COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/24/2024
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: 8.65 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.50 ft — Elevation of Water Level: 444.75 ft./MSL

Sampling Depth: 33 ft — Volume of Water Column: 40.90 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): 10/14/2024 — Sample Collection Time: 10:21

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3383033001 — Final Lab Analysis CompletionDate: 10/22/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP007W
Sample Date	10/14/2024

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	15	SM18-2321
CALCIUM, TOTAL	20.2	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)	7.4	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	9.5	EPA 300.0
pH-FIELD (SU)	4.84	FIELD
pH-LAB (SU)	6.88	EPA 150.1
POTASSIUM, TOTAL	2.2	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	36.6	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	392	FIELD
SPEC. COND., LAB (umhos/cm)	392	EPA 120.1
SULFATE	22.3	EPA 300.0
ALKALINITY	15	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	218	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	0.9	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP007W
Sample Date	10/14/2024

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

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

Site Name: Creswell Landfill

Facitlity ID (as issued by DEP): 100008

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: CWMP001W — X Well ___ Spring ___ Stream ___ Other

X Upgradient/Upstream ___ Downgradient/Downstream

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

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

Depth to Water Level: 28.31 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 1.23 ft — Elevation of Water Level: 486.82 ft./MSL

Sampling Depth: 57 ft — Volume of Water Column: 55.79 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 3.2

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/14/2024 — Sample Collection Time: 11:33

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): 3383033002 — Final Lab Analysis CompletionDate: 10/22/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP001W
Sample Date	10/14/2024

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	15.6	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	27.5	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	1800	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	10.8	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	75	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	17.4	EPA 300.0
pH-FIELD (SU)	5.09	FIELD
pH-LAB (SU)	6.76	EPA 150.1
POTASSIUM, TOTAL	2.3	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	13.6	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	251	FIELD
SPEC. COND., LAB (umhos/cm)	254	EPA 120.1
SULFATE	3.7	EPA 300.0
ALKALINITY	8	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	168	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	55	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP001W
Sample Date	10/14/2024

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.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

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MUNICIPAL WASTE LANDFILL
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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: 43.91 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -0.37 ft — Elevation of Water Level: 469.52 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 141.12 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/14/2024 — Sample Collection Time: 13:42

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3383033003 — Final Lab Analysis CompletionDate: 10/22/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	10/14/2024

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	14.8	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	60.7	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	67 ND	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	7.6	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	43	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	7.5	EPA 300.0
pH-FIELD (SU)	4.95	FIELD
pH-LAB (SU)	7.07	EPA 150.1
POTASSIUM, TOTAL	2	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	30.1	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	301	FIELD
SPEC. COND., LAB (umhos/cm)	305	EPA 120.1
SULFATE	6.6	EPA 300.0
ALKALINITY	19	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	168	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.3	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP005W
Sample Date	10/14/2024

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

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

Casing Stickup: -1.29 ft — Elevation of Water Level: 470.80 ft./MSL

Sampling Depth: 100 ft — Volume of Water Column: 31.71 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/15/2024 — Sample Collection Time: 13:32

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): 3383207001 — Final Lab Analysis CompletionDate: 10/22/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP003W
Sample Date	10/15/2024

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	23	SM18-2321
CALCIUM, TOTAL	20.1	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	57.3	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	67 ND	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	9.5	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	43	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	5.2	EPA 300.0
pH-FIELD (SU)	5.03	FIELD
pH-LAB (SU)	7.73	EPA 150.1
POTASSIUM, TOTAL	2.6	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	21.4	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	314	FIELD
SPEC. COND., LAB (umhos/cm)	309	EPA 120.1
SULFATE	18.8	EPA 300.0
ALKALINITY	23	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	175	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.83	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1	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.	CWMP003W
Sample Date	10/15/2024

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

Casing Stickup: -1.37 ft — Elevation of Water Level: 481.01 ft./MSL

Sampling Depth: 130 ft — Volume of Water Column: 134.35 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): 10/15/2024 — Sample Collection Time: 13:46

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): 3383207002 — Final Lab Analysis CompletionDate: 10/22/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP004W
Sample Date	10/15/2024

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	25	SM18-2321
CALCIUM, TOTAL	20.6	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	61.4	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	6.9	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	7.7	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	5.3	EPA 300.0
pH-FIELD (SU)	5.17	FIELD
pH-LAB (SU)	7.29	EPA 150.1
POTASSIUM, TOTAL	1.4	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	23.7	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	291	FIELD
SPEC. COND., LAB (umhos/cm)	298	EPA 120.1
SULFATE	5.7	EPA 300.0
ALKALINITY	25	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	173	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	2.3	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP004W
Sample Date	10/15/2024

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.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/24/2024
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: 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: 45.2 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: -1.19 ft — Elevation of Water Level: 480.61 ft./MSL

Sampling Depth: 85 ft — Volume of Water Column: 80.48 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 2.6

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/16/2024 — Sample Collection Time: 13:48

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3383424001 — Final Lab Analysis CompletionDate: 10/23/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP002W
Sample Date	10/16/2024

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	68	SM18-2321
CALCIUM, TOTAL	43.3	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	84.7	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	67 ND	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	15.5	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	670	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	7.1	EPA 300.0
pH-FIELD (SU)	5.53	FIELD
pH-LAB (SU)	7.06	EPA 150.1
POTASSIUM, TOTAL	2.6	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	26.3	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	491	FIELD
SPEC. COND., LAB (umhos/cm)	493	EPA 120.1
SULFATE	20.4	EPA 300.0
ALKALINITY	68	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	276	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	2.5	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.2	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP002W
Sample Date	10/16/2024

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

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/24/2024
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: 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: 14.2 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.53 ft — Elevation of Water Level: 297.77 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: 1.0

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/17/2024 — Sample Collection Time: 11:08

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): 3383699001 — Final Lab Analysis CompletionDate: 11/5/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP016W
Sample Date	10/17/2024

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	9	SM18-2321
CALCIUM, TOTAL	6.1	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	3.2	EPA 300.0
FLUORIDE	0.2 ND	EPA 300.0
IRON, TOTAL (ug/l)	220	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	1.4	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	5.6 ND	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	1.5	EPA 300.0
pH-FIELD (SU)	5.11	FIELD
pH-LAB (SU)	7.25	EPA 150.1
POTASSIUM, TOTAL	0.64	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	3.7	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	61	FIELD
SPEC. COND., LAB (umhos/cm)	63	EPA 120.1
SULFATE	9.6	EPA 300.0
ALKALINITY	9	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	53	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.5 ND	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	2	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP016W
Sample Date	10/17/2024

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
12/24/2024
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: 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: 8.89 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.10 ft — Elevation of Water Level: 352.01 ft./MSL

Sampling Depth: 17 ft — Volume of Water Column: 6.99 gal

Total Well Depth: 19.6 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): 10/17/2024 — Sample Collection Time: 12:13

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): 3383699002 — Final Lab Analysis CompletionDate: 11/5/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP010W
Sample Date	10/17/2024

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	0.19	EPA 350.3
BICARBONATE	334	SM18-2321
CALCIUM, TOTAL	94.6	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	19	EPA 410.4
CHLORIDE	528	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	600	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	77.2	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	220	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	17.9	EPA 300.0
pH-FIELD (SU)	6.78	FIELD
pH-LAB (SU)	8.35	EPA 150.1
POTASSIUM, TOTAL	18.9	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	303	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	2390	FIELD
SPEC. COND., LAB (umhos/cm)	2590	EPA 120.1
SULFATE	32.4	EPA 300.0
ALKALINITY	389	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1320	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	6.3	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	27	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP010W
Sample Date	10/17/2024

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
12/24/2024
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: 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: 9.17 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.70 ft — Elevation of Water Level: 395.03 ft./MSL

Sampling Depth: 16 ft — Volume of Water Column: 6.87 gal

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

Well Purged: X Yes ___ No — Well Volumes Purged: 4.8

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/17/2024 — Sample Collection Time: 12:55

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): 3383699003 — Final Lab Analysis CompletionDate: 11/5/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP009W
Sample Date	10/17/2024

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	29.1	EPA 350.3
BICARBONATE	604	SM18-2321
CALCIUM, TOTAL	194	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	112	EPA 410.4
CHLORIDE	690	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	36500	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	87.3	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	13200	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	2.5 ND	EPA 300.0
pH-FIELD (SU)	6.06	FIELD
pH-LAB (SU)	8.02	EPA 150.1
POTASSIUM, TOTAL	35.4	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	223	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	2924	FIELD
SPEC. COND., LAB (umhos/cm)	3200	EPA 120.1
SULFATE	8.3	EPA 300.0
ALKALINITY	604	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1600	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	38.8	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	29	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP009W
Sample Date	10/17/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	3.3	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	1.5	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	1.1	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

Date Prepared/Revised
12/24/2024
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: 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: 3.74 ft — Measured from: ___ Land Surface X TOC

Casing Stickup: 2.80 ft — Elevation of Water Level: 418.56 ft./MSL

Sampling Depth: 19 ft — Volume of Water Column: 3.11 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/17/2024 — Sample Collection Time: 13:38

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3383699004 — Final Lab Analysis CompletionDate: 11/5/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP008W
Sample Date	10/17/2024

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	8.01	EPA 350.3
BICARBONATE	448	SM18-2321
CALCIUM, TOTAL	80.8	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	34	EPA 410.4
CHLORIDE	62.7	EPA 300.0
FLUORIDE	0.5 ND	EPA 300.0
IRON, TOTAL (ug/l)	25500	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	36.5	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	15300	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	2.5 ND	EPA 300.0
pH-FIELD (SU)	6.22	FIELD
pH-LAB (SU)	7.97	EPA 150.1
POTASSIUM, TOTAL	10.4	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	57.5	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	988	FIELD
SPEC. COND., LAB (umhos/cm)	974	EPA 120.1
SULFATE	7	EPA 300.0
ALKALINITY	448	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	572	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	15.4	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	11	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP008W
Sample Date	10/17/2024

FORM 19

QUARTERLY AND ANNUAL WATER QUALITY ANALYSES

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

ANALYTE	VALUE[T]	ANALYSIS METHOD NUMBER
BENZENE	1.3	SW846 8260B
1,2-DIBROMOETHANE (EDB) (ETHYLENE D	1 ND	SW846 8260B
1,1-DICHLOROETHANE	1.8	SW846 8260B
1,1-DICHLOROETHENE	1 ND	SW846 8260B
1,2-DICHLOROETHANE	1 ND	SW846 8260B
cis 1,2-DICHLOROETHENE	1 ND	SW846 8260B
trans 1,2-DICHLOROETHENE	1 ND	SW846 8260B
ETHYLBENZENE	1 ND	SW846 8260B
METHYLENE CHLORIDE	1 ND	SW846 8260B
TETRACHLOROETHENE	1 ND	SW846 8260B
TOLUENE	1 ND	SW846 8260B
1,1,1-TRICHLOROETHANE	1 ND	SW846 8260B
TRICHLOROETHENE	1 ND	SW846 8260B
VINYL CHLORIDE	1 ND	SW846 8260B
XYLENES (TOTAL)	3 ND	SW846 8260B

T Please indicate detection limit if analyte is not detected.

2540-FM-BWM0041 Rev. 6/2005

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

Casing Stickup: 1.90 ft — Elevation of Water Level: 316.23 ft./MSL

Sampling Depth: 66.47 ft — Volume of Water Column: 52.03 gal

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

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/18/2024 — Sample Collection Time: 11:42

Sample Collector's Name: Mr. Brian G Shade

Sample Collector's Affiliation: ALS

Laboratory(ies) Performing Analysis:

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

Lab Accreditation Number(s):

Lab Sample Number(s): 3383857001 — Final Lab Analysis CompletionDate: 10/25/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP012W
Sample Date	10/18/2024

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	73	SM18-2321
CALCIUM, TOTAL	31	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	15 ND	EPA 410.4
CHLORIDE	50 ND	EPA 300.0
FLUORIDE	5 ND	EPA 300.0
IRON, TOTAL (ug/l)	7100	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	8.8	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	550	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	25 ND	EPA 300.0
pH-FIELD (SU)	5.99	FIELD
pH-LAB (SU)	7.93	EPA 150.1
POTASSIUM, TOTAL	1.3	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	13.6	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	291	FIELD
SPEC. COND., LAB (umhos/cm)	301	EPA 120.1
SULFATE	50 ND	EPA 300.0
ALKALINITY	73	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	202	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	0.85	SM18-5310B
TOTAL PHENOLICS (ug/l)	4	SW846 9066
TURBIDITY (N.T.U.)	150	SM 2130B

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

I.D. No	100008
Monitoring Point No.	CWMP012W
Sample Date	10/18/2024

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.

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.

SECTION A. APPLICANT IDENTIFIER

Applicant/permittee: Lancaster County Solid Waste Mana

Site Name: Creswell Landfill

Facitlity ID (as issued by DEP): 100008

SECTION B. FACILITY INFORMATION

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

Monitoring Point Number: CWMP018S — X Well ___ Spring ___ Stream ___ Other

___ Upgradient/Upstream X Downgradient/Downstream

Location (County): Lancaster County — Municipality: Manor

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

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

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

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

Total Well Depth: ___ ft — Sampling Method: ___Pumped ___Bailed X Grab

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

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

Spring Flow Rate: ___ gpm

Sample Date (mm/dd/yy): 10/18/2024 — Sample Collection Time: 12:13

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): 3383857002 — Final Lab Analysis CompletionDate: 11/5/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP018S
Sample Date	10/18/2024

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	546	SM18-2321
CALCIUM, TOTAL	90.6	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	20	EPA 410.4
CHLORIDE	1070	EPA 300.0
FLUORIDE	5 ND	EPA 300.0
IRON, TOTAL (ug/l)	96	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	117	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	6.9	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	47.3	EPA 300.0
pH-FIELD (SU)	8.38	FIELD
pH-LAB (SU)	8.72	EPA 150.1
POTASSIUM, TOTAL	20.6	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	379	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	3013	FIELD
SPEC. COND., LAB (umhos/cm)	2260	EPA 120.1
SULFATE	50 ND	EPA 300.0
ALKALINITY	581	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	1730	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	6.3	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	1.6	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.	CWMP018S
Sample Date	10/18/2024

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.

COMMONWEALTH OF PENNSYLVANIA
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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: 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: ___Pumped ___Bailed X Grab

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

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

Spring Flow Rate: _ gpm

Sample Date (mm/dd/yy): 10/18/2024 — Sample Collection Time: 12:34

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): 3383857003 — Final Lab Analysis CompletionDate: 11/5/2024

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

Comments:

I.D. No	100008
Monitoring Point No.	CWMP017S
Sample Date	10/18/2024

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	858	SM18-2321
CALCIUM, TOTAL	124	SW846 6010B
CALCIUM, DISSOLVED		SW 8466010B
COD (CHEMICAL OXYGEN DEMAND)	19	EPA 410.4
CHLORIDE	1520	EPA 300.0
FLUORIDE	5 ND	EPA 300.0
IRON, TOTAL (ug/l)	1400	SW846 6010B
IRON, DISSOLVED (ug/l)		SW846 6010B
MAGNESIUM, TOTAL	183	SW846 6010B
MAGNESIUM, DISSOLVED		SW846 6010B
MANGANESE, TOTAL (ug/l)	160	SW846 6010B
MANGANESE, DISSOLVED (ug/l)		SW846 6010B
NITRATE-NITROGEN	74.6	EPA 300.0
pH-FIELD (SU)	7.8	FIELD
pH-LAB (SU)	8.56	EPA 150.1
POTASSIUM, TOTAL	28.5	SW846 6010B
POTASSIUM, DISSOLVED		SW846 6010B
SODIUM, TOTAL	553	SW846 6010B
SODIUM, DISSOLVED		SW846 6010B
SPEC. COND., FIELD (umhos/cm)	4417	FIELD
SPEC. COND., LAB (umhos/cm)	3790	EPA 120.1
SULFATE	50 ND	EPA 300.0
ALKALINITY	937	SM18-2320B
TDS (TOTAL DISSOLVED SOLIDS)	2590	SM18-2540C
TOC (TOTAL ORGANIC CARBON)	5.6	SM18-5310B
TOTAL PHENOLICS (ug/l)	4 ND	SW846 9066
TURBIDITY (N.T.U.)	3.3	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.	CWMP017S
Sample Date	10/18/2024

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.

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 4TH QTR 2024 GWMP FORM 19Q
Workorder 3383033
Report ID 363435 on 10/29/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 14, 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
3383033001	CWMP007W	Ground Water	10/14/2024 10:21	10/14/2024 14:55	BGS	Analytical Laboratory Service
3383033002	CWMP001W	Ground Water	10/14/2024 11:33	10/14/2024 14:55	BGS	Analytical Laboratory Service
3383033003	CWMP005W	Ground Water	10/14/2024 13:42	10/14/2024 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.

Detected Results Summary

Client Sample ID	CWMP007W	Collected	10/14/2024 10:21
Lab Sample ID	3383033001	Lab Receipt	10/14/2024 14:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	8.65	Feet		Field	#
Dissolved Oxygen	5.30	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	453.40	Feet		Field	#
Flow Rate	1.57	gal/min		Field	#
Ground Water Elevation	444.75	ft/MSL		Field	#
Oxidation-Reduction Potential	384	mV		Field	#
pH, Field (SM4500B)	4.84	pH_Units		Field	#
Sample Depth	33.00	Feet		Field	#
Specific Conductance, Field	392	umhos/cm	1	Field	#
Temperature	13.78	Deg. C		Field	#
Total Well Depth	36.50	Feet		Field	#
Volume in Water Column	40.94	Gallons		Field	#
Water Level After Purge	9.32	Feet		Field	#
Well Volumes Purged	1.53	Vol		Field	#
METALS					
Calcium, Total	20.2	mg/L	0.11	SW846 6010C	#
Magnesium, Total	10.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0074	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.2	mg/L	0.56	SW846 6010C	#
Sodium, Total	36.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	15	mg/L	5	SM2320B-2011	#
Alkalinity, Total	15	mg/L	5	SM2320B-2011	#
Chloride	78.9	mg/L	2.0	EPA 300.0	#
Nitrate-N	9.5	mg/L	1.0	EPA 300.0	#
pH	6.88	pH_Units		S4500HB-11	#
Specific Conductance	392	umhos/cm	5	SW846 9050A	#
Sulfate	22.3	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	218	mg/L	25	SM2540C-15	#
Turbidity	0.90	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP001W	Collected	10/14/2024 11:33
Lab Sample ID	3383033002	Lab Receipt	10/14/2024 14:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	28.31	Feet		Field	#
Dissolved Oxygen	8.86	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	515.13	Feet		Field	#
Flow Rate	1.80	gal/min		Field	#
Ground Water Elevation	486.82	ft/MSL		Field	#
Oxidation-Reduction Potential	301	mV		Field	#
pH, Field (SM4500B)	5.09	pH_Units		Field	#
Sample Depth	57.00	Feet		Field	#
Specific Conductance, Field	251	umhos/cm	1	Field	#
Temperature	13.98	Deg. C		Field	#
Total Well Depth	66.30	Feet		Field	#
Turbidity, Field	100	NTU	1	Field	#
Volume in Water Column	55.85	Gallons		Field	#
Water Level After Purge	53.32	Feet		Field	#
Well Volumes Purged	3.22	Vol		Field	#
METALS					
Calcium, Total	15.6	mg/L	0.11	SW846 6010C	#
Iron, Total	1.8	mg/L	0.067	SW846 6010C	#
Magnesium, Total	10.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.075	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.6	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	27.5	mg/L	2.0	EPA 300.0	#
Nitrate-N	17.4	mg/L	1.0	EPA 300.0	#
pH	6.76	pH_Units		S4500HB-11	#
Specific Conductance	254	umhos/cm	5	SW846 9050A	#
Sulfate	3.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	168	mg/L	25	SM2540C-15	#
Turbidity	55	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP005W	Collected	10/14/2024 13:42
Lab Sample ID	3383033003	Lab Receipt	10/14/2024 14:55

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	43.91	Feet		Field	#
Dissolved Oxygen	6.50	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	513.43	Feet		Field	#
Flow Rate	1.91	gal/min		Field	#
Ground Water Elevation	469.52	ft/MSL		Field	#
Oxidation-Reduction Potential	295	mV		Field	#
pH, Field (SM4500B)	4.95	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	301	umhos/cm	1	Field	#
Temperature	13.09	Deg. C		Field	#
Total Well Depth	138.92	Feet		Field	#
Volume in Water Column	139.66	Gallons		Field	#
Water Level After Purge	45.29	Feet		Field	#
Well Volumes Purged	1.16	Vol		Field	#
METALS					
Calcium, Total	14.8	mg/L	0.11	SW846 6010C	#
Magnesium, Total	7.6	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.043	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.0	mg/L	0.56	SW846 6010C	#
Sodium, Total	30.1	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	60.7	mg/L	2.0	EPA 300.0	#
Nitrate-N	7.5	mg/L	1.0	EPA 300.0	#
pH	7.07	pH_Units		S4500HB-11	#
Specific Conductance	305	umhos/cm	5	SW846 9050A	#
Sulfate	6.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	168	mg/L	25	SM2540C-15	#
Turbidity	1.3	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP007W	Collected	10/14/2024 10:21
Lab Sample ID	3383033001	Lab Receipt	10/14/2024 14:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	8.65		Feet		Field	1	10/14/2024 10:21	BGS	D
Dissolved Oxygen	5.30		mg/L	0.01	Field	1	10/14/2024 10:21	BGS	D
Elev Top MW Casing above MSL	453.40		Feet		Field	1	10/14/2024 10:21	BGS	D
Flow Rate	1.57		gal/min		Field	1	10/14/2024 10:21	BGS	D
Ground Water Elevation	444.75		ft/MSL		Field	1	10/14/2024 10:21	BGS	D
Oxidation-Reduction Potential	384		mV		Field	1	10/14/2024 10:21	BGS	D
pH, Field (SM4500B)	4.84		pH_Units		Field	1	10/14/2024 10:21	BGS	D
Sample Depth	33.00		Feet		Field	1	10/14/2024 10:21	BGS	D
Specific Conductance, Field	392		umhos/cm	1	Field	1	10/14/2024 10:21	BGS	D
Temperature	13.78		Deg. C		Field	1	10/14/2024 10:21	BGS	D
Total Well Depth	36.50		Feet		Field	1	10/14/2024 10:21	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/14/2024 10:21	BGS	D
Volume in Water Column	40.94		Gallons		Field	1	10/14/2024 10:21	BGS	D
Water Level After Purge	9.32		Feet		Field	1	10/14/2024 10:21	BGS	D
Well Volumes Purged	1.53		Vol		Field	1	10/14/2024 10:21	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	20.2		mg/L	0.11	SW846 6010C	1	10/17/2024 10:45	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/17/2024 10:45	MSY	J1
Magnesium, Total	10.6		mg/L	0.11	SW846 6010C	1	10/17/2024 10:45	MSY	J1
Manganese, Total	0.0074		mg/L	0.0056	SW846 6010C	1	10/17/2024 10:45	MSY	J1
Potassium, Total	2.2		mg/L	0.56	SW846 6010C	1	10/17/2024 10:45	MSY	J1
Sodium, Total	36.6		mg/L	0.56	SW846 6010C	1	10/17/2024 10:45	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	10/21/2024 17:57	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:57	JTH	H

Results

Client Sample ID	CWMP007W	Collected	10/14/2024 10:21
Lab Sample ID	3383033001	Lab Receipt	10/14/2024 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	98.7%	62 – 133	10/21/2024 17:57	
4-Bromofluorobenzene	460-00-4	110%	79 – 114	10/21/2024 17:57	
Dibromofluoromethane	1868-53-7	95.6%	78 – 116	10/21/2024 17:57	
Toluene-d8	2037-26-5	101%	76 – 127	10/21/2024 17:57	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	15		mg/L	5	SM2320B-2011	1	10/17/2024 02:17	KMV	B
Alkalinity, Total	15	1	mg/L	5	SM2320B-2011	1	10/17/2024 02:17	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/17/2024 12:55	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/16/2024 14:24	KMS	A
Chloride	78.9		mg/L	2.0	EPA 300.0	2	10/15/2024 09:34	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/15/2024 09:34	J1W	B
Nitrate-N	9.5		mg/L	1.0	EPA 300.0	2	10/15/2024 09:34	J1W	B
pH	6.88	2	pH_Units		S4500HB-11	1	10/17/2024 02:17	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/22/2024 18:09	AKH	G
Specific Conductance	392		umhos/cm	5	SW846 9050A	1	10/21/2024 11:45	KMV	B
Sulfate	22.3		mg/L	2.0	EPA 300.0	2	10/15/2024 09:34	J1W	B
Total Dissolved Solids	218		mg/L	25	SM2540C-15	1	10/15/2024 16:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/15/2024 23:16	PAG	E
Turbidity	0.90		NTU	0.30	SM2130B-2011	1	10/15/2024 15:40	NPF	B

Results

Client Sample ID	CWMP001W	Collected	10/14/2024 11:33
Lab Sample ID	3383033002	Lab Receipt	10/14/2024 14:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	28.31		Feet		Field	1	10/14/2024 11:33	BGS	D
Dissolved Oxygen	8.86		mg/L	0.01	Field	1	10/14/2024 11:33	BGS	D
Elev Top MW Casing above MSL	515.13		Feet		Field	1	10/14/2024 11:33	BGS	D
Flow Rate	1.80		gal/min		Field	1	10/14/2024 11:33	BGS	D
Ground Water Elevation	486.82		ft/MSL		Field	1	10/14/2024 11:33	BGS	D
Oxidation-Reduction Potential	301		mV		Field	1	10/14/2024 11:33	BGS	D
pH, Field (SM4500B)	5.09		pH_Units		Field	1	10/14/2024 11:33	BGS	D
Sample Depth	57.00		Feet		Field	1	10/14/2024 11:33	BGS	D
Specific Conductance, Field	251		umhos/cm	1	Field	1	10/14/2024 11:33	BGS	D
Temperature	13.98		Deg. C		Field	1	10/14/2024 11:33	BGS	D
Total Well Depth	66.30		Feet		Field	1	10/14/2024 11:33	BGS	D
Turbidity, Field	100		NTU	1	Field	1	10/14/2024 11:33	BGS	D
Volume in Water Column	55.85		Gallons		Field	1	10/14/2024 11:33	BGS	D
Water Level After Purge	53.32		Feet		Field	1	10/14/2024 11:33	BGS	D
Well Volumes Purged	3.22		Vol		Field	1	10/14/2024 11:33	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	15.6		mg/L	0.11	SW846 6010C	1	10/17/2024 10:46	MSY	J1
Iron, Total	1.8		mg/L	0.067	SW846 6010C	1	10/17/2024 10:46	MSY	J1
Magnesium, Total	10.8		mg/L	0.11	SW846 6010C	1	10/17/2024 10:46	MSY	J1
Manganese, Total	0.075		mg/L	0.0056	SW846 6010C	1	10/17/2024 10:46	MSY	J1
Potassium, Total	2.3		mg/L	0.56	SW846 6010C	1	10/17/2024 10:46	MSY	J1
Sodium, Total	13.6		mg/L	0.56	SW846 6010C	1	10/17/2024 10:46	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	10/21/2024 17:17	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 17:17	JTH	H

Results

Client Sample ID	CWMP001W	Collected	10/14/2024 11:33
Lab Sample ID	3383033002	Lab Receipt	10/14/2024 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	102%	62 – 133	10/21/2024 17:17	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	10/21/2024 17:17	
Dibromofluoromethane	1868-53-7	96.1%	78 – 116	10/21/2024 17:17	
Toluene-d8	2037-26-5	100%	76 – 127	10/21/2024 17:17	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	8		mg/L	5	SM2320B-2011	1	10/17/2024 02:28	KMV	B
Alkalinity, Total	8	1	mg/L	5	SM2320B-2011	1	10/17/2024 02:28	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/17/2024 12:10	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/16/2024 14:24	KMS	A
Chloride	27.5		mg/L	2.0	EPA 300.0	2	10/15/2024 09:45	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/15/2024 09:45	J1W	B
Nitrate-N	17.4		mg/L	1.0	EPA 300.0	2	10/15/2024 09:45	J1W	B
pH	6.76	2	pH_Units		S4500HB-11	1	10/17/2024 02:28	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/22/2024 18:03	AKH	G
Specific Conductance	254		umhos/cm	5	SW846 9050A	1	10/21/2024 11:45	KMV	B
Sulfate	3.7		mg/L	2.0	EPA 300.0	2	10/15/2024 09:45	J1W	B
Total Dissolved Solids	168		mg/L	25	SM2540C-15	1	10/15/2024 16:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/15/2024 23:16	PAG	E
Turbidity	55		NTU	0.30	SM2130B-2011	1	10/15/2024 15:40	NPF	B

Results

Client Sample ID	CWMP005W	Collected	10/14/2024 13:42
Lab Sample ID	3383033003	Lab Receipt	10/14/2024 14:55

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	43.91		Feet		Field	1	10/14/2024 13:42	BGS	D
Dissolved Oxygen	6.50		mg/L	0.01	Field	1	10/14/2024 13:42	BGS	D
Elev Top MW Casing above MSL	513.43		Feet		Field	1	10/14/2024 13:42	BGS	D
Flow Rate	1.91		gal/min		Field	1	10/14/2024 13:42	BGS	D
Ground Water Elevation	469.52		ft/MSL		Field	1	10/14/2024 13:42	BGS	D
Oxidation-Reduction Potential	295		mV		Field	1	10/14/2024 13:42	BGS	D
pH, Field (SM4500B)	4.95		pH_Units		Field	1	10/14/2024 13:42	BGS	D
Sample Depth	130.00		Feet		Field	1	10/14/2024 13:42	BGS	D
Specific Conductance, Field	301		umhos/cm	1	Field	1	10/14/2024 13:42	BGS	D
Temperature	13.09		Deg. C		Field	1	10/14/2024 13:42	BGS	D
Total Well Depth	138.92		Feet		Field	1	10/14/2024 13:42	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/14/2024 13:42	BGS	D
Volume in Water Column	139.66		Gallons		Field	1	10/14/2024 13:42	BGS	D
Water Level After Purge	45.29		Feet		Field	1	10/14/2024 13:42	BGS	D
Well Volumes Purged	1.16		Vol		Field	1	10/14/2024 13:42	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	14.8		mg/L	0.11	SW846 6010C	1	10/17/2024 10:47	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/17/2024 10:47	MSY	J1
Magnesium, Total	7.6		mg/L	0.11	SW846 6010C	1	10/17/2024 10:47	MSY	J1
Manganese, Total	0.043		mg/L	0.0056	SW846 6010C	1	10/17/2024 10:47	MSY	J1
Potassium, Total	2.0		mg/L	0.56	SW846 6010C	1	10/17/2024 10:47	MSY	J1
Sodium, Total	30.1		mg/L	0.56	SW846 6010C	1	10/17/2024 10:47	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	10/21/2024 16:57	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 16:57	JTH	H

Results

Client Sample ID	CWMP005W	Collected	10/14/2024 13:42
Lab Sample ID	3383033003	Lab Receipt	10/14/2024 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	106%	62 – 133	10/21/2024 16:57	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	10/21/2024 16:57	
Dibromofluoromethane	1868-53-7	101%	78 – 116	10/21/2024 16:57	
Toluene-d8	2037-26-5	104%	76 – 127	10/21/2024 16:57	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	19		mg/L	5	SM2320B-2011	1	10/17/2024 03:17	KMV	B
Alkalinity, Total	19	1	mg/L	5	SM2320B-2011	1	10/17/2024 03:17	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/17/2024 13:49	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/16/2024 14:24	KMS	A
Chloride	60.7		mg/L	2.0	EPA 300.0	2	10/15/2024 09:56	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/15/2024 09:56	J1W	B
Nitrate-N	7.5		mg/L	1.0	EPA 300.0	2	10/15/2024 09:56	J1W	B
pH	7.07	2	pH_Units		S4500HB-11	1	10/17/2024 03:17	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/22/2024 18:06	AKH	G
Specific Conductance	305		umhos/cm	5	SW846 9050A	1	10/21/2024 11:45	KMV	B
Sulfate	6.6		mg/L	2.0	EPA 300.0	2	10/15/2024 09:56	J1W	B
Total Dissolved Solids	168		mg/L	25	SM2540C-15	1	10/15/2024 16:00	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/15/2024 23:16	PAG	E
Turbidity	1.3		NTU	0.30	SM2130B-2011	1	10/15/2024 15:40	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3383033001	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	
3383033002	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	
3383033003	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
3383033001	CWMP007W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1316653	10/17/2024 03:45	ANN	SW846 6010C	1317064
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1316034
		N/A	N/A	N/A		EPA 410.4	1316478
		N/A	N/A	N/A		S4500HB-11	1316503
		N/A	N/A	N/A		SM 4500-NH3G	1316502
		N/A	N/A	N/A		SM2130B-2011	1316043
		N/A	N/A	N/A		SM2320B-2011	1316503
		N/A	N/A	N/A		SM2540C-15	1316076
		N/A	N/A	N/A		SW846 9050A	1319822
		N/A	N/A	N/A		SW846 9060A	1316149
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1320030
3383033002	CWMP001W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1316653	10/17/2024 03:45	ANN	SW846 6010C	1317064
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1316034
		N/A	N/A	N/A		EPA 410.4	1316478
		N/A	N/A	N/A		S4500HB-11	1316503
		N/A	N/A	N/A		SM 4500-NH3G	1316502
		N/A	N/A	N/A		SM2130B-2011	1316043
		N/A	N/A	N/A		SM2320B-2011	1316503
		N/A	N/A	N/A		SM2540C-15	1316076
		N/A	N/A	N/A		SW846 9050A	1319822
		N/A	N/A	N/A		SW846 9060A	1316149
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1320030
3383033003	CWMP005W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1316653	10/17/2024 03:45	ANN	SW846 6010C	1317064
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1316034
		N/A	N/A	N/A		EPA 410.4	1316478
		N/A	N/A	N/A		S4500HB-11	1316503
		N/A	N/A	N/A		SM 4500-NH3G	1316501
		N/A	N/A	N/A		SM2130B-2011	1316043
		N/A	N/A	N/A		SM2320B-2011	1316503
		N/A	N/A	N/A		SM2540C-15	1316076
		N/A	N/A	N/A		SW846 9050A	1319822
		N/A	N/A	N/A		SW846 9060A	1316149
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1320030

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.

3383033
Logged By: SLS
PM: SJB

133 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	CWMP007W	10/14/24	1021		G	GW	2	1	2	1	1	x	x	1	2	
2	CWMP001W	10/14/24	1133		G	GW	2	1	2	1	1	x	x	1	2	
3	CWMP005W	10/14/24	1342		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: 571 WO Temp (°C) 6
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, list 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: ~~ALS~~ ID:

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
10-14-24	1456	1	~~ALS~~	2	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 4TH QTR 2024 GWMP FORM 19Q
Workorder 3383424
Report ID 363442 on 10/29/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 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
3383424001	CWMP002W	Ground Water	10/16/2024 13:48	10/16/2024 15:20	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	10/16/2024 13:48
Lab Sample ID	3383424001	Lab Receipt	10/16/2024 15:20

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	45.20	Feet		Field	#
Dissolved Oxygen	3.36	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	525.81	Feet		Field	#
Flow Rate	1.83	gal/min		Field	#
Ground Water Elevation	480.61	ft/MSL		Field	#
Oxidation-Reduction Potential	303	mV		Field	#
pH, Field (SM4500B)	5.53	pH_Units		Field	#
Sample Depth	85.00	Feet		Field	#
Specific Conductance, Field	491	umhos/cm	1	Field	#
Temperature	13.75	Deg. C		Field	#
Total Well Depth	100.00	Feet		Field	#
Volume in Water Column	80.56	Gallons		Field	#
Water Level After Purge	61.81	Feet		Field	#
Well Volumes Purged	2.61	Vol		Field	#
METALS					
Calcium, Total	43.3	mg/L	0.11	SW846 6010C	#
Magnesium, Total	15.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.67	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	26.3	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	4.8	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	68	mg/L	5	SM2320B-2011	#
Alkalinity, Total	68	mg/L	5	SM2320B-2011	#
Chloride	84.7	mg/L	2.0	EPA 300.0	#
Nitrate-N	7.1	mg/L	1.0	EPA 300.0	#
pH	7.06	pH_Units		S4500HB-11	#
Specific Conductance	493	umhos/cm	5	SW846 9050A	#
Sulfate	20.4	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	276	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	2.5	mg/L	0.50	SW846 9060A	#
Turbidity	1.2	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP002W	Collected	10/16/2024 13:48
Lab Sample ID	3383424001	Lab Receipt	10/16/2024 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	45.20		Feet		Field	1	10/16/2024 13:48	BGS	D
Dissolved Oxygen	3.36		mg/L	0.01	Field	1	10/16/2024 13:48	BGS	D
Elev Top MW Casing above MSL	525.81		Feet		Field	1	10/16/2024 13:48	BGS	D
Flow Rate	1.83		gal/min		Field	1	10/16/2024 13:48	BGS	D
Ground Water Elevation	480.61		ft/MSL		Field	1	10/16/2024 13:48	BGS	D
Oxidation-Reduction Potential	303		mV		Field	1	10/16/2024 13:48	BGS	D
pH, Field (SM4500B)	5.53		pH_Units		Field	1	10/16/2024 13:48	BGS	D
Sample Depth	85.00		Feet		Field	1	10/16/2024 13:48	BGS	D
Specific Conductance, Field	491		umhos/cm	1	Field	1	10/16/2024 13:48	BGS	D
Temperature	13.75		Deg. C		Field	1	10/16/2024 13:48	BGS	D
Total Well Depth	100.00		Feet		Field	1	10/16/2024 13:48	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/16/2024 13:48	BGS	D
Volume in Water Column	80.56		Gallons		Field	1	10/16/2024 13:48	BGS	D
Water Level After Purge	61.81		Feet		Field	1	10/16/2024 13:48	BGS	D
Well Volumes Purged	2.61		Vol		Field	1	10/16/2024 13:48	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	43.3		mg/L	0.11	SW846 6010C	1	10/17/2024 11:05	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/17/2024 11:05	MSY	J1
Magnesium, Total	15.5		mg/L	0.11	SW846 6010C	1	10/17/2024 11:05	MSY	J1
Manganese, Total	0.67		mg/L	0.0056	SW846 6010C	1	10/17/2024 11:05	MSY	J1
Potassium, Total	2.6		mg/L	0.56	SW846 6010C	1	10/17/2024 11:05	MSY	J1
Sodium, Total	26.3		mg/L	0.56	SW846 6010C	1	10/17/2024 11:05	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	10/21/2024 18:56	JTH	H
1,1-Dichloroethane	4.8		ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:56	JTH	H

Results

Client Sample ID	CWMP002W	Collected	10/16/2024 13:48
Lab Sample ID	3383424001	Lab Receipt	10/16/2024 15:20

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	10/21/2024 18:56	
4-Bromofluorobenzene	460-00-4	101%	79 – 114	10/21/2024 18:56	
Dibromofluoromethane	1868-53-7	94.4%	78 – 116	10/21/2024 18:56	
Toluene-d8	2037-26-5	97.8%	76 – 127	10/21/2024 18:56	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	68		mg/L	5	SM2320B-2011	1	10/18/2024 22:01	KMV	B
Alkalinity, Total	68	1	mg/L	5	SM2320B-2011	1	10/18/2024 22:01	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/21/2024 14:30	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/18/2024 11:40	KMS	A
Chloride	84.7		mg/L	2.0	EPA 300.0	2	10/17/2024 10:58	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/17/2024 10:58	J1W	B
Nitrate-N	7.1		mg/L	1.0	EPA 300.0	2	10/17/2024 10:58	J1W	B
pH	7.06	2	pH_Units		S4500HB-11	1	10/18/2024 22:01	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/23/2024 12:42	AKH	G
Specific Conductance	493		umhos/cm	5	SW846 9050A	1	10/21/2024 11:45	KMV	B
Sulfate	20.4		mg/L	2.0	EPA 300.0	2	10/17/2024 10:58	J1W	B
Total Dissolved Solids	276		mg/L	25	SM2540C-15	1	10/17/2024 16:40	RAG	B
Total Organic Carbon (TOC)	2.5		mg/L	0.50	SW846 9060A	1	10/17/2024 19:15	PAG	E
Turbidity	1.2		NTU	0.30	SM2130B-2011	1	10/17/2024 09:23	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3383424001	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	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3383424001	CWMP002W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1316653	10/17/2024 03:45	ANN	SW846 6010C	1317064
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1317036
		N/A	N/A	N/A		EPA 410.4	1318057
		N/A	N/A	N/A		S4500HB-11	1318343
		N/A	N/A	N/A		SM 4500-NH3G	1318342
		N/A	N/A	N/A		SM2130B-2011	1317043
		N/A	N/A	N/A		SM2320B-2011	1318343
		N/A	N/A	N/A		SM2540C-15	1317059
		N/A	N/A	N/A		SW846 9050A	1319822
		N/A	N/A	N/A		SW846 9060A	1317326
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175

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.

3383424

Logged By: SLS
PM: SJB

24 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	CWMP002W	10/16/24	1348		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) 40
Receipt Info completed by:
WV Containers 0-6°C Y N NA
Cooler Custody Seals Intact Y N NA
Sample Custody Seal Intact NA
Deviations? NO YES
If YES, list below:

Temp By: MJE | WO Temp (°C) 4 | Therm ID 569

Receipt Info Completed By:
Cooler Custody Seal Intact
Sample Custody Seal Intact
Received on Ice
Cooler & Samples Intact
Correct Containers Provided
Sample Label/COC Agree
Adequate Sample Volumes
CR6 Samples Filtered
OP Samples Filtered
VOA Trip Blank
NJ≤ 4 Days?
Rad Screen (uCi)
Courier/Tracking #:

SDWA Compliance
PWSID
WV Containers 0-6°C

MZP

Client contact:
Date/Tech:

Screen (uCi)
Source? Y N
Source Contact:
Joint
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: RS Shade ID:

Comments:

Date:	Time	Relinquished By / Company Name		Received By / Company Name	
10-16-24	1520	1 RS Shade 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 4TH QTR 2024 GWMP FORM 19Q
Workorder 3383207
Report ID 363438 on 10/29/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

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

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3383207001	CWMP003W	Ground Water	10/15/2024 13:32	10/15/2024 15:43	BGS	Analytical Laboratory Service
3383207002	CWMP004W	Ground Water	10/15/2024 13:46	10/15/2024 15:43	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 128 and the control limits were 90 to 110.
4	The QC sample type MSD for method SW846 9066 was outside the control limits for the analyte Phenolics. The % Recovery was reported as 134 and the control limits were 90 to 110.

Detected Results Summary

Client Sample ID	CWMP003W	Collected	10/15/2024 13:32
Lab Sample ID	3383207001	Lab Receipt	10/15/2024 15:43

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	53.41	Feet		Field	#
Dissolved Oxygen	3.81	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	524.21	Feet		Field	#
Flow Rate	2.05	gal/min		Field	#
Ground Water Elevation	470.80	ft/MSL		Field	#
Oxidation-Reduction Potential	325	mV		Field	#
pH, Field (SM4500B)	5.03	pH_Units		Field	#
Sample Depth	100.00	Feet		Field	#
Specific Conductance, Field	314	umhos/cm	1	Field	#
Temperature	14.07	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
Volume in Water Column	127.29	Gallons		Field	#
Water Level After Purge	72.38	Feet		Field	#
Well Volumes Purged	1.21	Vol		Field	#
METALS					
Calcium, Total	20.1	mg/L	0.11	SW846 6010C	#
Magnesium, Total	9.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.043	mg/L	0.0056	SW846 6010C	#
Potassium, Total	2.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	21.4	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	23	mg/L	5	SM2320B-2011	#
Alkalinity, Total	23	mg/L	5	SM2320B-2011	#
Chloride	57.3	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.2	mg/L	1.0	EPA 300.0	#
pH	7.73	pH_Units		S4500HB-11	#
Specific Conductance	309	umhos/cm	5	SW846 9050A	#
Sulfate	18.8	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	175	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.83	mg/L	0.50	SW846 9060A	#
Turbidity	1.0	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP004W	Collected	10/15/2024 13:46
Lab Sample ID	3383207002	Lab Receipt	10/15/2024 15:43

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	48.52	Feet		Field	#
Dissolved Oxygen	7.98	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	529.53	Feet		Field	#
Flow Rate	1.52	gal/min		Field	#
Ground Water Elevation	481.01	ft/MSL		Field	#
Oxidation-Reduction Potential	248	mV		Field	#
pH, Field (SM4500B)	5.17	pH_Units		Field	#
Sample Depth	130.00	Feet		Field	#
Specific Conductance, Field	291	umhos/cm	1	Field	#
Temperature	14.32	Deg. C		Field	#
Total Well Depth	140.00	Feet		Field	#
Volume in Water Column	134.48	Gallons		Field	#
Water Level After Purge	55.31	Feet		Field	#
Well Volumes Purged	1.13	Vol		Field	#
METALS					
Calcium, Total	20.6	mg/L	0.11	SW846 6010C	#
Iron, Total	0.17	mg/L	0.067	SW846 6010C	#
Magnesium, Total	6.9	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0077	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	23.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	25	mg/L	5	SM2320B-2011	#
Alkalinity, Total	25	mg/L	5	SM2320B-2011	#
Chloride	61.4	mg/L	2.0	EPA 300.0	#
Nitrate-N	5.3	mg/L	1.0	EPA 300.0	#
pH	7.29	pH_Units		S4500HB-11	#
Specific Conductance	298	umhos/cm	5	SW846 9050A	#
Sulfate	5.7	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	173	mg/L	25	SM2540C-15	#
Turbidity	2.3	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP003W	Collected	10/15/2024 13:32
Lab Sample ID	3383207001	Lab Receipt	10/15/2024 15:43

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	53.41		Feet		Field	1	10/15/2024 13:31	BGS	D
Dissolved Oxygen	3.81		mg/L	0.01	Field	1	10/15/2024 13:31	BGS	D
Elev Top MW Casing above MSL	524.21		Feet		Field	1	10/15/2024 13:31	BGS	D
Flow Rate	2.05		gal/min		Field	1	10/15/2024 13:31	BGS	D
Ground Water Elevation	470.80		ft/MSL		Field	1	10/15/2024 13:31	BGS	D
Oxidation-Reduction Potential	325		mV		Field	1	10/15/2024 13:31	BGS	D
pH, Field (SM4500B)	5.03		pH_Units		Field	1	10/15/2024 13:31	BGS	D
Sample Depth	100.00		Feet		Field	1	10/15/2024 13:31	BGS	D
Specific Conductance, Field	314		umhos/cm	1	Field	1	10/15/2024 13:31	BGS	D
Temperature	14.07		Deg. C		Field	1	10/15/2024 13:31	BGS	D
Total Well Depth	140.00		Feet		Field	1	10/15/2024 13:31	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/15/2024 13:31	BGS	D
Volume in Water Column	127.29		Gallons		Field	1	10/15/2024 13:31	BGS	D
Water Level After Purge	72.38		Feet		Field	1	10/15/2024 13:31	BGS	D
Well Volumes Purged	1.21		Vol		Field	1	10/15/2024 13:31	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	20.1		mg/L	0.11	SW846 6010C	1	10/17/2024 11:03	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/17/2024 11:03	MSY	J1
Magnesium, Total	9.5		mg/L	0.11	SW846 6010C	1	10/17/2024 11:03	MSY	J1
Manganese, Total	0.043		mg/L	0.0056	SW846 6010C	1	10/17/2024 11:03	MSY	J1
Potassium, Total	2.6		mg/L	0.56	SW846 6010C	1	10/17/2024 11:03	MSY	J1
Sodium, Total	21.4		mg/L	0.56	SW846 6010C	1	10/17/2024 11:03	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	10/21/2024 19:36	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:36	JTH	H

Results

Client Sample ID	CWMP003W	Collected	10/15/2024 13:32
Lab Sample ID	3383207001	Lab Receipt	10/15/2024 15:43

VOLATILE ORGANICS (cont.)

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

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	101%	62 – 133	10/21/2024 19:36	
4-Bromofluorobenzene	460-00-4	111%	79 – 114	10/21/2024 19:36	
Dibromofluoromethane	1868-53-7	95.6%	78 – 116	10/21/2024 19:36	
Toluene-d8	2037-26-5	101%	76 – 127	10/21/2024 19:36	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	23		mg/L	5	SM2320B-2011	1	10/17/2024 19:20	KMV	B
Alkalinity, Total	23	1	mg/L	5	SM2320B-2011	1	10/17/2024 19:20	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/17/2024 16:40	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/17/2024 11:45	KMS	A
Chloride	57.3		mg/L	2.0	EPA 300.0	2	10/16/2024 16:29	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/16/2024 16:29	J1W	B
Nitrate-N	5.2		mg/L	1.0	EPA 300.0	2	10/16/2024 16:29	J1W	B
pH	7.73	2	pH_Units		S4500HB-11	1	10/17/2024 19:20	KMV	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/22/2024 19:46	AKH	G
Specific Conductance	309		umhos/cm	5	SW846 9050A	1	10/21/2024 11:45	KMV	B
Sulfate	18.8		mg/L	2.0	EPA 300.0	2	10/16/2024 16:29	J1W	B
Total Dissolved Solids	175		mg/L	25	SM2540C-15	1	10/17/2024 15:40	RAG	B
Total Organic Carbon (TOC)	0.83		mg/L	0.50	SW846 9060A	1	10/17/2024 19:15	PAG	E
Turbidity	1.0		NTU	0.30	SM2130B-2011	1	10/16/2024 16:56	NPF	B

Results

Client Sample ID	CWMP004W	Collected	10/15/2024 13:46
Lab Sample ID	3383207002	Lab Receipt	10/15/2024 15:43

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	48.52		Feet		Field	1	10/15/2024 13:46	BGS	D
Dissolved Oxygen	7.98		mg/L	0.01	Field	1	10/15/2024 13:46	BGS	D
Elev Top MW Casing above MSL	529.53		Feet		Field	1	10/15/2024 13:46	BGS	D
Flow Rate	1.52		gal/min		Field	1	10/15/2024 13:46	BGS	D
Ground Water Elevation	481.01		ft/MSL		Field	1	10/15/2024 13:46	BGS	D
Oxidation-Reduction Potential	248		mV		Field	1	10/15/2024 13:46	BGS	D
pH, Field (SM4500B)	5.17		pH_Units		Field	1	10/15/2024 13:46	BGS	D
Sample Depth	130.00		Feet		Field	1	10/15/2024 13:46	BGS	D
Specific Conductance, Field	291		umhos/cm	1	Field	1	10/15/2024 13:46	BGS	D
Temperature	14.32		Deg. C		Field	1	10/15/2024 13:46	BGS	D
Total Well Depth	140.00		Feet		Field	1	10/15/2024 13:46	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/15/2024 13:46	BGS	D
Volume in Water Column	134.48		Gallons		Field	1	10/15/2024 13:46	BGS	D
Water Level After Purge	55.31		Feet		Field	1	10/15/2024 13:46	BGS	D
Well Volumes Purged	1.13		Vol		Field	1	10/15/2024 13:46	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	20.6		mg/L	0.11	SW846 6010C	1	10/17/2024 11:04	MSY	J1
Iron, Total	0.17		mg/L	0.067	SW846 6010C	1	10/17/2024 11:04	MSY	J1
Magnesium, Total	6.9		mg/L	0.11	SW846 6010C	1	10/17/2024 11:04	MSY	J1
Manganese, Total	0.0077		mg/L	0.0056	SW846 6010C	1	10/17/2024 11:04	MSY	J1
Potassium, Total	1.4		mg/L	0.56	SW846 6010C	1	10/17/2024 11:04	MSY	J1
Sodium, Total	23.7		mg/L	0.56	SW846 6010C	1	10/17/2024 11:04	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	10/21/2024 19:16	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:16	JTH	H

Results

Client Sample ID	CWMP004W	Collected	10/15/2024 13:46
Lab Sample ID	3383207002	Lab Receipt	10/15/2024 15:43

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	10/21/2024 19:16	
4-Bromofluorobenzene	460-00-4	90.4%	79 – 114	10/21/2024 19:16	
Dibromofluoromethane	1868-53-7	99.1%	78 – 116	10/21/2024 19:16	
Toluene-d8	2037-26-5	95.7%	76 – 127	10/21/2024 19:16	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	25		mg/L	5	SM2320B-2011	1	10/17/2024 19:31	KMV	B
Alkalinity, Total	25	1	mg/L	5	SM2320B-2011	1	10/17/2024 19:31	KMV	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/17/2024 15:55	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/17/2024 11:45	KMS	A
Chloride	61.4		mg/L	2.0	EPA 300.0	2	10/16/2024 17:34	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/16/2024 17:34	J1W	B
Nitrate-N	5.3		mg/L	1.0	EPA 300.0	2	10/16/2024 17:34	J1W	B
pH	7.29	2	pH_Units		S4500HB-11	1	10/17/2024 19:31	KMV	B
Phenolics	ND	ND,3,4	mg/L	0.004	SW846 9066	1	10/22/2024 19:35	AKH	G
Specific Conductance	298		umhos/cm	5	SW846 9050A	1	10/21/2024 11:45	KMV	B
Sulfate	5.7		mg/L	2.0	EPA 300.0	2	10/16/2024 17:34	J1W	B
Total Dissolved Solids	173		mg/L	25	SM2540C-15	1	10/17/2024 15:40	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/17/2024 19:15	PAG	E
Turbidity	2.3		NTU	0.30	SM2130B-2011	1	10/16/2024 16:56	NPF	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3383207001	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	
3383207002	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
3383207001	CWMP003W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1316653	10/17/2024 03:45	ANN	SW846 6010C	1317064
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1316434
		N/A	N/A	N/A		EPA 410.4	1317044
		N/A	N/A	N/A		S4500HB-11	1316503
		N/A	N/A	N/A		SM 4500-NH3G	1316501
		N/A	N/A	N/A		SM2130B-2011	1316447
		N/A	N/A	N/A		SM2320B-2011	1316503
		N/A	N/A	N/A		SM2540C-15	1317057
		N/A	N/A	N/A		SW846 9050A	1319822
		N/A	N/A	N/A		SW846 9060A	1317326
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1320030
3383207002	CWMP004W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1316653	10/17/2024 03:45	ANN	SW846 6010C	1317064
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1316434
		N/A	N/A	N/A		EPA 410.4	1317044
		N/A	N/A	N/A		S4500HB-11	1316503
		N/A	N/A	N/A		SM 4500-NH3G	1316501
		N/A	N/A	N/A		SM2130B-2011	1316447
		N/A	N/A	N/A		SM2320B-2011	1316503
		N/A	N/A	N/A		SM2540C-15	1317057
		N/A	N/A	N/A		SW846 9050A	1319822
		N/A	N/A	N/A		SW846 9060A	1317326
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1320030

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.

3383207
Logged By: SLS
PM: SJB

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	CWMP003W	10/15/24	1332		G	GW	2	1	2	1	1	x	x	1	2	
2	CWMP004W	10/15/24	1346		G	GW	2	1	2	1	1	x	x	1	2	
3																
4																
5																
6																
7																
8																
9																
10																

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

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
10-16-24	1543	1	[illegible] ALS	2	
		3		4	
		5		6	
		7		8	
		9		10	

* 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

(ALS / Receiving Lab)

Temp Taken By: Therm ID: WO Temp (°C)

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

Temp By: MZP | WO Temp (°C): 6 | Therm ID: 571

Receipt Info Completed By:	MZP
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)

A A A A

Deviations? NO YES
If YES, list below:

Client contact:
Date/Tech:

Rad Screen (uCi)
New Source? Y N
New Source Contact:

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

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

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 4TH QTR 2024 GWMP FORM 19Q
Workorder 3383699
Report ID 365788 on 11/8/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 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

Susan Scherer

Susan Scherer *(ALS Digital Signature)*
Project Coordinator

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

Sample Summary

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collector	Collection Company
3383699001	CWMP016W	Ground Water	10/17/2024 11:08	10/17/2024 15:15	BGS	Analytical Laboratory Service
3383699002	CWMP010W	Ground Water	10/17/2024 12:13	10/17/2024 15:15	BGS	Analytical Laboratory Service
3383699003	CWMP009W	Ground Water	10/17/2024 12:55	10/17/2024 15:15	BGS	Analytical Laboratory Service
3383699004	CWMP008W	Ground Water	10/17/2024 13:38	10/17/2024 15:15	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	Analyte was analyzed past the 14 day holding time.
2	The sample was originally run within hold time, but required further analysis that exceeded hold time.
3	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
4	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
5	The 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.
6	The lack of homogeneity in the sample caused the replicate analysis of this analyte to exceed the established control limits for precision.

Detected Results Summary

Client Sample ID	CWMP016W	Collected	10/17/2024 11:08
Lab Sample ID	3383699001	Lab Receipt	10/17/2024 15:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	14.20	Feet		Field	#
Dissolved Oxygen	8.96	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	311.97	Feet		Field	#
Flow Rate	1.78	gal/min		Field	#
Ground Water Elevation	297.77	ft/MSL		Field	#
Oxidation-Reduction Potential	307	mV		Field	#
pH, Field (SM4500B)	5.11	pH_Units		Field	#
Sample Depth	71.00	Feet		Field	#
Specific Conductance, Field	61	umhos/cm	1	Field	#
Temperature	12.69	Deg. C		Field	#
Total Well Depth	73.52	Feet		Field	#
Volume in Water Column	87.20	Gallons		Field	#
Water Level After Purge	19.82	Feet		Field	#
Well Volumes Purged	1.02	Vol		Field	#
METALS					
Calcium, Total	6.1	mg/L	0.11	SW846 6010C	#
Iron, Total	0.22	mg/L	0.067	SW846 6010C	#
Magnesium, Total	1.4	mg/L	0.11	SW846 6010C	#
Potassium, Total	0.64	mg/L	0.56	SW846 6010C	#
Sodium, Total	3.7	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	9	mg/L	5	SM2320B-2011	#
Alkalinity, Total	9	mg/L	5	SM2320B-2011	#
Chloride	3.2	mg/L	2.0	EPA 300.0	#
Nitrate-N	1.5	mg/L	1.0	EPA 300.0	#
pH	7.25	pH_Units		S4500HB-11	#
Specific Conductance	63	umhos/cm	5	SW846 9050A	#
Sulfate	9.6	mg/L	2.0	EPA 300.0	#
Total Dissolved Solids	53	mg/L	25	SM2540C-15	#
Turbidity	2.0	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP010W	Collected	10/17/2024 12:13
Lab Sample ID	3383699002	Lab Receipt	10/17/2024 15:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	8.89	Feet		Field	#
Dissolved Oxygen	3.64	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	360.90	Feet		Field	#
Flow Rate	0.24	gal/min		Field	#
Ground Water Elevation	352.01	ft/MSL		Field	#
Oxidation-Reduction Potential	39	mV		Field	#
pH, Field (SM4500B)	6.78	pH_Units		Field	#
Sample Depth	17.00	Feet		Field	#
Specific Conductance, Field	2390	umhos/cm	1	Field	#
Temperature	17.17	Deg. C		Field	#
Total Well Depth	19.60	Feet		Field	#
Turbidity, Field	3	NTU	1	Field	#
Volume in Water Column	6.96	Gallons		Field	#
Water Level After Purge	11.00	Feet		Field	#
Well Volumes Purged	1.10	Vol		Field	#
METALS					
Calcium, Total	94.6	mg/L	0.11	SW846 6010C	#
Iron, Total	0.60	mg/L	0.067	SW846 6010C	#
Magnesium, Total	77.2	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.22	mg/L	0.0056	SW846 6010C	#
Potassium, Total	18.9	mg/L	0.56	SW846 6010C	#
Sodium, Total	303	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	334	mg/L	5	SM2320B-2011	#
Alkalinity, Total	389	mg/L	5	SM2320B-2011	#
Ammonia-N, Low Level	0.19	mg/L	0.10	SM 4500-NH3G	#
Chemical Oxygen Demand (COD)	19	mg/L	15	EPA 410.4	#
Chloride	528	mg/L	10.0	EPA 300.0	#
Nitrate-N	17.9	mg/L	2.5	EPA 300.0	#
pH	8.35	pH_Units		S4500HB-11	#
Specific Conductance	2590	umhos/cm	50	SW846 9050A	#
Sulfate	32.4	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1320	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	6.3	mg/L	0.50	SW846 9060A	#
Turbidity	27	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP009W	Collected	10/17/2024 12:55
Lab Sample ID	3383699003	Lab Receipt	10/17/2024 15:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	9.17	Feet		Field	#
Dissolved Oxygen	0.16	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	404.20	Feet		Field	#
Flow Rate	1.66	gal/min		Field	#
Ground Water Elevation	395.03	ft/MSL		Field	#
Oxidation-Reduction Potential	-62	mV		Field	#
pH, Field (SM4500B)	6.06	pH_Units		Field	#
Sample Depth	16.00	Feet		Field	#
Specific Conductance, Field	2924	umhos/cm	1	Field	#
Temperature	15.56	Deg. C		Field	#
Total Well Depth	19.70	Feet		Field	#
Volume in Water Column	6.84	Gallons		Field	#
Water Level After Purge	12.20	Feet		Field	#
Well Volumes Purged	4.85	Vol		Field	#
METALS					
Calcium, Total	194	mg/L	0.11	SW846 6010C	#
Iron, Total	36.5	mg/L	0.067	SW846 6010C	#
Magnesium, Total	87.3	mg/L	0.11	SW846 6010C	#
Manganese, Total	13.2	mg/L	0.0056	SW846 6010C	#
Potassium, Total	35.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	223	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
Benzene	3.3	ug/L	1.0	SW846 8260B	#
cis-1,2-Dichloroethene	1.5	ug/L	1.0	SW846 8260B	#
Vinyl Chloride	1.1	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	604	mg/L	125	SM2320B-2011	#
Alkalinity, Total	604	mg/L	125	SM2320B-2011	#
Ammonia-N, Low Level	29.1	mg/L	1.00	SM 4500-NH3G	#
Chemical Oxygen Demand (COD)	112	mg/L	15	EPA 410.4	#
Chloride	690	mg/L	10.0	EPA 300.0	#
pH	8.02	pH_Units		S4500HB-11	#
Specific Conductance	3200	umhos/cm	50	SW846 9050A	#
Sulfate	8.3	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	1600	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	38.8	mg/L	5.0	SW846 9060A	#
Turbidity	29	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP008W	Collected	10/17/2024 13:38
Lab Sample ID	3383699004	Lab Receipt	10/17/2024 15:15

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	3.74	Feet		Field	#
Dissolved Oxygen	0.50	mg/L	0.01	Field	#
Elev Top MW Casing above MSL	422.30	Feet		Field	#
Flow Rate	0.70	gal/min		Field	#
Ground Water Elevation	418.56	ft/MSL		Field	#
Oxidation-Reduction Potential	-59	mV		Field	#
pH, Field (SM4500B)	6.22	pH_Units		Field	#
Sample Depth	19.00	Feet		Field	#
Specific Conductance, Field	988	umhos/cm	1	Field	#
Temperature	16.51	Deg. C		Field	#
Total Well Depth	22.80	Feet		Field	#
Volume in Water Column	3.05	Gallons		Field	#
Water Level After Purge	14.91	Feet		Field	#
Well Volumes Purged	4.59	Vol		Field	#
METALS					
Calcium, Total	80.8	mg/L	0.11	SW846 6010C	#
Iron, Total	25.5	mg/L	0.067	SW846 6010C	#
Magnesium, Total	36.5	mg/L	0.11	SW846 6010C	#
Manganese, Total	15.3	mg/L	0.0056	SW846 6010C	#
Potassium, Total	10.4	mg/L	0.56	SW846 6010C	#
Sodium, Total	57.5	mg/L	0.56	SW846 6010C	#
VOLATILE ORGANICS					
1,1-Dichloroethane	1.8	ug/L	1.0	SW846 8260B	#
Benzene	1.3	ug/L	1.0	SW846 8260B	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	448	mg/L	50	SM2320B-2011	#
Alkalinity, Total	448	mg/L	50	SM2320B-2011	#
Ammonia-N, Low Level	8.01	mg/L	1.00	SM 4500-NH3G	#
Chemical Oxygen Demand (COD)	34	mg/L	15	EPA 410.4	#
Chloride	62.7	mg/L	5.0	EPA 300.0	#
pH	7.97	pH_Units		S4500HB-11	#
Specific Conductance	974	umhos/cm	5	SW846 9050A	#
Sulfate	7.0	mg/L	5.0	EPA 300.0	#
Total Dissolved Solids	572	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	15.4	mg/L	5.0	SW846 9060A	#
Turbidity	11	NTU	0.30	SM2130B-2011	#

Results

Client Sample ID	CWMP016W	Collected	10/17/2024 11:08
Lab Sample ID	3383699001	Lab Receipt	10/17/2024 15:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	14.20		Feet		Field	1	10/17/2024 11:08	BGS	D
Dissolved Oxygen	8.96		mg/L	0.01	Field	1	10/17/2024 11:08	BGS	D
Elev Top MW Casing above MSL	311.97		Feet		Field	1	10/17/2024 11:08	BGS	D
Flow Rate	1.78		gal/min		Field	1	10/17/2024 11:08	BGS	D
Ground Water Elevation	297.77		ft/MSL		Field	1	10/17/2024 11:08	BGS	D
Oxidation-Reduction Potential	307		mV		Field	1	10/17/2024 11:08	BGS	D
pH, Field (SM4500B)	5.11		pH_Units		Field	1	10/17/2024 11:08	BGS	D
Sample Depth	71.00		Feet		Field	1	10/17/2024 11:08	BGS	D
Specific Conductance, Field	61		umhos/cm	1	Field	1	10/17/2024 11:08	BGS	D
Temperature	12.69		Deg. C		Field	1	10/17/2024 11:08	BGS	D
Total Well Depth	73.52		Feet		Field	1	10/17/2024 11:08	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/17/2024 11:08	BGS	D
Volume in Water Column	87.20		Gallons		Field	1	10/17/2024 11:08	BGS	D
Water Level After Purge	19.82		Feet		Field	1	10/17/2024 11:08	BGS	D
Well Volumes Purged	1.02		Vol		Field	1	10/17/2024 11:08	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	6.1		mg/L	0.11	SW846 6010C	1	10/23/2024 12:39	MSY	J1
Iron, Total	0.22		mg/L	0.067	SW846 6010C	1	10/23/2024 12:39	MSY	J1
Magnesium, Total	1.4		mg/L	0.11	SW846 6010C	1	10/23/2024 12:39	MSY	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	10/23/2024 12:39	MSY	J1
Potassium, Total	0.64		mg/L	0.56	SW846 6010C	1	10/23/2024 12:39	MSY	J1
Sodium, Total	3.7		mg/L	0.56	SW846 6010C	1	10/23/2024 12:39	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	10/21/2024 21:16	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 21:16	JTH	H

Results

Client Sample ID	CWMP016W	Collected	10/17/2024 11:08
Lab Sample ID	3383699001	Lab Receipt	10/17/2024 15:15

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	10/21/2024 21:16	
4-Bromofluorobenzene	460-00-4	100%	79 – 114	10/21/2024 21:16	
Dibromofluoromethane	1868-53-7	102%	78 – 116	10/21/2024 21:16	
Toluene-d8	2037-26-5	103%	76 – 127	10/21/2024 21:16	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	9	1,2	mg/L	5	SM2320B-2011	1	11/05/2024 12:13	JXK	B
Alkalinity, Total	9	1,2,3	mg/L	5	SM2320B-2011	1	11/05/2024 12:13	JXK	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/21/2024 18:33	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/21/2024 13:25	KMS	A
Chloride	3.2		mg/L	2.0	EPA 300.0	2	10/18/2024 15:20	J1W	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/18/2024 15:20	J1W	B
Nitrate-N	1.5		mg/L	1.0	EPA 300.0	2	10/18/2024 15:20	J1W	B
pH	7.25	4	pH_Units		S4500HB-11	1	11/05/2024 12:13	JXK	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/23/2024 12:56	AKH	G
Specific Conductance	63		umhos/cm	5	SW846 9050A	1	10/22/2024 15:29	LMD	B
Sulfate	9.6		mg/L	2.0	EPA 300.0	2	10/18/2024 15:20	J1W	B
Total Dissolved Solids	53		mg/L	25	SM2540C-15	1	10/22/2024 14:55	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/23/2024 04:19	PAG	E
Turbidity	2.0		NTU	0.30	SM2130B-2011	1	10/18/2024 07:53	GMM	B

Results

Client Sample ID	CWMP010W	Collected	10/17/2024 12:13
Lab Sample ID	3383699002	Lab Receipt	10/17/2024 15:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	8.89		Feet		Field	1	10/17/2024 12:13	BGS	D
Dissolved Oxygen	3.64		mg/L	0.01	Field	1	10/17/2024 12:13	BGS	D
Elev Top MW Casing above MSL	360.90		Feet		Field	1	10/17/2024 12:13	BGS	D
Flow Rate	0.24		gal/min		Field	1	10/17/2024 12:13	BGS	D
Ground Water Elevation	352.01		ft/MSL		Field	1	10/17/2024 12:13	BGS	D
Oxidation-Reduction Potential	39		mV		Field	1	10/17/2024 12:13	BGS	D
pH, Field (SM4500B)	6.78		pH_Units		Field	1	10/17/2024 12:13	BGS	D
Sample Depth	17.00		Feet		Field	1	10/17/2024 12:13	BGS	D
Specific Conductance, Field	2390		umhos/cm	1	Field	1	10/17/2024 12:13	BGS	D
Temperature	17.17		Deg. C		Field	1	10/17/2024 12:13	BGS	D
Total Well Depth	19.60		Feet		Field	1	10/17/2024 12:13	BGS	D
Turbidity, Field	3		NTU	1	Field	1	10/17/2024 12:13	BGS	D
Volume in Water Column	6.96		Gallons		Field	1	10/17/2024 12:13	BGS	D
Water Level After Purge	11.00		Feet		Field	1	10/17/2024 12:13	BGS	D
Well Volumes Purged	1.10		Vol		Field	1	10/17/2024 12:13	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	94.6	5	mg/L	0.11	SW846 6010C	1	10/23/2024 12:40	MSY	J1
Iron, Total	0.60		mg/L	0.067	SW846 6010C	1	10/23/2024 12:40	MSY	J1
Magnesium, Total	77.2	5	mg/L	0.11	SW846 6010C	1	10/23/2024 12:40	MSY	J1
Manganese, Total	0.22		mg/L	0.0056	SW846 6010C	1	10/23/2024 12:40	MSY	J1
Potassium, Total	18.9		mg/L	0.56	SW846 6010C	1	10/23/2024 12:40	MSY	J1
Sodium, Total	303	5	mg/L	0.56	SW846 6010C	1	10/23/2024 12:40	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	10/21/2024 18:17	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:17	JTH	H

Results

Client Sample ID	CWMP010W	Collected	10/17/2024 12:13
Lab Sample ID	3383699002	Lab Receipt	10/17/2024 15:15

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	106%	62 – 133	10/21/2024 18:17	
4-Bromofluorobenzene	460-00-4	98%	79 – 114	10/21/2024 18:17	
Dibromofluoromethane	1868-53-7	99.5%	78 – 116	10/21/2024 18:17	
Toluene-d8	2037-26-5	101%	76 – 127	10/21/2024 18:17	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	334	1,2	mg/L	5	SM2320B-2011	1	11/05/2024 12:32	JXK	B
Alkalinity, Total	389	1,2,3	mg/L	5	SM2320B-2011	1	11/05/2024 12:32	JXK	B
Ammonia-N, Low Level	0.19		mg/L	0.10	SM 4500-NH3G	1	10/21/2024 17:03	AYS	A
Chemical Oxygen Demand (COD)	19		mg/L	15	EPA 410.4	1	10/21/2024 13:25	KMS	A
Chloride	528		mg/L	10.0	EPA 300.0	10	10/24/2024 03:32	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	10/18/2024 15:33	J1W	B
Nitrate-N	17.9		mg/L	2.5	EPA 300.0	5	10/18/2024 15:33	J1W	B
pH	8.35	4	pH_Units		S4500HB-11	1	11/05/2024 12:32	JXK	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/23/2024 13:02	AKH	G
Specific Conductance	2590		umhos/cm	50	SW846 9050A	10	10/22/2024 15:29	LMD	B
Sulfate	32.4		mg/L	5.0	EPA 300.0	5	10/18/2024 15:33	J1W	B
Total Dissolved Solids	1320		mg/L	25	SM2540C-15	1	10/22/2024 14:55	RAG	B
Total Organic Carbon (TOC)	6.3		mg/L	0.50	SW846 9060A	1	10/23/2024 04:19	PAG	E
Turbidity	27		NTU	0.30	SM2130B-2011	1	10/18/2024 07:53	GMM	B

Results

Client Sample ID	CWMP009W	Collected	10/17/2024 12:55
Lab Sample ID	3383699003	Lab Receipt	10/17/2024 15:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	9.17		Feet		Field	1	10/17/2024 12:55	BGS	D
Dissolved Oxygen	0.16		mg/L	0.01	Field	1	10/17/2024 12:55	BGS	D
Elev Top MW Casing above MSL	404.20		Feet		Field	1	10/17/2024 12:55	BGS	D
Flow Rate	1.66		gal/min		Field	1	10/17/2024 12:55	BGS	D
Ground Water Elevation	395.03		ft/MSL		Field	1	10/17/2024 12:55	BGS	D
Oxidation-Reduction Potential	-62		mV		Field	1	10/17/2024 12:55	BGS	D
pH, Field (SM4500B)	6.06		pH_Units		Field	1	10/17/2024 12:55	BGS	D
Sample Depth	16.00		Feet		Field	1	10/17/2024 12:55	BGS	D
Specific Conductance, Field	2924		umhos/cm	1	Field	1	10/17/2024 12:55	BGS	D
Temperature	15.56		Deg. C		Field	1	10/17/2024 12:55	BGS	D
Total Well Depth	19.70		Feet		Field	1	10/17/2024 12:55	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/17/2024 12:55	BGS	D
Volume in Water Column	6.84		Gallons		Field	1	10/17/2024 12:55	BGS	D
Water Level After Purge	12.20		Feet		Field	1	10/17/2024 12:55	BGS	D
Well Volumes Purged	4.85		Vol		Field	1	10/17/2024 12:55	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	194		mg/L	0.11	SW846 6010C	1	10/23/2024 12:44	MSY	J1
Iron, Total	36.5		mg/L	0.067	SW846 6010C	1	10/23/2024 12:44	MSY	J1
Magnesium, Total	87.3		mg/L	0.11	SW846 6010C	1	10/23/2024 12:44	MSY	J1
Manganese, Total	13.2		mg/L	0.0056	SW846 6010C	1	10/23/2024 12:44	MSY	J1
Potassium, Total	35.4		mg/L	0.56	SW846 6010C	1	10/23/2024 12:44	MSY	J1
Sodium, Total	223		mg/L	0.56	SW846 6010C	1	10/23/2024 12:44	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	10/21/2024 20:56	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
Benzene	3.3		ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
cis-1,2-Dichloroethene	1.5		ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H
Vinyl Chloride	1.1		ug/L	1.0	SW846 8260B	1	10/21/2024 20:56	JTH	H

Results

Client Sample ID	CWMP009W	Collected	10/17/2024 12:55
Lab Sample ID	3383699003	Lab Receipt	10/17/2024 15:15

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	95.9%	62 – 133	10/21/2024 20:56	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	10/21/2024 20:56	
Dibromofluoromethane	1868-53-7	96.8%	78 – 116	10/21/2024 20:56	
Toluene-d8	2037-26-5	98.2%	76 – 127	10/21/2024 20:56	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	604		mg/L	125	SM2320B-2011	25	11/05/2024 18:53	JXK	B
Alkalinity, Total	604	3	mg/L	125	SM2320B-2011	25	11/05/2024 18:53	JXK	B
Ammonia-N, Low Level	29.1		mg/L	1.00	SM 4500-NH3G	10	10/23/2024 12:05	AYS	A
Chemical Oxygen Demand (COD)	112		mg/L	15	EPA 410.4	1	10/21/2024 13:25	KMS	A
Chloride	690		mg/L	10.0	EPA 300.0	10	10/24/2024 04:36	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	10/18/2024 15:46	J1W	B
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	10/18/2024 15:46	J1W	B
pH	8.02	4	pH_Units		S4500HB-11	25	11/05/2024 18:53	JXK	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/23/2024 12:59	AKH	G
Specific Conductance	3200		umhos/cm	50	SW846 9050A	10	10/22/2024 15:29	LMD	B
Sulfate	8.3		mg/L	5.0	EPA 300.0	5	10/18/2024 15:46	J1W	B
Total Dissolved Solids	1600		mg/L	25	SM2540C-15	1	10/22/2024 14:55	RAG	B
Total Organic Carbon (TOC)	38.8		mg/L	5.0	SW846 9060A	10	10/23/2024 04:19	PAG	E
Turbidity	29		NTU	0.30	SM2130B-2011	1	10/18/2024 07:53	GMM	B

Results

Client Sample ID	CWMP008W	Collected	10/17/2024 13:38
Lab Sample ID	3383699004	Lab Receipt	10/17/2024 15:15

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	3.74		Feet		Field	1	10/17/2024 13:38	BGS	D
Dissolved Oxygen	0.50		mg/L	0.01	Field	1	10/17/2024 13:38	BGS	D
Elev Top MW Casing above MSL	422.30		Feet		Field	1	10/17/2024 13:38	BGS	D
Flow Rate	0.70		gal/min		Field	1	10/17/2024 13:38	BGS	D
Ground Water Elevation	418.56		ft/MSL		Field	1	10/17/2024 13:38	BGS	D
Oxidation-Reduction Potential	-59		mV		Field	1	10/17/2024 13:38	BGS	D
pH, Field (SM4500B)	6.22		pH_Units		Field	1	10/17/2024 13:38	BGS	D
Sample Depth	19.00		Feet		Field	1	10/17/2024 13:38	BGS	D
Specific Conductance, Field	988		umhos/cm	1	Field	1	10/17/2024 13:38	BGS	D
Temperature	16.51		Deg. C		Field	1	10/17/2024 13:38	BGS	D
Total Well Depth	22.80		Feet		Field	1	10/17/2024 13:38	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/17/2024 13:38	BGS	D
Volume in Water Column	3.05		Gallons		Field	1	10/17/2024 13:38	BGS	D
Water Level After Purge	14.91		Feet		Field	1	10/17/2024 13:38	BGS	D
Well Volumes Purged	4.59		Vol		Field	1	10/17/2024 13:38	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	80.8		mg/L	0.11	SW846 6010C	1	10/23/2024 12:46	MSY	J1
Iron, Total	25.5		mg/L	0.067	SW846 6010C	1	10/23/2024 12:46	MSY	J1
Magnesium, Total	36.5		mg/L	0.11	SW846 6010C	1	10/23/2024 12:46	MSY	J1
Manganese, Total	15.3		mg/L	0.0056	SW846 6010C	1	10/23/2024 12:46	MSY	J1
Potassium, Total	10.4		mg/L	0.56	SW846 6010C	1	10/23/2024 12:46	MSY	J1
Sodium, Total	57.5		mg/L	0.56	SW846 6010C	1	10/23/2024 12:46	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	10/21/2024 20:36	JTH	H
1,1-Dichloroethane	1.8		ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
Benzene	1.3		ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:36	JTH	H

Results

Client Sample ID	CWMP008W	Collected	10/17/2024 13:38
Lab Sample ID	3383699004	Lab Receipt	10/17/2024 15:15

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	106%	62 – 133	10/21/2024 20:36	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	10/21/2024 20:36	
Dibromofluoromethane	1868-53-7	103%	78 – 116	10/21/2024 20:36	
Toluene-d8	2037-26-5	101%	76 – 127	10/21/2024 20:36	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	448		mg/L	50	SM2320B-2011	10	11/05/2024 19:07	JXK	B
Alkalinity, Total	448	3	mg/L	50	SM2320B-2011	10	11/05/2024 19:07	JXK	B
Ammonia-N, Low Level	8.01		mg/L	1.00	SM 4500-NH3G	10	10/23/2024 12:08	AYS	A
Chemical Oxygen Demand (COD)	34		mg/L	15	EPA 410.4	1	10/21/2024 13:25	KMS	A
Chloride	62.7		mg/L	5.0	EPA 300.0	5	10/18/2024 15:59	J1W	B
Fluoride	ND	ND	mg/L	0.50	EPA 300.0	5	10/18/2024 15:59	J1W	B
Nitrate-N	ND	ND	mg/L	2.5	EPA 300.0	5	10/18/2024 15:59	J1W	B
pH	7.97	1,2,4	pH_Units		S4500HB-11	10	11/05/2024 19:07	JXK	B
Phenolics	ND	ND,6	mg/L	0.004	SW846 9066	1	10/23/2024 13:06	AKH	G
Specific Conductance	974		umhos/cm	5	SW846 9050A	1	10/22/2024 15:29	LMD	B
Sulfate	7.0		mg/L	5.0	EPA 300.0	5	10/18/2024 15:59	J1W	B
Total Dissolved Solids	572		mg/L	25	SM2540C-15	1	10/22/2024 14:55	RAG	B
Total Organic Carbon (TOC)	15.4		mg/L	5.0	SW846 9060A	10	10/23/2024 04:19	PAG	E
Turbidity	11		NTU	0.30	SM2130B-2011	1	10/18/2024 07:53	GMM	B

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3383699001	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	
3383699002	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	
3383699003	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	
3383699004	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	

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3383699001	CWMP016W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1317829	10/18/2024 07:12	ANN	SW846 6010C	1320524
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1318033
		N/A	N/A	N/A		EPA 410.4	1319787
		N/A	N/A	N/A		S4500HB-11	1327383
		N/A	N/A	N/A		SM 4500-NH3G	1318338
		N/A	N/A	N/A		SM2130B-2011	1318037
		N/A	N/A	N/A		SM2320B-2011	1327383
		N/A	N/A	N/A		SM2540C-15	1319985
		N/A	N/A	N/A		SW846 9050A	1320106
		N/A	N/A	N/A		SW846 9060A	1320129
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175
3383699002	CWMP010W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1317829	10/18/2024 07:12	ANN	SW846 6010C	1320524
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1318033
		N/A	N/A	N/A		EPA 300.0	1320432
		N/A	N/A	N/A		EPA 410.4	1319787
		N/A	N/A	N/A		S4500HB-11	1327383
		N/A	N/A	N/A		SM 4500-NH3G	1318338
		N/A	N/A	N/A		SM2130B-2011	1318037
		N/A	N/A	N/A		SM2320B-2011	1327383
		N/A	N/A	N/A		SM2540C-15	1319985
		N/A	N/A	N/A		SW846 9050A	1320106
		N/A	N/A	N/A		SW846 9060A	1320129
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175
3383699003	CWMP009W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1317829	10/18/2024 07:12	ANN	SW846 6010C	1320524
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1318033
		N/A	N/A	N/A		EPA 300.0	1320432
		N/A	N/A	N/A		EPA 410.4	1319787
		N/A	N/A	N/A		S4500HB-11	1327383
		N/A	N/A	N/A		SM 4500-NH3G	1320439
		N/A	N/A	N/A		SM2130B-2011	1318037
		N/A	N/A	N/A		SM2320B-2011	1327383
		N/A	N/A	N/A		SM2540C-15	1319985
		N/A	N/A	N/A		SW846 9050A	1320106
		N/A	N/A	N/A		SW846 9060A	1320129
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175
3383699004	CWMP008W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1317829	10/18/2024 07:12	ANN	SW846 6010C	1320524
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1318033
		N/A	N/A	N/A		EPA 410.4	1319787
		N/A	N/A	N/A		S4500HB-11	1327383
		N/A	N/A	N/A		SM 4500-NH3G	1320439
		N/A	N/A	N/A		SM2130B-2011	1318037
		N/A	N/A	N/A		SM2320B-2011	1327383
		N/A	N/A	N/A		SM2540C-15	1319985
		N/A	N/A	N/A		SW846 9050A	1320106
		N/A	N/A	N/A		SW846 9060A	1320129
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175

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.

3383699
Logged By: DXB
PM: SJB

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

Enter Number of Containers Per Sample or Field Results Below.

#	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	
1	CWMP016W	10/17/24	1108		G	GW	2	1	2	1	1	x	x	1	2	
2	CWMP010W	10/17/24	1213		G	GW	2	1	2	1	1	x	x	1	2	
3	CWMP009W	10/17/24	1255		G	GW	2	1	2	1	1	x	x	1	2	
4	CWMP008W	10/17/24	1338		G	GW	2	1	2	1	1	x	x	1	2	
5																
6																
7																
8																
9																
10																

Circle Sample Collector: ALS Tech / Client (ALS Tech circled)
Name: BBWade ID:

Comments:

Date	Time	Relinquished By / Company Name	Received By / Company Name
10-17-24	1515	1 BBWade ALS	2 [signature]
		3	4
		5	6
		7	8
		9	10

(Receiving Lab)
Temp Taken By: Therm ID: WO Temp (°C) 6

Receipt Info completed by: ______ WV Containers 0-6°C Y N NA
Cooler Custody Seals Intact
Sample Custody Seal Intact
Received on Ice
Coolers & Samples Intact
Correct Containers Provided
Sample Label/COC Agree
Adequate Sample Volumes
VOA only: Trip Blank
NJ ≤ 4 days? Y N
Courier/Tracking #

Temp By:	WO Temp (°C)	Therm ID
DB	6	869

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

Sample(s) for Radiation testing?
Reportable SDWA Sample(s)?
SDWA State of Origin? ______
PWSID #__
PWS Contact: ______

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 [ ]

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

EDDS: Format Type

* 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 | www.alsglobal.com
Associated Site: 20 Riverside Drive | Spring City, PA 19475 | Phone: 610-948-4903 |

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 4TH QTR 2024 GWMP FORM 19Q
Workorder 3383857
Report ID 365791 on 11/8/2024

Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Oct 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
3383857001	CWMP012W	Ground Water	10/18/2024 11:42	10/18/2024 15:20	BGS	Analytical Laboratory Service
3383857002	CWMP018S	Ground Water	10/18/2024 12:13	10/18/2024 15:20	BGS	Analytical Laboratory Service
3383857003	CWMP017S	Ground Water	10/18/2024 12:34	10/18/2024 15:20	BGS	Analytical Laboratory Service
3383857004	Field Blank	Water	10/18/2024 14:19	10/18/2024 15:20	BGS	Analytical Laboratory Service
3383857005	Trip Blank	Water	10/18/2024 15:20	10/18/2024 15:20	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	Analyte was analyzed past the 14 day holding time.
2	The sample was originally run within hold time, but required further analysis that exceeded hold time.
3	The Total Alkalinity is titrated to a pH of 4.5 and reported as mg CaCO3/L.
4	The pH analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.

Detected Results Summary

Client Sample ID	CWMP012W	Collected	10/18/2024 11:42
Lab Sample ID	3383857001	Lab Receipt	10/18/2024 15:20

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Depth to Water Level	66.47	Feet		Field	#
Dissolved Oxygen	4.60	mg/L	0.01	Field	#
Oxidation-Reduction Potential	129	mV		Field	#
pH, Field (SM4500B)	5.99	pH_Units		Field	#
Sample Depth	66.47	Feet		Field	#
Specific Conductance, Field	291	umhos/cm	1	Field	#
Temperature	14.36	Deg. C		Field	#
METALS					
Calcium, Total	31.0	mg/L	0.11	SW846 6010C	#
Iron, Total	7.1	mg/L	0.067	SW846 6010C	#
Magnesium, Total	8.8	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.55	mg/L	0.0056	SW846 6010C	#
Potassium, Total	1.3	mg/L	0.56	SW846 6010C	#
Sodium, Total	13.6	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	73	mg/L	5	SM2320B-2011	#
Alkalinity, Total	73	mg/L	5	SM2320B-2011	#
pH	7.93	pH_Units		S4500HB-11	#
Phenolics	0.004	mg/L	0.004	SW846 9066	#
Specific Conductance	301	umhos/cm	5	SW846 9050A	#
Total Dissolved Solids	202	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	0.85	mg/L	0.50	SW846 9060A	#
Turbidity	150	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP018S	Collected	10/18/2024 12:13
Lab Sample ID	3383857002	Lab Receipt	10/18/2024 15:20

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	10.68	mg/L	0.01	Field	#
Oxidation-Reduction Potential	139	mV		Field	#
pH, Field (SM4500B)	8.38	pH_Units		Field	#
Specific Conductance, Field	3013	umhos/cm	1	Field	#
Temperature	11.40	Deg. C		Field	#
METALS					
Calcium, Total	90.6	mg/L	0.11	SW846 6010C	#
Iron, Total	0.096	mg/L	0.067	SW846 6010C	#
Magnesium, Total	117	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.0069	mg/L	0.0056	SW846 6010C	#
Potassium, Total	20.6	mg/L	0.56	SW846 6010C	#
Sodium, Total	379	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	546	mg/L	50	SM2320B-2011	#
Alkalinity, Total	581	mg/L	50	SM2320B-2011	#
Chemical Oxygen Demand (COD)	20	mg/L	15	EPA 410.4	#
Chloride	1070	mg/L	50.0	EPA 300.0	#
Nitrate-N	47.3	mg/L	25.0	EPA 300.0	#
pH	8.72	pH_Units		S4500HB-11	#
Specific Conductance	2260	umhos/cm	50	SW846 9050A	#
Total Dissolved Solids	1730	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	6.3	mg/L	1.0	SW846 9060A	#
Turbidity	1.6	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	CWMP017S	Collected	10/18/2024 12:34
Lab Sample ID	3383857003	Lab Receipt	10/18/2024 15:20

Compound	Result	Units	RDL	Method	Flag
FIELD PARAMETERS					
Dissolved Oxygen	8.46	mg/L	0.01	Field	#
Oxidation-Reduction Potential	144	mV		Field	#
pH, Field (SM4500B)	7.80	pH_Units		Field	#
Specific Conductance, Field	4417	umhos/cm	1	Field	#
Temperature	21.26	Deg. C		Field	#
Turbidity, Field	4	NTU	1	Field	#
METALS					
Calcium, Total	124	mg/L	0.11	SW846 6010C	#
Iron, Total	1.4	mg/L	0.067	SW846 6010C	#
Magnesium, Total	183	mg/L	0.11	SW846 6010C	#
Manganese, Total	0.16	mg/L	0.0056	SW846 6010C	#
Potassium, Total	28.5	mg/L	0.56	SW846 6010C	#
Sodium, Total	553	mg/L	0.56	SW846 6010C	#
WET CHEMISTRY					
Alkalinity, Bicarbonate	858	mg/L	50	SM2320B-2011	#
Alkalinity, Total	937	mg/L	50	SM2320B-2011	#
Chemical Oxygen Demand (COD)	19	mg/L	15	EPA 410.4	#
Chloride	1520	mg/L	50.0	EPA 300.0	#
Nitrate-N	74.6	mg/L	25.0	EPA 300.0	#
pH	8.56	pH_Units		S4500HB-11	#
Specific Conductance	3790	umhos/cm	50	SW846 9050A	#
Total Dissolved Solids	2590	mg/L	25	SM2540C-15	#
Total Organic Carbon (TOC)	5.6	mg/L	0.50	SW846 9060A	#
Turbidity	3.3	NTU	0.30	SM2130B-2011	#

Detected Results Summary

Client Sample ID	Field Blank	Collected	10/18/2024 14:19
Lab Sample ID	3383857004	Lab Receipt	10/18/2024 15:20

Compound	Result	Units	RDL	Method	Flag
WET CHEMISTRY					
pH	7.28	pH_Units		S4500HB-11	#

Results

Client Sample ID	CWMP012W	Collected	10/18/2024 11:42
Lab Sample ID	3383857001	Lab Receipt	10/18/2024 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Depth to Water Level	66.47		Feet		Field	1	10/18/2024 11:42	BGS	D
Dissolved Oxygen	4.60		mg/L	0.01	Field	1	10/18/2024 11:42	BGS	D
Oxidation-Reduction Potential	129		mV		Field	1	10/18/2024 11:42	BGS	D
pH, Field (SM4500B)	5.99		pH_Units		Field	1	10/18/2024 11:42	BGS	D
Sample Depth	66.47		Feet		Field	1	10/18/2024 11:42	BGS	D
Specific Conductance, Field	291		umhos/cm	1	Field	1	10/18/2024 11:42	BGS	D
Temperature	14.36		Deg. C		Field	1	10/18/2024 11:42	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/18/2024 11:42	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	31.0		mg/L	0.11	SW846 6010C	1	10/25/2024 10:22	MSY	J1
Iron, Total	7.1		mg/L	0.067	SW846 6010C	1	10/25/2024 10:22	MSY	J1
Magnesium, Total	8.8		mg/L	0.11	SW846 6010C	1	10/25/2024 10:22	MSY	J1
Manganese, Total	0.55		mg/L	0.0056	SW846 6010C	1	10/25/2024 10:22	MSY	J1
Potassium, Total	1.3		mg/L	0.56	SW846 6010C	1	10/25/2024 10:22	MSY	J1
Sodium, Total	13.6		mg/L	0.56	SW846 6010C	1	10/25/2024 10:22	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	10/21/2024 18:36	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 18:36	JTH	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	10/21/2024 18:36	
4-Bromofluorobenzene	460-00-4	102%	79 – 114	10/21/2024 18:36	
Dibromofluoromethane	1868-53-7	98.9%	78 – 116	10/21/2024 18:36	
Toluene-d8	2037-26-5	99%	76 – 127	10/21/2024 18:36	

Results

Client Sample ID	CWMP012W	Collected	10/18/2024 11:42
Lab Sample ID	3383857001	Lab Receipt	10/18/2024 15:20

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	73	1,2	mg/L	5	SM2320B-2011	1	10/24/2024 14:01	JXK	B
Alkalinity, Total	73	1,2,3	mg/L	5	SM2320B-2011	1	10/24/2024 14:01	JXK	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/23/2024 13:26	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/23/2024 11:50	KMS	A
Chloride	ND	ND	mg/L	50.0	EPA 300.0	50	10/19/2024 09:10	GMM	B
Fluoride	ND	ND	mg/L	5.0	EPA 300.0	50	10/19/2024 09:10	GMM	B
Nitrate-N	ND	ND	mg/L	25.0	EPA 300.0	50	10/19/2024 09:10	GMM	B
pH	7.93	4	pH_Units		S4500HB-11	1	10/24/2024 14:01	JXK	B
Phenolics	0.004		mg/L	0.004	SW846 9066	1	10/23/2024 14:23	AKH	G
Specific Conductance	301		umhos/cm	5	SW846 9050A	1	10/22/2024 15:29	LMD	B
Sulfate	ND	ND	mg/L	50.0	EPA 300.0	50	10/19/2024 09:10	GMM	B
Total Dissolved Solids	202		mg/L	25	SM2540C-15	1	10/22/2024 14:55	RAG	B
Total Organic Carbon (TOC)	0.85		mg/L	0.50	SW846 9060A	1	10/23/2024 04:19	PAG	E
Turbidity	150		NTU	0.30	SM2130B-2011	1	10/19/2024 07:40	NPF	B

Results

Client Sample ID	CWMP018S	Collected	10/18/2024 12:13
Lab Sample ID	3383857002	Lab Receipt	10/18/2024 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	10.68		mg/L	0.01	Field	1	10/18/2024 12:13	BGS	D
Oxidation-Reduction Potential	139		mV		Field	1	10/18/2024 12:13	BGS	D
pH, Field (SM4500B)	8.38		pH_Units		Field	1	10/18/2024 12:13	BGS	D
Specific Conductance, Field	3013		umhos/cm	1	Field	1	10/18/2024 12:13	BGS	D
Temperature	11.40		Deg. C		Field	1	10/18/2024 12:13	BGS	D
Turbidity, Field	ND	ND	NTU	1	Field	1	10/18/2024 12:13	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	90.6		mg/L	0.11	SW846 6010C	1	10/25/2024 10:23	MSY	J1
Iron, Total	0.096		mg/L	0.067	SW846 6010C	1	10/25/2024 10:23	MSY	J1
Magnesium, Total	117		mg/L	0.11	SW846 6010C	1	10/25/2024 10:23	MSY	J1
Manganese, Total	0.0069		mg/L	0.0056	SW846 6010C	1	10/25/2024 10:23	MSY	J1
Potassium, Total	20.6		mg/L	0.56	SW846 6010C	1	10/25/2024 10:23	MSY	J1
Sodium, Total	379		mg/L	0.56	SW846 6010C	1	10/25/2024 10:23	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	10/21/2024 19:56	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 19:56	JTH	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	103%	62 – 133	10/21/2024 19:56	
4-Bromofluorobenzene	460-00-4	96.4%	79 – 114	10/21/2024 19:56	
Dibromofluoromethane	1868-53-7	97.2%	78 – 116	10/21/2024 19:56	
Toluene-d8	2037-26-5	99.3%	76 – 127	10/21/2024 19:56	

WET CHEMISTRY

Results

Client Sample ID	CWMP018S	Collected	10/18/2024 12:13
Lab Sample ID	3383857002	Lab Receipt	10/18/2024 15:20

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	546		mg/L	50	SM2320B-2011	10	11/05/2024 16:38	JXK	B
Alkalinity, Total	581	3	mg/L	50	SM2320B-2011	10	11/05/2024 16:38	JXK	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/23/2024 16:14	AYS	A
Chemical Oxygen Demand (COD)	20		mg/L	15	EPA 410.4	1	10/23/2024 11:50	KMS	A
Chloride	1070		mg/L	50.0	EPA 300.0	50	10/19/2024 09:21	GMM	B
Fluoride	ND	ND	mg/L	5.0	EPA 300.0	50	10/19/2024 09:21	GMM	B
Nitrate-N	47.3		mg/L	25.0	EPA 300.0	50	10/19/2024 09:21	GMM	B
pH	8.72	4	pH_Units		S4500HB-11	1	10/24/2024 14:19	JXK	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/23/2024 14:16	AKH	G
Specific Conductance	2260		umhos/cm	50	SW846 9050A	10	10/22/2024 15:29	LMD	B
Sulfate	ND	ND	mg/L	50.0	EPA 300.0	50	10/19/2024 09:21	GMM	B
Total Dissolved Solids	1730		mg/L	25	SM2540C-15	1	10/22/2024 14:55	RAG	B
Total Organic Carbon (TOC)	6.3		mg/L	1.0	SW846 9060A	2	10/23/2024 04:19	PAG	E
Turbidity	1.6		NTU	0.30	SM2130B-2011	1	10/19/2024 07:40	NPF	B

Results

Client Sample ID	CWMP017S	Collected	10/18/2024 12:34
Lab Sample ID	3383857003	Lab Receipt	10/18/2024 15:20

FIELD PARAMETERS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dissolved Oxygen	8.46		mg/L	0.01	Field	1	10/18/2024 12:34	BGS	D
Oxidation-Reduction Potential	144		mV		Field	1	10/18/2024 12:34	BGS	D
pH, Field (SM4500B)	7.80		pH_Units		Field	1	10/18/2024 12:34	BGS	D
Specific Conductance, Field	4417		umhos/cm	1	Field	1	10/18/2024 12:34	BGS	D
Temperature	21.26		Deg. C		Field	1	10/18/2024 12:34	BGS	D
Turbidity, Field	4		NTU	1	Field	1	10/18/2024 12:34	BGS	D

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	124		mg/L	0.11	SW846 6010C	1	10/25/2024 10:24	MSY	J1
Iron, Total	1.4		mg/L	0.067	SW846 6010C	1	10/25/2024 10:24	MSY	J1
Magnesium, Total	183		mg/L	0.11	SW846 6010C	1	10/25/2024 10:24	MSY	J1
Manganese, Total	0.16		mg/L	0.0056	SW846 6010C	1	10/25/2024 10:24	MSY	J1
Potassium, Total	28.5		mg/L	0.56	SW846 6010C	1	10/25/2024 10:24	MSY	J1
Sodium, Total	553		mg/L	0.56	SW846 6010C	1	10/25/2024 10:24	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	10/21/2024 20:16	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/21/2024 20:16	JTH	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	99.9%	62 – 133	10/21/2024 20:16	
4-Bromofluorobenzene	460-00-4	103%	79 – 114	10/21/2024 20:16	
Dibromofluoromethane	1868-53-7	95.1%	78 – 116	10/21/2024 20:16	
Toluene-d8	2037-26-5	97.6%	76 – 127	10/21/2024 20:16	

WET CHEMISTRY

Results

Client Sample ID	CWMP017S	Collected	10/18/2024 12:34
Lab Sample ID	3383857003	Lab Receipt	10/18/2024 15:20

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	858		mg/L	50	SM2320B-2011	10	11/05/2024 16:49	JXK	B
Alkalinity, Total	937	3	mg/L	50	SM2320B-2011	10	11/05/2024 16:49	JXK	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/23/2024 15:47	AYS	A
Chemical Oxygen Demand (COD)	19		mg/L	15	EPA 410.4	1	10/23/2024 11:50	KMS	A
Chloride	1520		mg/L	50.0	EPA 300.0	50	10/19/2024 09:32	GMM	B
Fluoride	ND	ND	mg/L	5.0	EPA 300.0	50	10/19/2024 09:32	GMM	B
Nitrate-N	74.6		mg/L	25.0	EPA 300.0	50	10/19/2024 09:32	GMM	B
pH	8.56	4	pH_Units		S4500HB-11	1	10/24/2024 14:52	JXK	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/23/2024 13:52	AKH	G
Specific Conductance	3790		umhos/cm	50	SW846 9050A	10	10/22/2024 15:29	LMD	B
Sulfate	ND	ND	mg/L	50.0	EPA 300.0	50	10/19/2024 09:32	GMM	B
Total Dissolved Solids	2590		mg/L	25	SM2540C-15	1	10/22/2024 14:55	RAG	B
Total Organic Carbon (TOC)	5.6		mg/L	0.50	SW846 9060A	1	10/23/2024 04:19	PAG	E
Turbidity	3.3		NTU	0.30	SM2130B-2011	1	10/19/2024 07:40	NPF	B

Results

Client Sample ID	Field Blank	Collected	10/18/2024 14:19
Lab Sample ID	3383857004	Lab Receipt	10/18/2024 15:20

METALS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Calcium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	10/25/2024 10:25	MSY	J1
Iron, Total	ND	ND	mg/L	0.067	SW846 6010C	1	10/25/2024 10:25	MSY	J1
Magnesium, Total	ND	ND	mg/L	0.11	SW846 6010C	1	10/25/2024 10:25	MSY	J1
Manganese, Total	ND	ND	mg/L	0.0056	SW846 6010C	1	10/25/2024 10:25	MSY	J1
Potassium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	10/25/2024 10:25	MSY	J1
Sodium, Total	ND	ND	mg/L	0.56	SW846 6010C	1	10/25/2024 10:25	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	10/23/2024 13:26	JTH	H
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:26	JTH	H

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	108%	62 – 133	10/23/2024 13:26	
4-Bromofluorobenzene	460-00-4	91.7%	79 – 114	10/23/2024 13:26	
Dibromofluoromethane	1868-53-7	97.8%	78 – 116	10/23/2024 13:26	
Toluene-d8	2037-26-5	97%	76 – 127	10/23/2024 13:26	

WET CHEMISTRY

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
Alkalinity, Bicarbonate	ND	ND,1,2	mg/L	5	SM2320B-2011	1	10/24/2024 15:02	JXK	B
Alkalinity, Total	ND	ND,1,2,3	mg/L	5	SM2320B-2011	1	10/24/2024 15:02	JXK	B
Ammonia-N, Low Level	ND	ND	mg/L	0.10	SM 4500-NH3G	1	10/23/2024 15:44	AYS	A
Chemical Oxygen Demand (COD)	ND	ND	mg/L	15	EPA 410.4	1	10/23/2024 11:50	KMS	A
Chloride	ND	ND	mg/L	2.0	EPA 300.0	2	10/19/2024 09:44	GMM	B
Fluoride	ND	ND	mg/L	0.20	EPA 300.0	2	10/19/2024 09:44	GMM	B
Nitrate-N	ND	ND	mg/L	1.0	EPA 300.0	2	10/19/2024 09:44	GMM	B
pH	7.28	4	pH_Units		S4500HB-11	1	10/24/2024 15:02	JXK	B
Phenolics	ND	ND	mg/L	0.004	SW846 9066	1	10/23/2024 14:39	AKH	G

Results

Client Sample ID	Field Blank	Collected	10/18/2024 14:19
Lab Sample ID	3383857004	Lab Receipt	10/18/2024 15:20

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	10/22/2024 15:29	LMD	B
Sulfate	ND	ND	mg/L	2.0	EPA 300.0	2	10/19/2024 09:44	GMM	B
Total Dissolved Solids	ND	ND,2	mg/L	25	SM2540C-15	1	10/28/2024 16:45	RAG	B
Total Organic Carbon (TOC)	ND	ND	mg/L	0.50	SW846 9060A	1	10/23/2024 04:19	PAG	E
Turbidity	ND	ND	NTU	0.30	SM2130B-2011	1	10/19/2024 07:40	NPF	B

Results

Client Sample ID	Trip Blank	Collected	10/18/2024 15:20
Lab Sample ID	3383857005	Lab Receipt	10/18/2024 15:20

VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
Benzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
Ethylbenzene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
Methylene Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
Tetrachloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
Toluene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
Total Xylenes	ND	ND	ug/L	3.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
Trichloroethene	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A
Vinyl Chloride	ND	ND	ug/L	1.0	SW846 8260B	1	10/23/2024 13:46	JTH	A

SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	107%	62 – 133	10/23/2024 13:46	
4-Bromofluorobenzene	460-00-4	97.4%	79 – 114	10/23/2024 13:46	
Dibromofluoromethane	1868-53-7	97.4%	78 – 116	10/23/2024 13:46	
Toluene-d8	2037-26-5	99.2%	76 – 127	10/23/2024 13:46	

Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3383857001	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	
3383857002	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	
3383857003	CWMP017S	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	
3383857004	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	
3383857005	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
3383857001	CWMP012W	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1320335	10/23/2024 05:32	ANN	SW846 6010C	1321612
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1318930
		N/A	N/A	N/A		EPA 410.4	1320459
		N/A	N/A	N/A		S4500HB-11	1320092
		N/A	N/A	N/A		SM 4500-NH3G	1320439
		N/A	N/A	N/A		SM2130B-2011	1318926
		N/A	N/A	N/A		SM2320B-2011	1320092
		N/A	N/A	N/A		SM2540C-15	1319986
		N/A	N/A	N/A		SW846 9050A	1320106
		N/A	N/A	N/A		SW846 9060A	1320129
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175
3383857002	CWMP018S	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1320335	10/23/2024 05:32	ANN	SW846 6010C	1321612
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1318930
		N/A	N/A	N/A		EPA 410.4	1320459
		N/A	N/A	N/A		S4500HB-11	1320092
		N/A	N/A	N/A		SM 4500-NH3G	1320439
		N/A	N/A	N/A		SM2130B-2011	1318926
		N/A	N/A	N/A		SM2320B-2011	1327383
		N/A	N/A	N/A		SM2540C-15	1319986
		N/A	N/A	N/A		SW846 9050A	1320106
		N/A	N/A	N/A		SW846 9060A	1320129
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175
3383857003	CWMP017S	N/A	N/A	N/A		Field	1321718
		SW846 3015A	1320335	10/23/2024 05:32	ANN	SW846 6010C	1321612
		N/A	N/A	N/A		SW846 8260B	1319842
		N/A	N/A	N/A		EPA 300.0	1318930
		N/A	N/A	N/A		EPA 410.4	1320459
		N/A	N/A	N/A		S4500HB-11	1320092
		N/A	N/A	N/A		SM 4500-NH3G	1320439
		N/A	N/A	N/A		SM2130B-2011	1318926
		N/A	N/A	N/A		SM2320B-2011	1327383
		N/A	N/A	N/A		SM2540C-15	1319986
		N/A	N/A	N/A		SW846 9050A	1320106
		N/A	N/A	N/A		SW846 9060A	1320129
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175
3383857004	Field Blank	SW846 3015A	1320335	10/23/2024 05:32	ANN	SW846 6010C	1321612
		N/A	N/A	N/A		SW846 8260B	1320533
		N/A	N/A	N/A		EPA 300.0	1318930
		N/A	N/A	N/A		EPA 410.4	1320459
		N/A	N/A	N/A		S4500HB-11	1320092
		N/A	N/A	N/A		SM 4500-NH3G	1320439
		N/A	N/A	N/A		SM2130B-2011	1318926
		N/A	N/A	N/A		SM2320B-2011	1320092
		N/A	N/A	N/A		SM2540C-15	1322259
		N/A	N/A	N/A		SW846 9050A	1320106
		N/A	N/A	N/A		SW846 9060A	1320129
		SW846 9066	1319850	10/22/2024 09:58	AKH	SW846 9066	1321175
3383857005	Trip Blank	N/A	N/A	N/A		SW846 8260B	1320533

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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.

3383857
Logged By: D1G
PM: SJB

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	CWMP012W	10/18/24	1142		G	GW	2	1	2	1	1	x	x	1	2	
2	CWMP018S	10/18/24	1213		G	GW	2	1	2	1	1	x	x	1	2	
3	CWMP017S	10/18/24	1234		G	GW	2	1	2	1	1	x	x	1	2	
4	Field Blank	10/18/24	1419		G	DI	2	1	2	1	1			1	2	
5	Trip Blank	10/18/24	1520		G	DI			2							
6																
7																
8																
9																
10																

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

Temp By:	WO Temp (°C)	Therm ID
MZP	3	571

Receipt Info Completed By:	MZP
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

Deviations? NO YES
If YES, list below
Client contact:
Date/Tech:

Rad Screen (uCi)_____
Source? Y N
Source Contact:

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: KB Shade **ID:**

Comments:

Date:	Time		Relinquished By / Company Name		Received By / Company Name
10-18-24	1520	1	KB Shade ALS	2	
		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