18/2024 23:00	J1W	B
Total Dissolved Solids	43		mg/L	25	SM2540C-15	1	07/18/2024 16:25	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	07/19/2024 11:29	PAG	E
Turbidity	1.7		NTU	0.30	SM2130B-2011	1	07/17/2024 09:45	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3369120001	CWMP016W	Field	N/A	
		SW846 6010C	SW846 3015A	
		SW846 8260B	N/A	
		EPA 300.0	N/A	
		EPA 410.4	N/A	
		S4500HB-11	N/A	
		SM 4500-NH3G	N/A	
		SM2130B-2011	N/A	
		SM2320B-2011	N/A	
		SM2540C-15	N/A	
		SW846 9050A	N/A	
		SW846 9060A	N/A	
		SW846 9066	SW846 9066	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3369120001	CWMP016W	N/A	N/A	N/A		Field	1260581
		SW846 3015A	1257710	07/19/2024 04:40	ANN	SW846 6010C	1259381
		N/A	N/A	N/A		SW846 8260B	1253808
		N/A	N/A	N/A		EPA 300.0	1256513
		N/A	N/A	N/A		EPA 410.4	1259309
		N/A	N/A	N/A		S4500HB-11	1256942
		N/A	N/A	N/A		SM 4500-NH3G	1256514
		N/A	N/A	N/A		SM2130B-2011	1254512
		N/A	N/A	N/A		SM2320B-2011	1256942
		N/A	N/A	N/A		SM2540C-15	1256815
		N/A	N/A	N/A		SW846 9050A	1258308
		N/A	N/A	N/A		SW846 9060A	1257008
		SW846 9066	1259969	07/23/2024 11:14	AKH	SW846 9066	1260009

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

CHAIN OF CUSTODY/ REQUEST FOR ANALYSIS

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

COC #: 3369120 Logged By: MJE PM: SJB

ALS Quote #: of

Client Name: Lancaster County Solid Waste MA

Address: 1299 Harrisburg Pike PO Box 4424

Lancaster PA 17604

Contact: Dan Brown

Phone#: 717-735-0193

Project Name/#: Creswell/GWMP Form 19Q

Bill To: Lancaster County Solid Waste MA

Purchase Order #:

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

Date Required: **Approved?**

Email? [x] dbrown@lcswma.org

	Container Type	AG	AN	CG	P	P			P	P	
	Container Size	40ml	125ml	40ml	1L	500ml			250ml	125ml	
	Preservative	HCL	H2SO4	UNP	UNP	UNP			H2SO4	HNO3	

Orthophosphate Filtered? Yes No Hexavalent Chromium Filtered? Yes No

ANALYSIS / METHOD REQUESTED

	Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	SDWA Sample Type (see key)	*G or C	**Matrix (See bottom of COC)	TOC	O-OH	8260 VOCs - Form 19Q	pH, Cl, SpC, F, SO4, NO3, Tb, TDS	Alkalinity, HCO3	FM	Sample Debth for AUX Data	NH3-N, COD	Total Metals Ca, Fe, Mn, Mg, K, Na	
							Enter Number of Containers Per Sample or Field Results Below.									
1	CWMP016W	7/16/24	1241		G	GW	2	1	2	1	1	x	x	1	2	
2																
3																
4																
5																
6																
7																
8																
9																
10																

Temp Taken By: MJE Therm ID: 569 WO Temp (°C): 6°

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

Cooler Custody ? NO YES

Sample Custod S, list below

Received on Ic

Coolers & Sam

Correct Contai

Sample Label/

Adequate Sam

VOA only: Trip

NJ ≤ 4 days'

Courier/Tracking

Temp By: MJE | WO Temp (°C): 6° | Therm ID: 569

Receipt Info Completed By: MJE

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

Sample(s) for uCi)_____

Reportable S Y N

SDWA State

PWSID #__

PWS Contac

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

Sample/COC Remarks

Contains Short Hold Testing YES NO

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

Circle Sample Collector: ALS Tech / Client

Name: DS Shadd **ID:**

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
7-16-24	1405	1	DS Shadd ALS	2	
		3		4	
		5		6	
		7		8	
		9		10	

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

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

Sample Disposal: Lab [x] Special [ ]

EDDS: Format Type

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

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

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

Rev 07.06.2023