

APPENDIX D

Results of Field and Laboratory QA/QC Review

Spring 2022

Compliance Groundwater

QA/QC Results

SCS Engineers QA/QC Review
Groundwater - Spring 2022 Compliance Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161414-1

Samples: MW-12A, MW-12B, MW-15A, MW-15B, MW-16A, DUP1 (MW-16A), MW-16B, MW-21A and TB1.

Sample Date: 04/19-21/2022

Laboratory Sample Received Date: 04/22/2022 and 04/25/2022

Sample Temperatures on arrival at lab: 0.4, 2.1, 3.2, 4.4, and 7.5°C

Laboratory Data Received Date: 05/12/2022

QA/QC Review Date: 06/01/2022 (IH)

Cation/Anion Balance: MW-12A = -2.6%, MW-12B = 2.4%, MW-15A = -20%, MW-15B = -0.47%, MW-16A = 6.3%, DUP1 (MW-16A) = 9.6%, MW-16B = -1.6%, MW-21A = -1.8%,

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits except for 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene in batch 573474 (*- flags). These are noted and qualified for in the case narrative.
LCSD	All RPDs are within control limits.
MS/MSD	MS/MSD were not performed for Method 8260B due to insufficient sample volume. Method precision and accuracy have been verified by acceptable LCS/LCSD data. This is noted and qualified in the case narrative. The MS/MSD for Method 8260B performed on a sample from another client exhibited spike recoveries and RPDs outside of control limits for multiple compounds in batch 573474 (F1 and F2 flags). These are noted and qualified for in the case narrative.
TICs	TICs were not identified in any samples.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
MS/MSD	MS/MSD were not performed for Method 8011 due to insufficient sample volume. Method precision and accuracy have been verified by acceptable LCS/LCSD data. This is noted and qualified in the case narrative.

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All spike recoveries are within control limit..
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical holding times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Trip Blanks

Laboratory supplies trip blanks (TB1) were carried into the field 04/19-21/2022 with all samples and returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Duplicates

A field duplicate (DUP1) was collected on 04/19/2022 at MW-16A. All RPDs were within 20% except for dissolved iron (32%). It should be noted that the concentrations of dissolved iron in the DUP1 and MW-16A sample were less than five times the reporting limit and, therefore, not controlled by RPDs.

Data Quality Reviews (DQRs)

A DQR was initiated on 05/23/2022 to check the cation/anion balances for MW-15A, MW-16A, and DUP1. On 6/9/2022, the recalculated cation/anion balance for MW-15A was -3.9%. The cation/anion balance for the DUP1 and MW-16A samples were confirmed at 9.6% and 6.3%, respectively.

Notes

None.

Data Validation

Upon final review of lab report #280-161414-1 for Riverbend Landfill, SCS Engineers finds the data to be /valid for its intended use (06/09/2022; IH).

SCS Engineers QA/QC Review
Groundwater - Spring 2022 Compliance Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161449-1

Samples: MW-14A, MW-14B, and TB3

Sample Date: 04/22/2022

Laboratory Sample Received Date: 04/23/2022

Sample Temperatures on arrival at lab: 1.1 and 2.7°C

Laboratory Data Received Date: 05/12/2022

QA/QC Review Date: 06/02/2022 (BR)

Cation/Anion Balance: MW-14A = -3.1%, MW-14B = -2.1%

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
MS/MSD	MS/MSD were not performed for Method 8260B due to insufficient sample volume. Method precision and accuracy have been verified by acceptable LCS/LCSD data. This is noted and qualified in the case narrative. The MS/MSD for Method 8260B performed on a sample from another client exhibited spike recoveries and RPDs outside of control limits for multiple compounds in batch 573935 (F1 F2 flags). This is noted and qualified for in the case narrative.
TICs	TICS were not identified in any samples except for MW-14A.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
MS/MSD	MS/MSD were not performed for Method 8011 due to insufficient sample volume. Method precision and accuracy have been verified by acceptable LCS/LCSD data. This is noted and qualified in the case narrative.

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All spike recoveries are within control limits except for nitrate/nitrite in batch 534257 (F1 flag). This is noted and qualified in the case narrative.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical holding times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC**Trip Blanks**

Laboratory supplies trip blanks (TB3) were carried into the field 04/22/2022 with all samples and returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of lab report #280-161449-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/02/2022; BR).

SCS Engineers QA/QC Review
Groundwater – Spring 2022 Compliance Wells
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-162989-1

Samples: FB5 (MW-21B), MW-21B, and DUP5 (MW-21B)

Sample Date: 06/01/2022

Laboratory Sample Received Date: 06/02/2022

Sample Temperatures on arrival at lab: 4.4°C

Laboratory Data Received Date: 06/22/2022

QA/QC Review Date: 06/23/2022 (BR)

Cation/Anion Balance: FB5 (MW-21B) = NC, MW-21B = 1.9%, and DUP5 (MW-21B) = 8.8%

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits except bromomethane in batch 577411 (*+ flag). This is noted and qualified for in the case narrative.
LCSD	All RPDs are within control limits except chloroethane, chloromethane, and vinyl chloride in batch 577411 (*1 flags). This is noted and qualified for in the case narrative.
MS/MSD	MS/MSD were not performed for Method 8260B due to insufficient sample volume. All other MS and MSD results were within established control limits.
TICs	TICS were not identified in any samples.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All spike recoveries are within control limits.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical holding times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Trip Blanks

Laboratory supplies trip blanks (TB1) were carried into the field 06/01/2022 with all samples and returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Blanks

A field blank (FB5) was collected on 06/01/2022 near MW-21B. All analytes were reported as non-detect.

Field Duplicates

A field duplicate (DUP5) was collected on 06/01/2022 at MW-21B. All RPDs were within 20%.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of lab report #280-162989-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/23/2022; BR).

Spring 2022
Detection Groundwater
QA/QC Results

**SCS Engineers QA/QC Review
Groundwater - Spring 2022 Detection Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161417-1**

Samples: P-05A, P-06A, P-07A, and FB1

Sample Date: 04/19-20/2022

Laboratory Sample Received Date: 04/22/2022

Sample Temperatures on arrival at lab: 0.4, 2.1, 3.2, and 4.4°C

Laboratory Data Received Date: 05/12/2022

QA/QC Review Date: 06/01/2022 (IH)

Cation/Anion Balance: not applicable.

Dissolved Metals

Method Blanks	All analytes are non-detect except for dissolved iron and dissolved manganese in batch 573344 (B Flags). These are noted and qualified the case narrative.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All spike recoveries are within control limits for ammonia in batch 574030 (F1 flag). This is noted and qualified for in the case narrative.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Field Blank

A field blank was collected on 4/19/22 near P-07A. All analytes were reported as non-detect.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of lab report #280-161417-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/01/2022; IH).

SCS Engineers QA/QC Review
Groundwater - Spring 2022 Detection Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161448-1

Samples: MW-19A, FB4, DUP4, and TB3.

Sample Date: 04/22/2022

Laboratory Sample Received Date: 04/23/2022

Sample Temperatures on arrival at lab: 1.1°C and 2.7°C.

Laboratory Data Received Date: 05/12/2022

QA/QC Review Date: 06/02/2022 (BR)

Cation/Anion Balance: MW-19A = -3.9%, FB4 = NC, DUP4 = -1.9%.

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits. All surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
MS/MSD	Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) for Method 8260; however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.
TICs	TICs were not identified in any of the samples.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limit. All surrogate recoveries are within control limits
LCSD	All RPDs are within control limits.
MS/MSD	Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) for Method 8011; however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.

Dissolved Metals

Method Blanks	All analytes are non-detect except for dissolved iron (B Flags). These are noted and qualified in the case narrative.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/OC**Trip Blanks**

Laboratory supplied trip blanks (TB3) were carried into the field on 04/22/2022 with all samples are returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Duplicate

A field duplicate (DUP4) was collected at MW-19A on 4/22/2022. All calculated RPDs were within 20% except TOC (75%), dissolved potassium (24%), and ammonia (26%). It should be noted that the concentrations of TOC, dissolved potassium, and ammonia in the DUP4 and MW-19A samples were less than 5 times the reporting limit therefore are not controlled by RPDs.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of lab report #280-161448-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/02/2022; BR).

SCS Engineers QA/QC Review
Groundwater - Spring 2022 Detection Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161462-1

Samples: MW-20A, MW-20B, and TB1.

Sample Date: 04/19/2022

Laboratory Sample Received Date: 04/25/2022

Sample Temperatures on arrival at lab: 3.2 and 7.5°C

Laboratory Data Received Date: 05/13/2022

QA/QC Review Date: 06/02/2022 (BR)

Cation/Anion Balance: MW-20A=-1.1% and MW-20B = -1.3%

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits. All surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries and surrogates are within control limits.
MSD	All RPDs are within control limits.
TICs	TICs were not identified in any of the samples.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limit. All surrogate recoveries are within control limits
LCSD	All RPDs are within control limits.
MS/MSD	All MS/MSD limits and RPDs are within control limits.

Dissolved Metals

Method Blanks	All analytes are non-detect except for dissolved iron (B flags). These are noted and qualified in the case narrative.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) for Method 8260B, however, an LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC**Trip Blanks**

Laboratory supplied trip blanks (TB1) were carried into the field on 04/19/2022 with all samples are returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Data Quality Reviews (DQRs)

None.

Notes

The Continuing Calibration Blank (CCB) was outside control limits for Bicarbonate Alkalinity during Method 2320B analysis. Because the associated samples exhibited detections of Total Alkalinity and Bicarbonate Alkalinity greater than ten times the CCB result, corrective action was deemed unnecessary.

Data Validation

Upon final review of lab report #280-161462-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/02/2022; BR).

SCS Engineers QA/QC Review
Groundwater - Spring 2022 Detection Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161465-1

Samples: MW-5A, MW-5B, DUP2, and TB1

Sample Date: 04/19-20/2022

Laboratory Sample Received Date: 04/25/2022

Sample Temperatures on arrival at lab: 3.2°C

Laboratory Data Received Date: 05/10/2022

QA/QC Review Date: 06/02/2022 (BR)

Cation/Anion Balance: not applicable.

VOCs (Method 8260B)

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits except 1,2,3-Trichlorobenzene in batch 573456 (flag), and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries and surrogates are within control limits.
MSD	All RPDs are within control limits.
TICs	A TIC was identified in TB1.

Method 8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
MS/MSD	Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) for Method 8011; however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy. This is noted and qualified in the case narrative.

Hold Times

The holding times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Trip Blanks

Laboratory-supplied trip blanks (TB1) were carried into the field 04/19/2022 with all samples and returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Duplicate

A field duplicate (DUP2) was collected at MW-5A on 4/20/2022. All calculated RPDs were within 20% except 1,4-Dichlorobenzene (154%) and chlorobenzene (143%). It should be noted that the concentrations of 1,4-Dichlorobenzene and chlorobenzene in the DUP2 samples were more than 5 times the reporting limit therefore are controlled by RPDs.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of lab report #280-161465-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/02/2022; BR).

SCS Engineers QA/QC Review
Groundwater - Spring 2022 Detection Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161418-1

Samples: TB1, MW-22A, DUP3 (MW-22A), and FB3 (MW-22A).

Sample Date: 04/21/2022

Laboratory Sample Received Date: 04/22/2022

Sample Temperatures on arrival at lab: 0.4, 2.1 and 3.2°C

Preliminary Laboratory Data Received Date: 05/12/2022

QA/QC Review Date: 06/01/2022 (IH)

Cation/Anion Balance: MW-22A=-1.0%, FB3= NC, DUP3=-2.0%.

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits and all surrogate recoveries are within control limits, except for 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene in batch 573474 (*- flags). These are noted and qualified for in the case narrative.
LCSD	All RPDs are within control limits.
Matrix Spike	All MS recoveries were within control limits except for multiple compounds in batch 573474 (F1 and F2 flags). These are noted and qualified for in the case narrative.
MSD	All RPDs were within control limits except for multiple compounds in batch 573474 (F1 and F2 flags). These are noted and qualified for in the case narrative.
TICs	TICs were identified in all samples.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limit, all surrogate recoveries are within control limits
LCSD	All RPDs are within control limits.
MS/MSD	Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) for Method 8011; however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except for ammonia in batch 574030 (F1 flag). This is noted and qualified for in the case narrative.
MSD	All RPDs are within control limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC**Trip Blanks**

Laboratory supplied trip blanks (TB1) were carried into the field on 04/19/2022 with all samples are returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Duplicate

A field duplicate (DUP3) was collected at MW-22A. All RPDs were within 20% except for ammonia (62%). It should be noted that the reported concentrations of ammonia in the DUP3 and MW-22A sample were less than 5 times the reporting limit and, therefore, not controlled by RPDs.

Field Blank

A field blank (FB3) was collected near MW-22A using laboratory supplied DI water. All analytes were reported as non-detect.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of data presented in lab report #280-161418-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/01/2022; IH).

Spring 2022
Surface Water
QA/QC Results

SCS Engineers QA/QC Review
Surface Water – Spring 2022 South Yamhill River Surface Water Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161382-1

Samples: Trip Blank, SYR SW-1, SYR SW-2, and SYR MW-12A.

Sample Date: 04/21/2022

Laboratory Sample Received Date: 04/22/2022 and 04/25/2022

Sample Temperatures on arrival at lab: 0.9, 1.2, and 4.4°C

Laboratory Data Received Date: 05/12/2022

QA/QC Review Date: 06/01/2022 (IH)

Cation/Anion Balance: SYR SW-1= -3.2%, SYR SW-2 = 1.3%, SYR MW-12A= 6.6%.

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes non-detect.
LCS	All LCS recoveries are within control limits and all surrogate recoveries are within control limits, except for trichlorofluoromethane in batch 573793 (*+ flag). This is noted and qualified for in the case narrative.
LCSD	All RPDs are within control limits except for acetone in batch 573793 (*1 flag). This is noted and qualified for in the case narrative,
MS/MSD	Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) for Method 8260B, however, an LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.
TICS	TICS were identified in all samples.

Total Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except for COD in batch 574418 and nitrate + nitrite as nitrogen in batch 573912 (F1 flags). These are noted and qualified in the case narrative.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical hold times were met except for laboratory pH (HF flags) and orthophosphate (H flags) for sample SYR SW-1. It should be noted that laboratory pH is only performed as a QC check on the field pH.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Trip Blanks

Laboratory supplied trip blanks (Trip Blank) were carried into the field 04/21/2022 with all samples and returned to the lab for Method 8260B analysis. All analytes are non-detect, and all surrogates are within control limits.

Data Quality Reviews (DQRs)

None.

Notes

E. coli and fecal coliform analysis were performed by Alexin Analytical in Tigard, Oregon and the results are included in this lab report.

Data Validation

Upon final review of lab report #280-161382-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/01/2022; IH).

Spring 2022

Leachate Management System Liquids

QA/QC Results

SCS Engineers QA/QC Review
Leachate – Spring 2022 Leachate Management System Sumps Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161446-1

Samples: TB2, FB2, 1/5P, 4/5S, 4/5S, 6/7P, 6/7S, 8P, 8S, 9P, 9S

Sample Date: 04/20/2022, 4/22/2022

Laboratory Sample Received Date: 04/23/2022

Sample Temperatures on Arrival at Lab: 0.5 °C, 0.7 °C, 1.0 °C, 2.7 °C, 3.0 °C

Preliminary Laboratory Data Received Date: 05/13/2022

QA/QC Review Date: 06/02/2022 (BR)

Cation/Anion Balance: FB2 = NC, 1/5P = 9.8%, 4/5S = 1.6%, 6/7P = -2.2%, 6/7S = 1.9%, 8P = 13.0%, 8S = -1.3%, 9P = 4.1%, and 9S = -1.8%.

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits except 1,2,3-Trichloropropane and 1,2-Dibromo-3-Chloropropane from batch 573649 (*- flag). All surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
MS/MSD	Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) for Method 8260B; however, LCS/LCSD pair analysis demonstrated method precision and accuracy. This is noted and qualified in the case narrative.
TICs	TICS were identified in all samples except for 1/5P, TB2, and FB2

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except for sodium from batch 574148 (F1 flag). This is noted and qualified in the case narrative.
MSD	All RPDs are within control limits.

Total Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except for Nitrate/Nitrite in batch 573912 (F1 flag) and COD in batch 574418 (F2 F1 flags). These are noted and qualified in the case narrative.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits except batch 574240 (F3 flag). This is noted in the case narrative.

Hold Times

All analytical hold times were met except for laboratory pH for all samples. It should be noted that laboratory pH is only performed as a QC check on the field pH.

Reporting Limit Exceedances

Several reporting limits were elevated due to dilution performed during analysis because of matrix interference and/or the presence of high concentrations of non-target analytes.

Field QA/QC**Trip Blanks**

Laboratory supplied trip blanks (TB2) were carried into the field 04/20/2022 with all samples and returned to the lab for Method 8260B analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Blank

A field blank was collected on 04/20/2022 near 4/5S using laboratory supplied DI water. All analytes were non-detect.

Data Quality Reviews (DQRs)

None.

Notes

The samples 1/5P, 6/7P, 8P and 9P were analyzed at a dilution for Method 8260B due to a high concentration of target compounds and/or foamy matrix. As a result, the reporting limits were elevated.

The prepreserved hydrochloric acid preserved vials for Method 8260B analysis for the samples 6/7S, 8P, 9S, and 9P exhibited pH values greater than 2. This is non-compliant with Method 8260B which requires samples to be preserved with hydrochloric acid to a pH of less than 2.

Data Validation

Upon final review of lab report #280-161446-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/02/2022; BR).

SCS Engineers QA/QC Review
Leachate – Spring 2022 Leachate Lagoon Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-161447-1

Samples: TB2, LEACH POND, LPOND LDS

Sample Date: 04/20/2022

Laboratory Sample Received Date: 04/23/2022

Sample Temperatures on Arrival at Lab: 0.7°C, 2.7°C

Preliminary Laboratory Data Received Date: 05/13/2022

QA/QC Review Date: 06/02/2022 (BR)

Cation/Anion Balance: LEACH-POND = 8.5%, LPOND LDS = 2.6%

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits except 1,2,3-Trichloropropane and 1,2-Dibromo-3-Chloropropane in batch 573649 (*- flag). This is noted and qualified for in the case narrative.
LCSD	All RPDs were within control limits.
MS/MSD	Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) for Method 8260B; however, an LCS/LCSD pair was analyzed to demonstrate method precision and accuracy.
TICs	TICS were not identified in any samples.

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

Total Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs were within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except for COD in batch 574418 (F1 flag). These are noted and qualified in the case narrative.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical hold times were met except for laboratory pH. It should be noted that laboratory pH is only performed as a QC check on the field pH.

Reporting Limit Exceedances

Several reporting limits were elevated due to dilution performed during analysis because of matrix interference and/or the presence of high concentrations of non-target analytes.

Field QA/OC

Trip Blanks

Laboratory supplied trip blanks were carried into the field 04/20/2022 with all samples and returned to the lab for Method 8260B analyses. All analytes were reported as non-detect.

Data Quality Reviews (DQRs)

None.

Notes

The prepreserved hydrochloric acid preserved vials for Method 8260B analysis for the samples LEACH-POND and LPOND LDS exhibited pH values greater than 2. This is non-compliant with Method 8260B which requires samples to be preserved with hydrochloric acid to a pH of less than 2. Because these samples were leachate samples, a buffering effect was suspected.

The Method 6020 Continuing Calibration Verification (CCV) sample was above the control limits for Total Beryllium. Because the data are considered biased high and Total Beryllium was not detected in the associated samples above the reporting limit, corrective action was deemed unnecessary.

Data Validation

Upon final review of lab report #280-161447-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (06/01/2022; BR).

Fall 2022

Compliance Groundwater

QA/QC Results

SCS Engineers QA/QC Review
Groundwater - Fall 2022 Compliance Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-169301-1

Samples: MW-12A, MW-12B, MW-14B, MW-15B, DUP11152201 (MW-15B), MW-16A, DUP11162201 (MW-16A), MW-16B, FB11152201 (MW-16B), MW-21A, MW-21B, and TRIP BLANK.

Sample Date: 11/15-16/2022

Laboratory Sample Received Date: 11/17/2022

Sample Temperatures on arrival at lab: 0.4, 0.8, and 1.7 °C

Preliminary Laboratory Data Received Date: 12/14/2022

QA/QC Review Date: 12/16/2022 (BR)

Cation/Anion Balance: MW-12A = 0.92%, MW-12B = 1.1%, MW-14B = -0.64, MW-15B = 1.1%, DUP11152201 (MW-15B) = 0.59%, MW-16A = -4.2%, DUP11162201 (MW-16A) = -4.1%, MW-16B = -0.95%, FB11152201 (MW-16B) = NC, MW-21A = -0.58%, MW-21B = -0.53%

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits except chloromethane and dichlorodifluoromethane in batch 594149 (*1 flag). This is noted and qualified for in the case narrative.
TICs	TICS were not identified in any samples.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
MS/MSD	Insufficient volume was available to perform a matrix spike/ matrix spike duplicate. Method precision and accuracy was verified by acceptable LCS/LCSD data. This is noted and qualified for in the case narrative.

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All spike recoveries are within control limits.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC**Trip Blanks**

Laboratory supplies trip blanks were carried into the field 11/15-16/2022 with all samples and returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Blanks

A field blank (FB11152201) was collected on 11/15/2022 near MW-16B. All analytes were reported as non-detect.

Field Duplicates

A field duplicate (DUP11152201) was collected on 11/15/2022 at MW-15B. All RPDs were within 20% except for ammonia (90%).

A field duplicate (DUP11162201) was collected on 11/16/2022 at MW-16A. All RPDs were within 20% except for dissolved iron (38%), dissolved manganese (49%), and nitrogen, nitrate-nitrite (43%). It should be noted that the concentrations of dissolved iron and nitrogen, nitrate-nitrite in samples MW-16A and DUP11162201 were less than five times the reporting limit. Consequently, these results are not controlled by RPDs.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of the data presented in lab report #280-169301-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (12/16/2022; BR).

SCS Engineers QA/QC Review
Groundwater - Fall 2022 Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-171058-1

Samples: MW-14A, DUP105231, MW-15A, FB1052301, and TRIP BLANK.

Sample Date: 1/5/2023

Laboratory Sample Received Date: 1/6/2023

Sample Temperatures on arrival at lab: 4.1 °C

Preliminary Laboratory Data Received Date: 1/27/2023

QA/QC Review Date: 3/3/2023 (BR)

Cation/Anion Balance: MW-14A = 2.0%, DUP105231 = -1.4%, MW-15A = 22%, FB1052301 = NC

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
TICs	Two unknown TICs were identified in every sample.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits, and all surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All spike recoveries are within control limits except nitrate/nitrite in batch 599911 (F1 flag). This is noted and qualified for in the case narrative.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Trip Blanks

Laboratory supplies trip blanks were carried into the field 1/5/2023 with all samples and returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Blanks

A field blank (FB10052301) was collected on 1/5/2023 near MW-15A. All analytes were reported as non-detect.

Field Duplicates

A field duplicate (DUP1005231) was collected on 1/5/2023 at MW-14A. All RPDs were within 20%.

Data Quality Reviews (DQRs)

On March 13, 2022, a request was made of the laboratory to check the Cation/Anion balance on MW-15A (22%). The laboratory responded on 3/14/23 that the balance was correct.

Notes

None.

Data Validation

Upon final review of the data presented in lab report #280-171058-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (03/03/2023; BR).

SCS Engineers QA/QC Review
Groundwater – 4Q2022 MW-12 Resample Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-171441-1

Samples: MW-12A, DUP0113231, FB0113231

Sample Date: 01/13/23

Laboratory Sample Received Date: 01/17/2023

Sample Temperatures on arrival at lab: 1.2°C

Preliminary Laboratory Data Received Date: 02/8/2023

QA/QC Review Date: 02/14/2023 (BR)

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All spike recoveries and RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All spike recoveries and RPDs are within control limits.
Duplicate	All RPDs are within control limits except TDS in batch 599908 (E F3 flag). This is noted and qualified for in the case narrative.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Field Duplicate

A field duplicate (DUP0113231) was collected at MW-12A.

Field Blank

A field blank (FB0113231) was collected near MW-12A using laboratory supplied DI water. All analytes were reported as non-detect.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of data presented in lab report #280-171441-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (02/14/2023; BR).

Fall 2022

Detection Groundwater

QA/QC Results

SCS Engineers QA/QC Review
Groundwater - Fall 2022 Detection Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-169429-1

Samples: TB03, MW-5A, and FB11172201

Sample Date: 11/17/2022

Laboratory Sample Received Date: 11/19/2022

Sample Temperatures on arrival at lab: 0.6°C

Preliminary Laboratory Data Received Date: 12/7/2022

QA/QC Review Date: 12/14/2022 (BR)

Cation/Anion Balance: NA

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits except 1,3-dichloropropane in batch 595025 (*- flag). This is noted and qualified for in the case narrative. All surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits except bromoform, n-butylbenzene, and styrene in batch 595025 (*1 flag). This is noted and qualified for in the case narrative.
TICs	TICs were not identified in any sample.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limit. All surrogate recoveries are within control limits
LCSD	All RPDs are within control limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Trip Blanks

Laboratory supplied trip blanks (TB03) were carried into the field on 11/17/2022 with all samples are returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Blank

A field blank (FB11172201) was collected near MW-5A using laboratory supplied DI water. All analytes were reported as non-detect.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of data presented in lab report #280-169429-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (12/14/2022; BR).

SCS Engineers QA/QC Review
Groundwater - Fall 2022 Detection Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-169431-1

Samples: TRIP BLANK, MW-19A, and DUP11172201

Sample Date: 11/17/2022

Laboratory Sample Received Date: 11/19/2022

Sample Temperatures on arrival at lab: 0.6°C

Preliminary Laboratory Data Received Date: 12/13/2022

QA/QC Review Date: 12/14/2022 (BR)

Cation/Anion Balance: MW-19A=-1.5%, DUP11172201 = -1.5%

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits except 1,3-dichloropropane in batch (*- flag). This is noted and qualified for in the case narrative. All surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits except bromoform, n-butylbenzene, and styrene in batch 595025 (*1 flag) This is noted and qualified for in the case narrative.
TICs	TICs were not identified in sample.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limit. All surrogate recoveries are within control limits
LCSD	All RPDs are within control limits.

Dissolved Metals

Method Blanks	All analytes are non-detect except iron in batch 595413. This is noted and qualified for in the case narrative.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All spike recoveries and RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except chloride in batch 651985 (F1 flag). This is noted and qualified for in the case narrative.
MSD	All spike recoveries and RPDs are within control limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Trip Blanks

Laboratory supplied trip blanks (TB03) were carried into the field on 11/17/2022 with all samples are returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect except 2-butanone. All surrogates are within control limits.

Field Duplicate

A field duplicate (DUP11172201) was collected at MW-19A. All RPDs were within 20% except for ammonia (35%). It should be noted that the concentrations of ammonia in samples MW-19A and DUP4 were less than five times the reporting limit. Consequently, these results are not controlled by RPDs.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

Upon final review of data presented in lab report #280-169431-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (12/14/2022; BR).

SCS Engineers QA/QC Review
Groundwater - Fall 2022 Detection Groundwater Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-169302-1

Samples: TRIP BLANK, MW-20A, and FB11162201

Sample Date: 11/16/2022

Laboratory Sample Received Date: 11/17/2022

Sample Temperatures on arrival at lab: 0.4, 0.8, and 1.7°C

Preliminary Laboratory Data Received Date: 12/9/2022

QA/QC Review Date: 12/14/2022 (BR)

Cation/Anion Balance: MW-20A=-0.7%, FB11162201 = NC

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limits. All surrogate recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except 1,1,2,2-tetrachloroethane in MSD batch 594854 (F1 flag). This is noted and qualified for in the case narrative.
MSD	All RPDs are within control limits.
TICs	Three unknown TICs were identified in TRIP BLANK, MW-20A, and FB11162201.

8011

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect, and all surrogate recoveries within control limits.
LCS	All LCS recoveries are within control limit. All surrogate recoveries are within control limits
LCSD	All RPDs are within control limits.

Dissolved Metals

Method Blanks	All analytes are non-detect except iron in batch 595413. This is noted and qualified for in the case narrative.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except chloride in batch 651985 (F1 Flag). This is noted and qualified for in the case narrative.
MSD	All spike recoveries and RPDs are within control limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

All analytical reporting limits met the environmental monitoring plan required limits.

Field QA/QC

Trip Blanks

Laboratory supplied trip blanks (TRIP BLANK) were carried into the field on 11/16/2022 with all samples are returned to the lab for Method 8260B and 8011 analyses. All analytes are non-detect, and all surrogates are within control limits.

Field Blank

A field blank (FB11162201) was collected near MW-20A using laboratory supplied DI water. All analytes were reported as non-detect.

Data Quality Reviews (DQRs)

None.

Notes

None.

Data Validation

*Upon final review of data presented in lab report #280-169302-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (12/14/2022; **BR**).*

Fall 2022

Leachate Pond and Leachate Pond LDS Liquids

QA/QC Results

SCS Engineers QA/QC Review
Leachate – Fall 2022 Leachate Lagoon Monitoring Event
Riverbend Landfill
Eurofins Environmental Testing-Denver Report #280-169433-1

Samples: TB04, LPOND LDS, and LEACH POND.

Sample Date: 11/17/2022

Laboratory Sample Received Date: 11/19/2022

Sample Temperatures on Arrival at Lab: 0.5°C

Preliminary Laboratory Data Received Date: 12/19/2022

QA/QC Review Date: 12/17/2021 (IH)

Cation/Anion Balance: LPond LDS = -0.52%, Leach-Pond= -1.9%

VOCs

Surrogates	All sample surrogate recoveries are within control limits.
Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits except 1,2-dibromo-3-chloropropane and 1,3-dichloropropane in batch 595025 (*+ flag). This is noted and qualified for in the case narrative.
LCSD	All spike recoveries and RPDs are within control limits except bromoform, n-butylbenzene, and styrene in batch 595025 (*1 flag). This is noted and qualified for in the case narrative.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.
TICS	TICS were identified in all samples except for the trip blank.

Dissolved Metals

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

Total Metals

Method Blanks	All analytes are non-detect except iron in batch 595224 and 595656. This is noted in the case narrative.
LCS	All LCS recoveries are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits.
MSD	All RPDs are within control limits.

General Chemistry

Method Blanks	All analytes are non-detect.
LCS	All LCS recoveries are within control limits.
LCSD	All RPDs are within control limits.
Matrix Spikes	All matrix spike recoveries are within control limits except COD in batch 594928 and Hardness, as CaCO ₃ in batch 595723 (F1 flags). This is noted and qualified for in the case narrative.
MSD	All RPDs are within control limits.
Duplicates	All RPDs are within control limits.

Hold Times

All analytical hold times were met.

Reporting Limit Exceedances

None.

Field QA/OC

Trip Blanks

Laboratory supplied trip blanks (TB04) were carried into the field 11/17/2022 with all samples and returned to the lab for Method 8260B analyses. All analytes were reported as non-detect.

Data Quality Reviews (DQRs)

None.

Notes

In analytical batch 280-595025 for Method 8260, the following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria ($\text{pH} < 2$) with a pH of 3 and 6 for samples 169433-2 and 3, respectively, when verified by the laboratory. The samples were analyzed outside the 7-day holding time specified for unpreserved samples but within the 14-day holding time specified for preserved samples: LPOND LDS (280-169433-2) and LEACH POND (280-169433-3).

Data Validation

Upon final review of the data presented in lab report #280-169433-1 for Riverbend Landfill, SCS Engineers finds the data to be valid for its intended use (12/20/2022; BR).