Remedial Investigation Report
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, North Carolina
Task Order 2900 RI-12
S&ME Project No. 23050459

PREPARED FOR:

North Carolina Department of Environmental Quality
Division of Waste Management – Special Remediation Branch
Pre-Regulatory Landfill Unit
1646 Mail Service Center
Raleigh, NC 27699-1646

PREPARED BY:

S&ME, Inc.
3201 Spring Forest Road
Raleigh, NC 27616

July 25, 2025

July 25, 2025

North Carolina Department of Environmental Quality
Division of Waste Management – Special Remediation Branch
Pre-Regulatory Landfill Unit
1646 Mail Service Center
Raleigh, NC 27699-1646

Attention: Ms. Analee Thornburg via email: analee.thornburg@deq.nc.gov
Project Manager

Reference: **Remedial Investigation Report – Soil Gas and Groundwater**
Cumberland County/Cliffdale Landfill
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
NCDEQ ID No. NCD98052900
NCDEQ Task Order 2900RI-12
S&ME Project No. 23050459

Dear Ms. Thornburg:

S&ME, Inc. (S&ME) is submitting this report to NCDEQ to summarize the results of the soil gas and groundwater investigation phase remedial investigation activities conducted at the above-referenced site in Fayetteville, North Carolina. S&ME completed this investigation in general conformance with S&ME Proposal No. 23050459F, dated March 3, 2025, between NCDEQ and S&ME. The attached report includes the results of the following tasks:

- Offsite Soil Gas Probe and Implant Installation
- Onsite and Offsite Soil Gas Sampling, and Groundwater Sampling

We appreciate the opportunity to provide environmental consulting services to NCDEQ. Please contact us if you have any questions about the information included in this report.

Sincerely,

S&ME, Inc.

Connor Hicks, G.I.T.
Staff Geologist II
connorhicks@smeinc.com

Thomas Raymond, P. E., PMP
Principal Engineer/Project Manager
traymond@smeinc.com

Attachment: *Remedial Investigation Report*

Copy: Gerald Paul, S&ME, Inc.

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1.0 Summary of Current Investigation

S&ME completed the scope of services listed below for this investigation in general conformance with S&ME Proposal No. 23050459F, dated March 3, 2025, for Task Order 2900RI-12:

- Installed 19 offsite soil gas probes, field-screened, and sampled 26 landfill gas probes and implants, and 19 offsite soil gas probes and implants for laboratory analysis;
- Field-screened and sampled seven of nine groundwater monitor wells for laboratory analysis; and
- Prepared this report.

S&ME's services were performed in general accordance with the North Carolina Department of Environmental Quality (NCDEQ), *Guidelines for Addressing Pre-Regulatory Landfills and Dumps* (March 2022) and S&ME's approved *Standard Operating Procedures and Quality Assurance (SOP/QA) Manual (July 2010)*, previously approved by NCDEQ.

2.0 Landfill Gas Assessment

2.1 Soil Gas Probe and Implant Installation

2.1.1 Initial Residential Property Visits and Installations

On March 19 and 20, 2025, S&ME personnel visited the 20 properties that submitted property access agreements to S&ME. Residents were briefed on the installation and sampling process.

On March 31, 2025, through April 3, 2025, S&ME personnel installed 11 soil gas probes (SGPs) and 8 soil gas implants (SGIs) using a stainless-steel hand auger with a two-inch diameter bucket. SGPs were installed to depths of 7 to 11 feet below ground surface (ft-bgs), and SGIs were installed to a depth of 2-5 ft-bgs. Once the total depth of the SGPs were determined, a 1-inch diameter 1 to 5-foot-long section of PVC 0.010-inch slotted screen was installed with PVC well riser casing installed from the top of the well screen up to the ground surface. A sand pack of #2 filter sand was placed in the annulus between the borehole wall and the well screen up to approximately two feet above the top of the well screen. A granular bentonite seal was installed up to approximately two feet above the top of the sand pack for all SGP's. For the SGIs, an implant was placed at the bottom of the boring, and a sand pack of #2 filter sand was put one foot above the implant. Granular bentonite was then used to seal the boring from the sand pack to the ground surface. The SGP and SGI construction details are presented in **Table 1,** and the location of the SGPs and SGIs is shown in **Figure 1**. The Coordinates of Selected Features are included in **Appendix I,** and the SGP and SGI Construction Records are included in **Appendix II**.

2.2 Field Screening Methods

On April 17, 2025, landfill gas and offsite soil gas probes and implants that did not have high water levels were screened for landfill gas. **Figures 2A** (Onsite Landfill Screening) **and 2B** (Offsite Screening) show the

data from the field screening event. SGP-32, SGI-41, SGI-43, and SGI-45 were not screened due to water above the sample screen. Portable meters were used to collect the following parameters at each soil gas probe, soil gas implant and background screening location:

- Landfill Gas Meter – GEM5000 PLUS for the following:
  - methane: 0-100%, +/- 0.3% to 1.5% accuracy
  - hydrogen sulfide: 0-500 parts per million-volume (ppm-v), with +/- 2.0% accuracy
  - carbon dioxide: 0-100%, +/- 0.5% to 1.5% accuracy
  - oxygen: 0-25%, +/- 1.0% accuracy
  - barometric pressure: +/- 14.7 inches mercury from calibration pressure, +/- 1% inches mercury accuracy
- Photo-Ionization Detector (PID) MiniRAE 3000 for total VOCs: 0-15,000 ppm-v, with +/- 0.1 ppm-v resolution over range of 0 to 999.9 ppm-v and +/- 1 ppm-v resolution over range of 1,000 to 15,000 ppm-v.

Each of the meters listed above has an internal pump, which was used to draw air samples from the gas probe through the portable meters. New Teflon tubing was connected from the meters to the soil gas probe cap for sampling.

A thermohygrometer was used to measure ambient air for humidity and temperature. The landfill gas screening forms which summarize the results are included with the field documents in **Appendix III**.

2.3 Landfill Gas Screening Results

2.3.1 Volatile Organic Compounds

Landfill Gas Screening Results

- VOCs were detected in 22 out of 26 sample locations on the landfill. VOCs were NOT detected in SGP-20, SGI-26, SGP-27, and SGP-28. During the screening event, concentrations ranged from 0.2 parts per million by volume (ppm-v) to 4.3 ppm-v.

Residential Soil Gas Screening Results

- VOCs were detected in 3 of 15 residential sample locations. VOCs were detected in SGI-30, SGP-31, and SGP-35. During the screening event, concentrations ranged from 0.7 parts per million by volume (ppm-v) to 10.5 ppm-v.

2.3.2 Methane

Landfill Gas Screening Results

- During the screening event, methane was detected in 24 of 26 sample locations. Methane was NOT detected in SGP-27 and SGP-28. Concentrations ranged from 19.9% to 71.2% (volume in air), all exceeding the Lower Explosive Limit (LEL) for methane (5%). The GEM5000 manufacturer specifies an approximate accuracy range of +/- 0.3% of the displayed reading for methane concentrations between 0% and 5%.

Residential Soil Gas Screening Results

- During the screening event, methane was detected in 5 of 15 sample locations. Methane was detected at SGI-30, SGP-31, SGI-34, SGP-36, and SGP-37. Concentrations ranged from 12.0% to 62.8% (volume in air), all exceeding the Lower Explosive Limit (LEL) for methane (5%). The GEM5000 manufacturer specifies an approximate accuracy range of +/- 0.3% of the displayed reading for methane concentrations between 0% and 5%.

2.3.3 Hydrogen Sulfide

Landfill Gas Screening Results

- Hydrogen Sulfide was detected in 20 of 26 sample locations. Hydrogen Sulfide was NOT detected in SGP-4, SGP-5, SGP-9, SGP-24, SGP-27, and SGP-28. Concentrations ranged from 1 ppm-v to 98 ppm-v in sample locations where Hydrogen Sulfide was detected. The GEM5000 manufacturer specifies an approximate accuracy range of +/- 2.0% of the displayed reading for hydrogen sulfide concentrations between 0 – 500 ppm-v.

Residential Soil Gas Screening Results

- Hydrogen Sulfide was detected in 8 of 15 sample locations. Hydrogen Sulfide was detected in SGI-30, SGP-31, SGP-33, SGI-34, SGP-36, SGP-37, SGP-38, and SGP-47. Concentrations ranged from 1 ppm-v to 19 ppm-v in sample locations where Hydrogen Sulfide was detected. The GEM5000 manufacturer specifies an approximate accuracy range of +/- 2.0% of the displayed reading for hydrogen sulfide concentrations between 0 – 500 ppm-v.

The landfill gas screening results are summarized in **Table 3** and shown in **Figures 2A** and **2B**.

2.4 Landfill Gas Sampling

On April 8, 2025, through April 15, 2025, S&ME personnel used batch-certified sampling canisters to collect samples (including duplicate samples) from 26 landfill gas and 14 offsite residential soil gas probes and implants for laboratory analysis of VOCs by EPA Method TO-15, Methane by EPA Method 3C, and Hydrogen sulfide by TO-15.

2.4.1 Shut-in Testing

Prior to beginning sample collection, S&ME performed a shut-in test and helium leak test in general accordance with the Pre-Regulatory Landfill Guidance document. The shut-in test was performed by attaching the dedicated sampling array (series of dedicated stopcock valves, Teflon® tubing and silicone tubing) to the soil gas probe on one end and to the regulator installed on a batch certified six-liter SILO canister on the other end. An open end of the sample array (three-way stopcock) was connected to a 100 ml/cc dedicated syringe. The syringe was then used to pull vacuum on the sample train (approximately 10" of Hg – indicated on the regulator vacuum gage). Once the vacuum was created the three-way stopcock was closed to seal the sample train. After approximately one minute of the vacuum being held on the sample train, the vacuum was released, and the shut-in test was considered successful.

2.4.2 Helium Leak Testing

To perform the helium leak test, the syringe was replaced by additional Teflon® tubing and was connected to the purge port on the leak testing shroud. Next, a section of Teflon® tubing was then attached to the end of the stopcock valve and fitted through a plastic shroud that was placed overtop the soil gas probe sampling array. S&ME then injected helium gas into the plastic shroud until the concentration reached at least 15% helium, as monitored with a helium detector. The gas probe and sampling array were monitored for leaks by using a calibrated personal pump to purge air from the sampling array into a Tedlar® bag.

The purged air from the sampling array in the Tedlar® bag was then monitored for the presence of helium gas concentration with a helium detector. Per the North Carolina Department of Environmental Quality (NCDEQ) Vapor Intrusion Guidance Document (March 2018), the helium concentrations detected during the leak test shall not exceed 10% of the helium concentration contained in the shroud. Each of the gas probes or soil gas implants, and sampling arrays had a successful leak test.

2.4.3 Purging and Sampling

After successfully passing the leak test, a minimum of three volumes of air were purged from the gas probes and sampling arrays. After purging the sampling array, the ball valve attachment on the T-connector leading to the purge point was closed and the valve on the regulator was opened to allow the collection of the samples into SILO canisters.

After collecting the gas samples, the SILO canisters were shipped under standard chain-of-custody protocol to Enthalpy Analytical for VOC analysis, including Hydrogen Sulfide by EPA Method TO-15 and Methane by EPA Method 3C. The laboratory reports and chain of custody are in **Appendix III.**

2.5 Landfill Gas Sample Results

Landfill Gas Sample Results

The laboratory reported detections of multiple volatile organic compounds in the landfill gas samples. The NCDEQ Risk Calculator was used to assess the risk of the soil gas to the indoor air pathway. The Residential Receptor Risk was exceeded at 22 of 26 sample locations. The Non-Residential Worker Receptor Risk was exceeded at 13 of 26 sample locations. See **Section 4.0** for the Risk Calculator details.

- Methane was detected above the LEL in 23 of 26 sample locations.
- Hydrogen Sulfide was detected in 15 of 26 sample locations.

Residential Soil Gas Sample Results

The laboratory reported detections of multiple volatile organic compounds in the soil gas samples. The NCDEQ Risk Calculator was used to assess the risk of soil gas to the indoor air pathway. The Residential Receptor Risk was exceeded at 6 of 14 sample locations. The Non-Residential Worker Receptor Risk was exceeded at 2 of 14 sample locations. See **Section 4.0** for the Risk Calculator details.

- Methane was detected above the LEL in 5 of 14 sample locations.
- Hydrogen Sulfide was detected in 4 of 14 sample locations.

A summary of the laboratory results is included in **Tables 5A** (Landfill) and **Table 5B** (Residential)**,** and the results of the NCDEQ Risk Calculator Residential and Non-Residential Vapor Intrusion risk levels are shown in **Figures 3A** and **3B**. The field notes are included in **Appendix III**. The laboratory reports and chain of custody forms are included in **Appendix IV**.

3.0 Groundwater Assessment

3.1 Monitor Well Elevation Measuring

On April 16, 2025, the depth of groundwater was measured in each well with an electronic water level meter. A licensed surveyor located and measured horizontal coordinates and vertical elevations for the monitor wells under Task Order 2900RI-6. The approximate depth of groundwater and elevations at each sample location are displayed in **Table 2** and are represented on **Figure 5,** Groundwater Elevation Map. Groundwater generally flows from the waste disposal area toward the stream to the north and east.

3.2 Monitor Well Purging and Sampling

Before sample collection, the monitor wells were purged using a monsoon pump or bailer, and field parameter data (pH, temperature, conductivity, and turbidity) were recorded (**Table 4**). Groundwater sampling field forms are included with the field documents in **Appendix III**. Once three well volumes were purged, groundwater samples were collected, placed on ice, and sent under the chain-of-custody protocol to Eurofins | Environment Testing America (Eurofins) in Savannah Georgia for analysis of volatile organic compounds (VOCs) by EPA Method 8260D, semi-volatile-organic compounds (SVOCs) by EPA Method 8270E, 1,4 Dioxane by EPA Method 8270E SIM, metals by EPA Method 6020B, mercury by EPA Method 7470A, nitrate and sulfate by EPA Method 300.0, and ammonia by EPA Method 350.1.

MW-2 and MW-4 could not be sampled due to the well having inadequate water volume at the time of sample collection. MW-6 was only analyzed for VOCs by Method 8260D due to a low volume of water that could be sampled from the monitor well.

3.3 Monitor Well Sample Results

The laboratory reported detections of multiple constituents above the NCAC 2L Groundwater Standards in the groundwater samples. The NCDEQ Risk Calculator was used to assess the risk of groundwater use. All seven of the monitor wells that were sampled exceeded the Residential Receptor Groundwater Use risk level. Five of seven monitor wells that were sampled exceeded the Non-Residential Worker Receptor Groundwater Use risk level. See **Section 4.0** for the Risk Calculator details.

See **Table 6** for a summary of the groundwater analytical results. Groundwater risk assessment results and NCAC 2L Groundwater Standards exceedances are shown on **Figure 4.** A copy of the laboratory report and chain of custody records are included in **Appendix V**.

4.0 NCDEQ Risk Calculator

NCDEQ's Risk Calculator was used to evaluate environmental exposure risks of multiple contaminants and exposure pathways associated with the Landfill Gas Samples and Landfill Cover Soil Samples. The January 2025 version of NCDEQ's Risk Calculator, downloaded from the NCDEQ website, was used.

4.1 Landfill Gas Samples

The NCDEQ Risk Calculator was run for each landfill gas sample location and associated duplicate samples. The risk calculator uses analytical results and generates a Carcinogenic Risk and Hazard Index value. The laboratory results from the following locations exceeded risk:

- Resident Receptor, Soil Gas to Indoor Air Pathway: 22 of 26 sample locations exceeded the Residential Receptor Risk.
- Non-Residential Worker Receptor, Soil Gas to Indoor Air Pathway: 13 of 26 sample locations exceeded the Non-Residential Receptor.

4.2 Residential Soil Gas Samples

The NCDEQ Risk Calculator was run for each soil gas sample location and associated duplicate samples. The risk calculator uses analytical results and generates a Carcinogenic Risk and Hazard Index value. The laboratory results from the following locations exceeded risk:

- Resident Receptor, Soil Gas to Indoor Air Pathway: 6 of 14 sample locations exceeded the Residential Receptor Risk.
- Non-Residential Worker Receptor, Soil Gas to Indoor Air Pathway: 2 of 14 sample locations exceeded the Non-Residential Receptor.

4.3 Groundwater Samples

The NCDEQ Risk Calculator was run for each individual monitor well. The risk calculator uses analytical results and generates a Carcinogenic Risk and a Hazard Index value.

- Resident Groundwater Receptor: 7 of 7 monitor wells that were sampled exceeded the Residential Receptor Groundwater Use risk level.
- Non-Resident Groundwater Worker Receptor: 5 of 7 monitor wells that were sampled exceeded the Non-Residential Worker Receptor Groundwater Use risk level.

Appendix V contains the NCDEQ Risk Calculator Inputs and Outputs.

5.0 Quality Control

Quality control samples were collected and analyzed as follows:

Soil Gas Duplicates

- One SGP duplicate sample was collected for each day of sampling. Duplicates were taken at SGP-01 (DUP-1), SGP-08 (DUP-2), SGI-18 (DUP-3), SGI-25 (DUP-4), SGI-30 (DUP-5), and SGP-39 (DUP-6) and analyzed for the same parameters as the record sample. Analytical results of the duplicate samples were within an acceptable relative difference from the record samples.

Groundwater Duplicates

- One duplicate sample was collected for the one day of sampling. DUP-1 was taken at MW-3 and analyzed for the same parameters as the record sample. Analytical results of the duplicate sample were within an acceptable relative difference from the record sample.

Trip Blank

- One trip blank sample of laboratory-provided Deionized Water was kept with the laboratory samples throughout the groundwater sampling event and analyzed for VOCs by 8260D. No analytes were reported above the laboratory's minimum detection limit.

For groundwater, the laboratory conducted USEPA quality assurance and quality control procedures and reporting as required for laboratory analysis according to USEPA Level II Protocols. Reported laboratory analytical data met data quality objectives.

6.0 Deviation From Work Plan

MW-2 and MW-4 could not be sampled due to no obtainable water in the monitor wells. MW-6 was only analyzed for VOCs by Method 8260D due to a low volume of water available.

Hydrogen sulfide landfill gas laboratory results were provided by Enthalpy Analytical. The method detection limit (MDL) for hydrogen sulfide ranged from 84 micrograms per cubic meter (µg/m3) to 2,500 µg/m3 . The laboratory informed S&ME that samples required dilution due to interferences from other compounds in the landfill gas samples. Diluting the samples raises the MDL. The Target Air Vapor Intrusion Screening Level (VISL) for hydrogen sulfide is 14 µg/m3 . Multiple landfill gas sample results for hydrogen sulfide were reported below the laboratory MDL where the MDL was reported above 14 µg/m3 . It is possible that hydrogen sulfide may be detectable between the reported MDL and the VISL which is not accounted for in the current Risk Calculator inputs. Future sampling will be conducted at these same sample locations; a laboratory will be used where the laboratory is able to achieve an MDL at or below the NCDEQ VISL for hydrogen sulfide.

7.0 Sole Use Statement

This report is solely intended for use by NCDEQ for the services that were performed in accordance with S&ME Proposal No. 23050459F, dated March 3, 2025, for Task Order 2900RI-12 as authorized by NCDEQ.

8.0 Certification Acknowledgement

"I certify that to the best of my knowledge, after thorough investigation, the information contained in or accompanying this certification is true, accurate, and complete."

Thomas P. Raymond / S&ME, Inc.
Name of Environmental Consultant / Company

Signature of Environmental Consultant

July 25, 2025
Date

I, Gail L. Kluever, a Notary Public of said County and State, do hereby certify that Thomas P. Raymond did personally appear and sign before me this day, produced proper identification in the form of NCDL, was duly sworn or affirmed, and declared that, he or she is the duly authorized environmental consultant referenced above and that, to the best of his or her knowledge and belief, after thorough investigation, the information contained in the above certification is true and accurate, and he or she then signed this Certification in my presence.

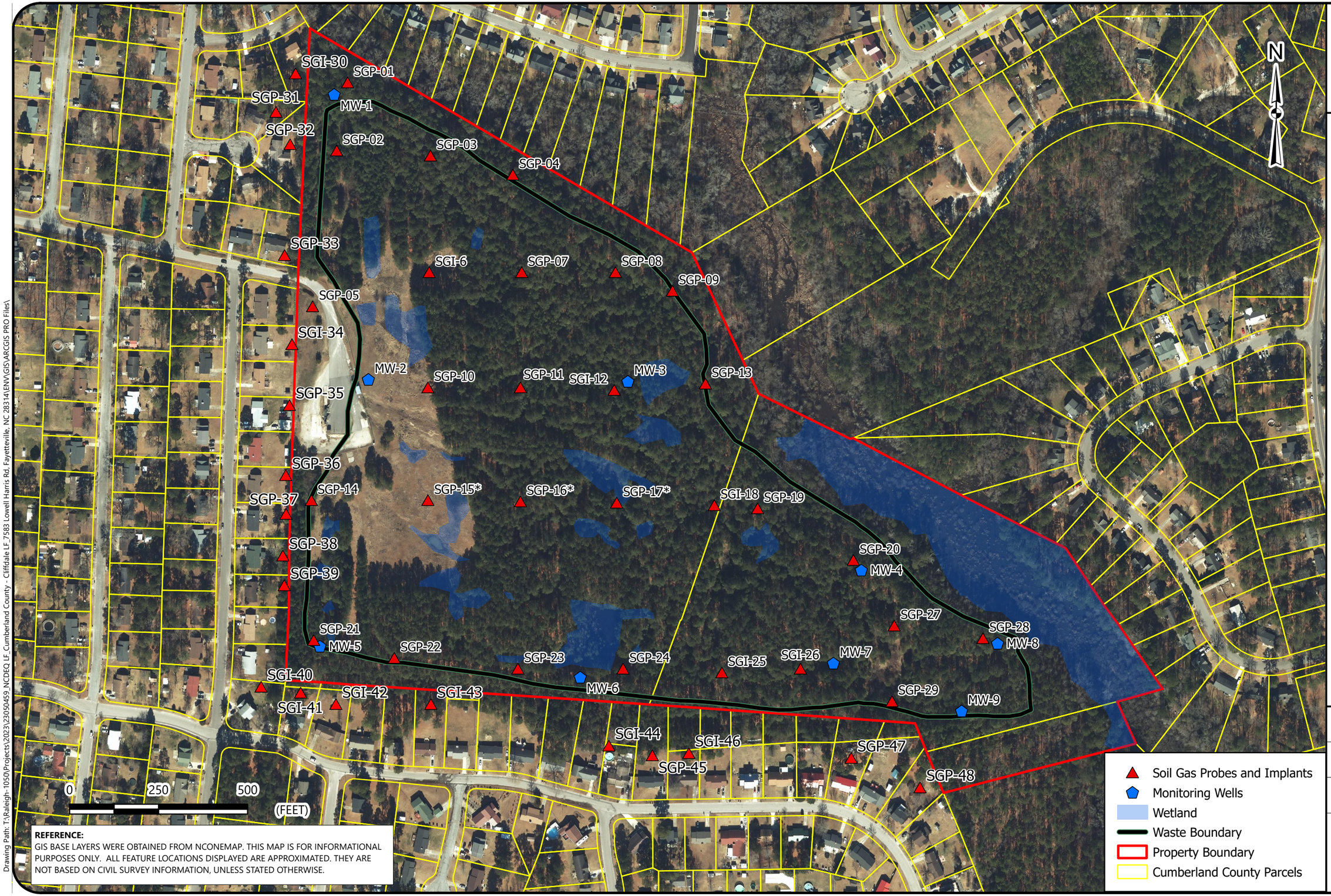
WITNESS my hand and official seal this 25th day of July, 2025.

(OFFICIAL SEAL)

Gail L. Kluever NOTARY My Comm. Exp. 07-26-2026 PUBLIC Wake County, NC

Notary Public (signature)

My commission expires: 7/26/2026



REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM NCONEMAP. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

Drawing Path: T:\Raleigh-1050\Projects\2023\23050459 NCDEQ LF_Cumberland County - Cliffdale LF_7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files\

SITE MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
NCDEQ ID NCD980502900 TASK ORDER 2900RI-12
7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE:
1 in = 250 feet

DATE:
6/11/2025

PROJECT NUMBER
23050459

FIGURE NO.
1

NOTES:
LANDFILL GAS SCREENING WAS CONDUCTED ON APRIL 17, 2025.
-VOLATILE ORGANIC COMPOUNDS (VOC) IS MEASURED IN ppm-v.
-HYDROGEN SULFIDE IS MEASURED IN ppm-v.
-ppm-v: PARTS PER MILLION BY VOLUME
-LOWER EXPLOSIVE LIMIT (LEL) FOR METHANE IS 5% BY VOLUME. THE SCREENING LEVEL IS 1.25% BY VOLUME
- EXCEEDANCES OF METHANE LEL AND SCREENING LEVEL LEL ARE SHOWN IN RED

REFERENCE:
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SGP-1
Methane: 22.8 %
Hydrogen Sulfide: 98 ppm-v
VOC: 0.5 ppm-v

SGP-2
Methane: 43.2 %
Hydrogen Sulfide: 16 ppm-v
VOC: 1.2 ppm-v

SGI-6
Methane: 54.6 %
Hydrogen Sulfide: 14 ppm-v
VOC: 0.8 ppm-v

SGP-5
Methane: 41.2 %
VOC: 1.2 ppm-v

SGP-10
Methane: 57.6 %
Hydrogen Sulfide: 11 ppm-v
VOC: 3.5 ppm-v

SGP-14
Methane: 61.8 %
Hydrogen Sulfide: 2 ppm-v
VOC: 4.3 ppm-v

SGP-21
Methane: 19.9 %
Hydrogen Sulfide: 2 ppm-v
VOC: 1.1 ppm-v

SGP-22
Methane: 62.2 %
Hydrogen Sulfide: 12 ppm-v
VOC: 0.4 ppm-v

SGP-3
Methane: 47.2 %
Hydrogen Sulfide: 2 ppm-v
VOC: 1.1 ppm-v

SGP-4
Methane: 66.9 %
Hydrogen Sulfide: 1.0 ppm-v

SGP-7
Methane: 73.2 %
Hydrogen Sulfide: 47 ppm-v
VOC: 1.8 ppm-v

SGP-8
Methane: 68.4%
Hydrogen Sulfide: 20 ppm-v
VOC: 0.2 ppm-v

SGP-9
Methane: 61.2 %
VOC: 1.1 ppm-v

SGP-11
Methane: 58.9 %
Hydrogen Sulfide: 13 ppm-v
VOC: 2.1 ppm-v

SGI-12
Methane: 71.2 %
Hydrogen Sulfide: 18 ppm-v
VOC: 3.3 ppm-v

SGP-13
Methane: 64.2 %
Hydrogen Sulfide: 1 ppm-v
VOC: 2.1 ppm-v

SGI-18
Methane: 58 %
Hydrogen Sulfide: 22 ppm-v
VOC: 1.2 ppm-v

SGP-19
Methane: 58 %
Hydrogen Sulfide: 27 ppm-v
VOC: 1.6 ppm-v

SGP-20
Methane: 59.7 %
Hydrogen Sulfide: 46 ppm-v

SGP-27
No detections above background levels

SGP-28
No detections above background levels

SGP-23
Methane: 64.6 %
Hydrogen Sulfide: 10 ppm-v
VOC: 1 ppm-v

SGP-24
Methane: 29.8 %
VOC: 1.1 ppm-v

SGI-25
Methane: 66.2 %
Hydrogen Sulfide: 16 ppm-v
VOC: 1.6 ppm-v

SGI-26
Methane: 54.1%
Hydrogen Sulfide: 22 ppm-v

SGP-29
Methane: 61.2 %
Hydrogen Sulfide: 13 ppm-v
VOC: 1.5 ppm-v

Soil Gas Probes and Implants
Wetland
Waste Boundary
Property Boundary
Cumberland County Parcels

0 300 600 (FEET)

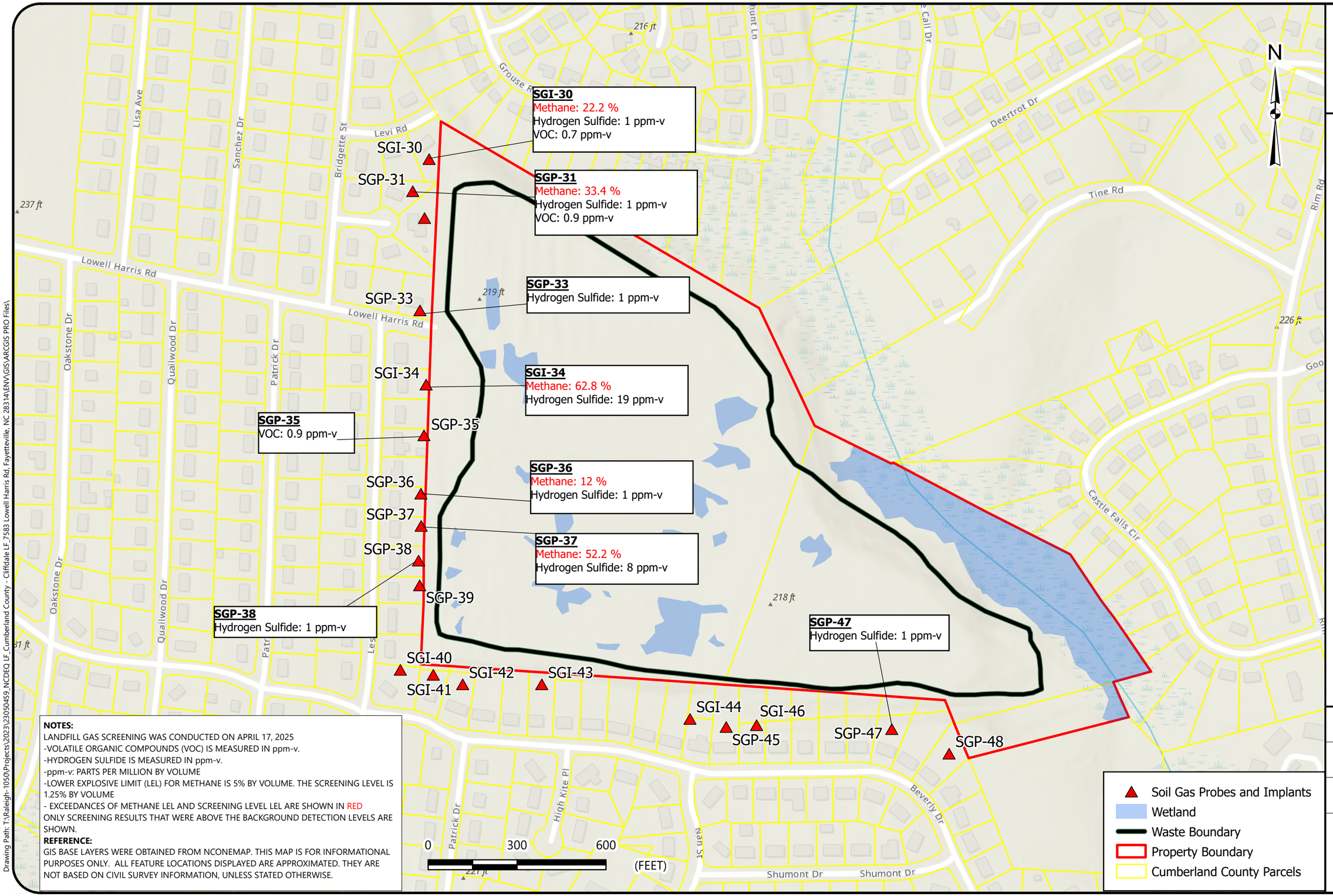
N

ON-SITE LANDFILL GAS SCREENING RESULTS

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
NCDEQ ID NCD980502900 TASK ORDER 2900RI-12
7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE: 1 in = 300 feet
DATE: 6/11/2025
PROJECT NUMBER: 23050459
FIGURE NO.: **2A**

Drawing Path: T:\Raleigh-1050\Projects\2023\23050459_NCDEQ LF_Cumberland County - Cliffdale LF_7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files\



NOTES:
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- EXCEEDANCES OF METHANE LEL AND SCREENING LEVEL LEL ARE SHOWN IN RED
ONLY SCREENING RESULTS THAT WERE ABOVE THE BACKGROUND DETECTION LEVELS ARE SHOWN.

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OFF-SITE SOIL GAS SCREENING RESULTS

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
NCDEQ ID NCD980502900 TASK ORDER 2900RI-12
7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE:
1 in = 300 feet

DATE:
6/11/2025

PROJECT NUMBER
23050459

FIGURE NO.
2B

Drawing Path: T:\Raleigh- 1050\Projects\2023\23050459_NCDEQ LF_Cumberland County - Cliffdale LF_7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files\

SGP-1
Carcinogenic Risk: 2.2E-05
Non-Carcinogenic Hazard Quotient: 38
Methane: 6.13%

SGP-2
Carcinogenic Risk: 7.7E-05
Non-Carcinogenic Hazard Quotient: 180
Methane: 22.1%

SGP-3
Carcinogenic Risk: 1.2E-07
Non-Carcinogenic Hazard Quotient: 0

SGP-4
Carcinogenic Risk: 6.6E-05
Non-Carcinogenic Hazard Quotient: 11
Methane: 37%

SGP-5
Carcinogenic Risk: 3.3E-04
Non-Carcinogenic Hazard Quotient: 8.4
Methane: 42.8%

SGP-7
Carcinogenic Risk: 2.7E-04
Non-Carcinogenic Hazard Quotient: 550
Methane: 74%

SGP-8
Carcinogenic Risk: 1.8E-04
Non-Carcinogenic Hazard Quotient: 300
Methane: 69.9%

SGP-9
Carcinogenic Risk: 6.4E-04
Non-Carcinogenic Hazard Quotient: 2.8
Methane: 30.7%

SGP-10
Carcinogenic Risk: 5.0E-04
Non-Carcinogenic Hazard Quotient: 93
Methane: 64.7%

SGP-11
Carcinogenic Risk: 7.0E-05
Non-Carcinogenic Hazard Quotient: 2.8
Methane: 10.2%

SGP-12
Carcinogenic Risk: 1.6E-04
Non-Carcinogenic Hazard Quotient: 530
Methane: 73%

SGP-13
Carcinogenic Risk: 3.7E-05
Non-Carcinogenic Hazard Quotient: 2.1
Methane: 1.02%

SGP-14
Carcinogenic Risk: 3.0E-05
Non-Carcinogenic Hazard Quotient: 0.73
Methane: 6.73%

SGP-19
Carcinogenic Risk: 1.1E-04
Non-Carcinogenic Hazard Quotient: 59
Methane: 61%

SGP-20
Carcinogenic Risk: 9.1E-05
Non-Carcinogenic Hazard Quotient: 58
Methane: 64.4%

SGP-21
Carcinogenic Risk: 6.8E-05
Non-Carcinogenic Hazard Quotient: 1.5
Methane: 16.8%

SGI-18
Carcinogenic Risk: 1.1E-04
Non-Carcinogenic Hazard Quotient: 46

SGP-22
Carcinogenic Risk: 4.6E-04
Non-Carcinogenic Hazard Quotient: 12
Methane: 62%

SGP-23
Carcinogenic Risk: 3.9E-04
Non-Carcinogenic Hazard Quotient: 100
Methane: 65.6%

SGP-24
Carcinogenic Risk: 7.9E-05
Non-Carcinogenic Hazard Quotient: 2.6
Methane: 52.2%

SGP-27
Carcinogenic Risk: 4.5E-05
Non-Carcinogenic Hazard Quotient: 130
Methane: 63.6%

SGP-28
Carcinogenic Risk: 6.0E-06
Non-Carcinogenic Hazard Quotient: 18
Methane: 2.23%

SGI-25
Carcinogenic Risk: 1.0E-04
Non-Carcinogenic Hazard Quotient: 220
Methane: 58.4%

SGI-26
Carcinogenic Risk: 1.7E-05
Non-Carcinogenic Hazard Quotient: 0.34
Methane: 24.3%

SGP-29
Carcinogenic Risk: 2.6E-05
Non-Carcinogenic Hazard Quotient: 0.63
Methane: 33.6%

SGP-01 SGP-02 SGP-03 SGP-04 SGP-05 SGP-07 SGP-08 SGP-09 SGP-10 SGP-11 SGP-12 SGP-13 SGP-14 SGP-15* SGP-16* SGP-17* SGI-18 SGP-19 SGP-20 SGP-21 SGP-22 SGP-23 SGP-24 SGI-25 SGI-26 SGP-27 SGP-28 SGP-29 SGI-6

NOTES:
LANDFILL GAS SAMPLING WAS CONDUCTED ON 4/8/2025 THROUGH 4/11/205.
SAMPLING LOCATIONS THAT EXCEEDED THE RESIDENTIAL RISK FOR SOIL GAS TO INDOOR AIR IS SHOWN IN RED .
THE LOWER EXPLOSIVE LIMIT (LEL) FOR METHANE IS 5% BY VOLUME. EXCEEDANCES OF METHANE LEL ARE SHOWN IN RED .

SITEWIDE RISK
CARCINOGENIC RISK: 6.6E-04
NON-CARCINOGENIC HAZARD QUOTIENT: 580 .

REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community World Hillshade: Esri, NASA, NGA, USGS, FEMA. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

Soil Gas Probes and Implants
Wetland
Waste Boundary
Property Boundary
Cumberland County Parcels

0 350 700 (FEET)

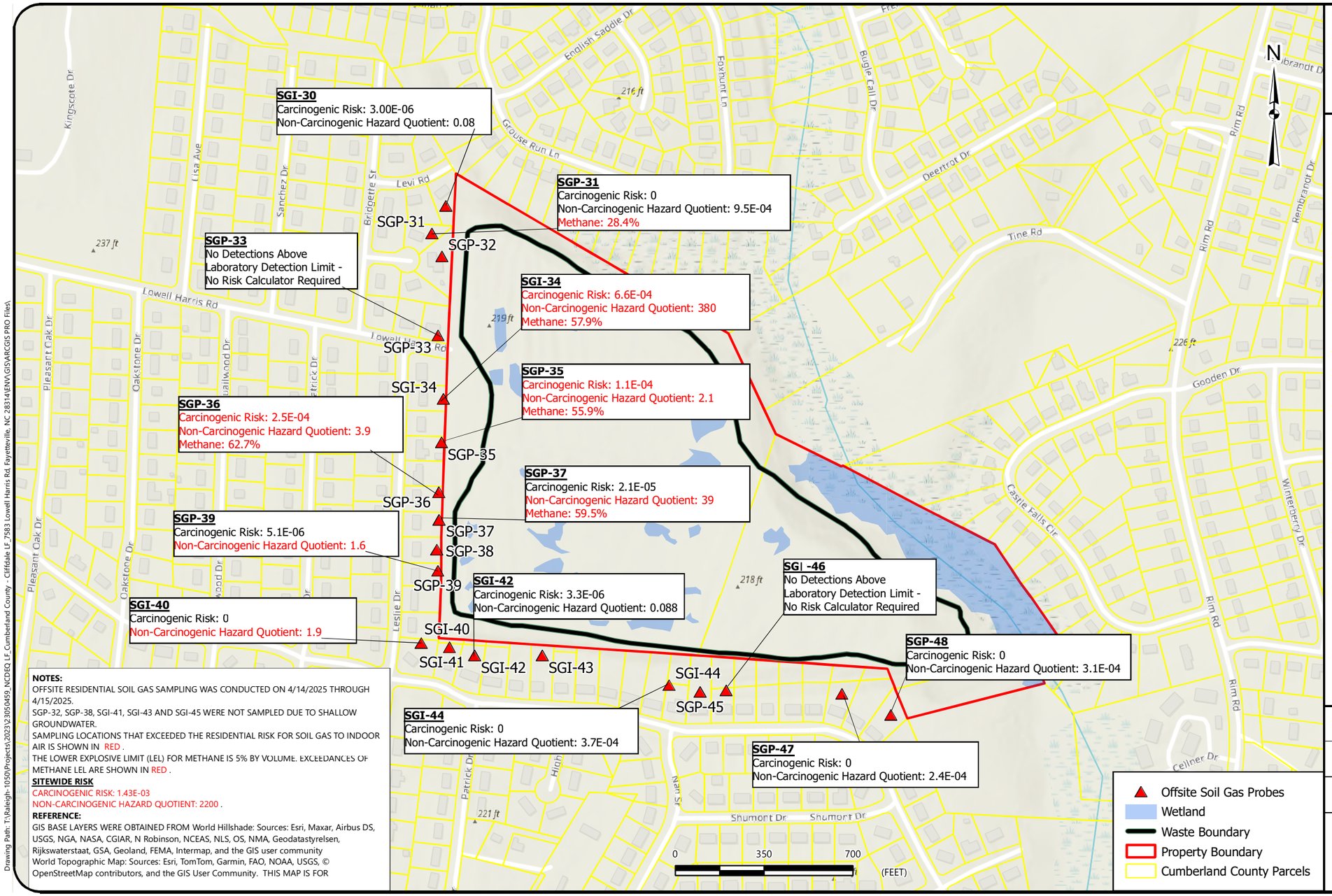
N

LANDFILL GAS RISK ASSESSMENT & LABORATORY METHANE RESULTS MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
NCDEQ ID NCD980502900 TASK ORDER 2900RI-12
7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE: 1 in: 350 feet
DATE: 6/11/2025
PROJECT NUMBER 23050459
FIGURE NO. 3A

Drawing Path: T:\Raleigh-1050\Projects\2023\23050459_NCDEQ LF_Cumberland County - Cliffdale LF_7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files\



NOTES:
OFFSITE RESIDENTIAL SOIL GAS SAMPLING WAS CONDUCTED ON 4/14/2025 THROUGH 4/15/2025.
SGP-32, SGP-38, SGI-41, SGI-43 AND SGI-45 WERE NOT SAMPLED DUE TO SHALLOW GROUNDWATER.
SAMPLING LOCATIONS THAT EXCEEDED THE RESIDENTIAL RISK FOR SOIL GAS TO INDOOR AIR IS SHOWN IN RED .
THE LOWER EXPLOSIVE LIMIT (LEL) FOR METHANE IS 5% BY VOLUME. EXCEEDANCES OF METHANE LEL ARE SHOWN IN RED .

SITEWIDE RISK
CARCINOGENIC RISK: 1.43E-03
NON-CARCINOGENIC HAZARD QUOTIENT: 2200 .

REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM World Hillshade: Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community
World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community. THIS MAP IS FOR

RESIDENTIAL SGP RISK ASSESSMENT & LABORATORY METHANE RESULTS MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
NCDEQ ID NCD980502900 TASK ORDER 2900RI-12
7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

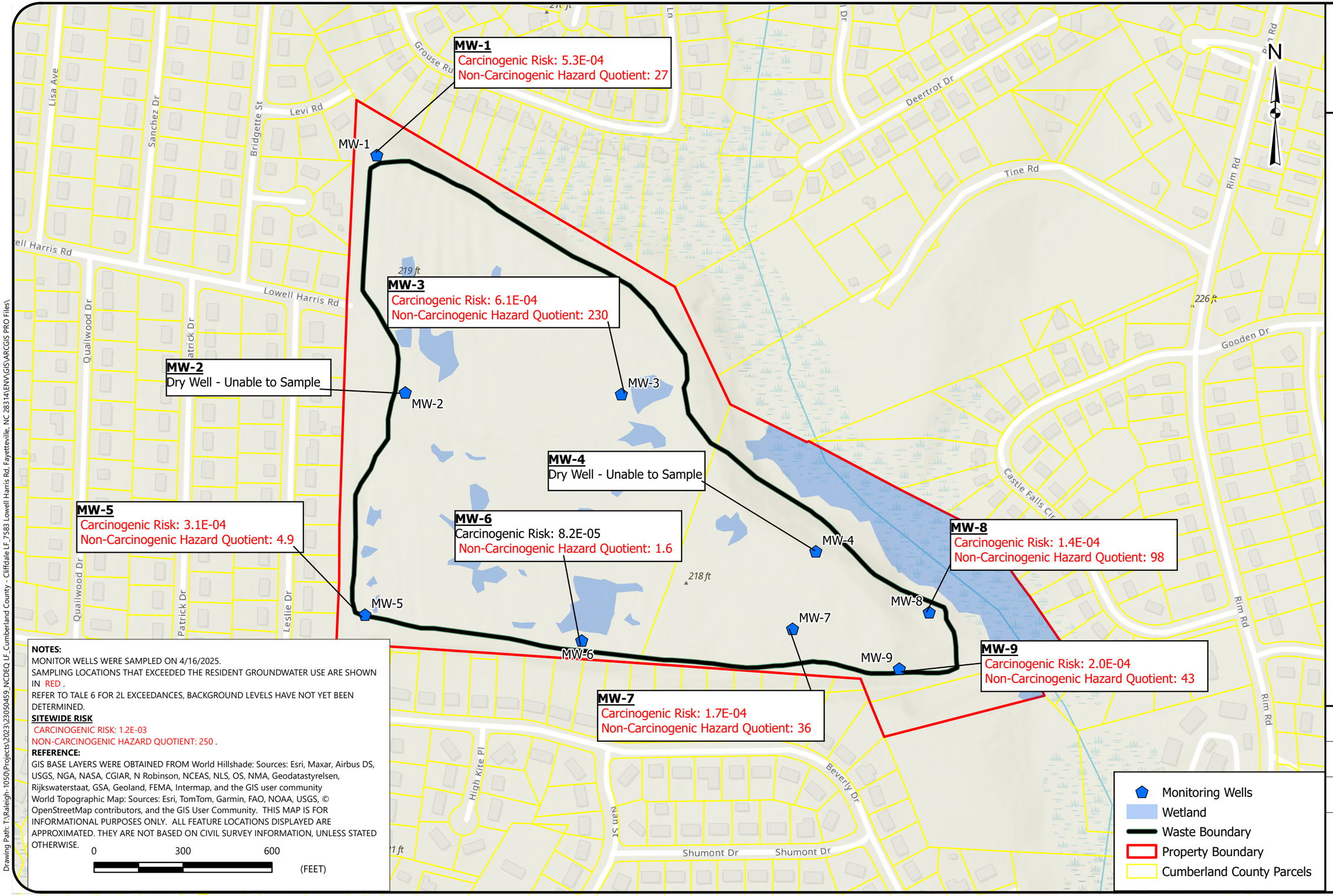
SCALE:
1 in: 350 feet

DATE:
6/11/2025

PROJECT NUMBER
23050459

FIGURE NO.
3B

Drawing Path: T:\Raleigh- 1050\Projects\2023\23050459_NCDEQ LF_Cumberland County - Cliffdale LF 7583 Lowell Harris Rd. Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files\



NOTES:
MONITOR WELLS WERE SAMPLED ON 4/16/2025.
SAMPLING LOCATIONS THAT EXCEEDED THE RESIDENT GROUNDWATER USE ARE SHOWN IN RED .
REFER TO TALE 6 FOR 2L EXCEEDANCES, BACKGROUND LEVELS HAVE NOT YET BEEN DETERMINED.

SITEWIDE RISK
CARCINOGENIC RISK: 1.2E-03
NON-CARCINOGENIC HAZARD QUOTIENT: 250 .

REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM World Hillshade: Sources: Esri, Maxar, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap, and the GIS user community World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

0 300 600
(FEET)

GROUNDWATER ANALYTICAL RISK ASSESSMENT MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
NCDEQ ID NCD980502900 TASK ORDER 2900RI-12
7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE:
1 in: 300 feet

DATE:
6/12/2025

PROJECT NUMBER
23050459

FIGURE NO.
4

Drawing Path: T:\Raleigh-1050\Projects\2023\23050459_NCDEQ_LF_Cumberland County - Cliffdale LF_7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files\

GROUNDWATER ELEVATION MAP

CUMBERLAND COUNTY / CLIFFDALE LANDFILL
NCDEQ ID NCD980502900 TASK ORDER 2900RI-12
7583 LOWELL HARRIS ROAD FAYETTEVILLE, NORTH CAROLINA

SCALE:
1 in: 250 feet

DATE:
6/12/2025

PROJECT NUMBER
23050459

FIGURE NO.
5

NOTES:
GROUNDWATER ELEVATIONS ARE SHOWN IN FEET ABOVE MEAN SEA LEVEL.
GROUNDWATER ELEVATIONS WERE MEASURED ON APRIL 16, 2025.
NM: NOT MEASURED IN SURVEY.
MW-2, MW-4, MW-6 WERE NOT INCLUDED IN THE POTENTIOMETRIC LINE CALCULATION DUE TO NO OR LOW WATER IN THE MONITOR WELLS WITHIN THE WASTE DISPOSAL AREA.

REFERENCE:
GIS BASE LAYERS WERE OBTAINED FROM Imagery\Orthoimagery_Latest: NC OneMap, NC Center for Geographic Information and Analysis, NC 911 Board. THIS MAP IS FOR INFORMATIONAL PURPOSES ONLY. ALL FEATURE LOCATIONS DISPLAYED ARE APPROXIMATED. THEY ARE NOT BASED ON CIVIL SURVEY INFORMATION, UNLESS STATED OTHERWISE.

- Monitoring Wells
- Wetland
- Waste Boundary
- Property Boundary
- Potentiometric Surface Lines
- Tributary to Bones Creek
- Flow Direction

0 250 500 (FEET)

Drawing Path: T:\Raleigh-1050\Projects\2023\23050459_NCDEQ LF_Cumberland County - Cliffdale LF_7583 Lowell Harris Rd, Fayetteville, NC 28314\ENV\GIS\ARCGIS PRO Files\

TABLE 1
Landfill Gas Probe & Gas Implant Construction Details
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

ID	Date Installed	Type	Casing Material	Stickup Height (ft)	Total Depth (ft-bgs)	Casing Interval (ft-bgs)	Screen Interval (ft-bgs)	Grout Interval (ft-bgs)	Bentonite Interval (ft-bgs)	Filter Pack Interval (ft-bgs)
SGP-1	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-2	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-3	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-4	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-5	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGI-6	9/11/24	Flushmount-Gas Implant	1/4" tubing	0.0	5.0	NA	4.5 - 5.0	0.0 - 1.0	1.0 - 4.0	4.0 - 5.0
SGP-7	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	4.0 - 7.0
SGP-8	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	5.0 - 7.0
SGP-9	9/10/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-10	9/11/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	5.0 - 7.0
SGP-11	9/11/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	5.0 - 7.0
SGI-12	9/11/24	Flushmount-Gas Implant	1/4" tubing	0.0	4.0	NA	3.5 - 4.0	0.0 - 1.0	1.0 - 4.0	3.0 - 4.0
SGP-13	9/11/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-14	9/11/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-15	9/11/24	Soil Gas Probes Abandoned Due to Shallow Groundwater								
SGP-16										
SGP-17										
SGP-18	9/11/24	Flushmount-Gas Implant	1/4" tubing	0.0	4.0	NA	3.5 - 4.0	0.0 - 1.0	1.0 - 3.0	3.0 - 4.0
SGP-19	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	8.0	0.0 - 6.0	6.0 - 8.0	0.0 - 4.0	4.0 - 5.0	5.0 - 8.0
SGP-20	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 6.0	6.0 - 10.0	0.0 - 4.0	4.0 - 5.0	5.0 - 10.0
SGP-21	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-22	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	8.0	0.0 - 6.0	6.0 - 8.0	0.0 - 4.0	4.0 - 5.0	5.0 - 8.0
SGP-23	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGP-24	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	8.0	0.0 - 6.0	6.0 - 8.0	0.0 - 4.0	4.0 - 5.0	5.0 - 8.0
SGI-25	9/12/24	Flushmount-Gas Implant	1/4" tubing	0.0	4.0	NA	3.5 - 4.0	0.0 - 1.0	1.0 - 3.0	3.0 - 4.0
SGI-26	9/12/24	Flushmount-Gas Implant	1/4" tubing	0.0	5.0		4.5 - 5.0	0.0 - 1.0	1.0 - 3.0	4.0 - 5.0
SGP-27	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 6.0	6.0 - 10.0	0.0 - 4.0	4.0 - 5.0	5.0 - 10.0
SGP-28	9/18/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 6.0	6.0 - 7.0	0.0 - 4.0	4.0 - 5.0	4.0 - 7.0
SGP-29	9/12/24	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0	0.0 - 4.0	4.0 - 5.0	5.0 - 11.0
SGI-30	4/1/25	Flushmount-Gas Implant	1/4" tubing	0.0	5.0	NA	4.5 - 5.0	Installed Points by Hand Auger - Bentonite From Top of Filter Pack to Ground Surface	0.0 - 3.0	3.0 - 5.0
SGP-31	4/1/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 5.0	5.0 - 10.0		0.0 - 4.0	4.0 - 10.0
SGP-32	4/2/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 5.0	5.0 - 7.0		0.0 - 4.0	4.0 - 7.0
SGP-33	4/3/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 5.0	5.0 - 10.0		0.0 - 4.0	4.0 - 10.0
SGI-34	3/31/25	Flushmount-Gas Implant	1/4" tubing	0.0	5.5	NA	5.0 - 5.5		0.0 - 3.0	3.0 - 5.5
SGP-35	3/31/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0		0.0 - 5.0	5.0 - 11.0
SGP-36	3/31/35	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0		0.0 - 5.0	5.0 - 11.0
SGP-37	3/31/35	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	11.0	0.0 - 6.0	6.0 - 11.0		0.0 - 5.0	5.0 - 11.0
SGP-38	4/1/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	7.0	0.0 - 5.0	5.0 - 7.0		0.0 - 5.0	5.0 - 7.0
SGP-39	4/1/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 5.0	5.0 - 10.0		0.0 - 4.0	4.0 - 10.0
SGI-40	4/1/25	Flushmount-Gas Implant	1/4" tubing	0.0	2.5	NA	2.0 - 2.5		0.0 - 1.5	1.5 - 2.5
SGI-41	4/2/25	Flushmount-Gas Implant	1/4" tubing	0.0	2.5	NA	2.0 - 2.5		0.0 - 1.5	1.5 - 2.5
SGI-42	4/2/25	Flushmount-Gas Implant	1/4" tubing	0.0	2.0	NA	1.5 - 2.0		0.0 - 1.0	1.0 - 2.0
SGI-43	4/2/25	Flushmount-Gas Implant	1/4" tubing	0.0	4.0	NA	3.5 - 4.0		0.0 - 3.0	3.0 - 4.0
SGI-44	4/2/25	Flushmount-Gas Implant	1/4" tubing	0.0	4.0	NA	3.5 - 4.0		0.0 - 2.5	2.5 - 4.0
SGP-45	4/2/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 5.0	5.0 - 10.0		0.0 - 4.0	4.0 - 10.0
SGI-46	4/3/25	Flushmount-Gas Implant	1/4" tubing	0.0	5.0	NA	4.5 - 5.0		0.0 - 3.0	3.0 - 5.0
SGP-47	4/3/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 5.0	5.0 - 10.0		0.0 - 4.0	4.0 - 10.0
SGP-48	4/3/25	Flushmount-Gas Probe	1-in Sch 40 PVC	0.0	10.0	0.0 - 5.0	5.0 - 10.0		0.0 - 4.0	4.0 - 10.0

Notes:
SGI were used in areas of shallow groundwater
SGP-15, 16,and 17, were abandoned due to shallow groundwater
SGP-30-48 were installed by hand in residential properties near the landfill
ft-bgs: feet below ground surface.
in: inches
N/A: Not Applicable
The Soil Gas Probe and Implant locations are indicated on **Figure 1.**

TABLE 2
Groundwater Monitor Well Construction & Groundwater Level
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

ID	Date Installed	Type	Casing Material	Stickup Height (ft)	Total Depth (ft-bgs)	Casing Interval (ft-bgs)	Screen Interval (ft-bgs)	Grout Interval (ft-bgs)	Bentonite Interval (ft-bgs)	Filter Pack Interval (ft-bgs)	Top of Casing Elevation (ft-amsl)	Date Water Level Measured	Depth to Groundwater (ft-btoc)	Groundwater Elevation (ft-amsl)
MW-1	9/10/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.0	38.5	0.0 - 28.5	28.5 - 38.5	0.0 - 24.5	24.5 - 26.5	26.5 - 38.5	218.79	4/16/2025	34.25	184.54
MW-2	9/11/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.8	30.0	0.0 - 20.0	20.0 - 30.0	0.0 - 16.0	16.0 - 18.0	18.0 - 30.0	224.98	4/16/2025	32.66	192.32
MW-3	9/11/24	Stickup - Monitoring Well	2-in Sch 40 PVC	2.4	15.0	0.0 - 5.0	5.0 - 15.0	0.0 - 2.0	2.0 - 3.0	3.0 - 15.0	213.81	4/16/2025	11.76	202.05
MW-4	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.0	27.0	0.0 - 17.0	17.0 - 27.0	0.0 - 13.0	13.0 - 15.0	15.0 - 27.0	213.66	4/16/2025	29.45	184.21
MW-5	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	2.5	27.0	0.0 - 17.0	17.0 - 27.0	0.0 - 13.0	13.0 - 15.0	15.0 - 27.0	228.46	4/16/2025	28.90	199.56
MW-6	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.5	25.0	0.0 - 15.0	15.0 - 25.0	0.0 - 11.0	11.0 - 13.0	13.0 - 25.0	219.95	4/16/2025	29.13	190.82
MW-7	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	2.6	14.0	0.0 - 4.0	4.0 - 14.0	0.0 - 2.0	2.0 - 3.0	3.0 - 14.0	208.93	4/16/2025	13.60	195.33
MW-8	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	3.4	14.0	0.0 - 4.0	4.0 - 14.0	0.0 - 2.0	2.0 - 3.0	3.0 - 14.0	185.67	4/16/2025	13.74	171.93
MW-9	9/18/24	Stickup - Monitoring Well	2-in Sch 40 PVC	2.9	27.0	0.0 - 17.0	17.0 - 27.0	0.0 - 13.0	13.0 - 15.0	15.0 - 27.0	181.60	4/16/2025	8.28	173.32
MW-10	9/18/2024	Monitoring Well Abandoned Due to Shallow Groundwater Near Surface Wet Area												

Notes:
MW-10 was abandoned due to shallow groundwater
ft-bgs: feet below ground surface.
in: inches
Monitoring Well locations are indicated on **Figure 1.**

TABLE 3
Landfill Gas Field Screening Results
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

Field Parameter		Volatile Organic Compounds (ppm-v)	Methane (Volume in Air %)	Methane (% Lower Explosive Limit)	Hydrogen Sulfide (ppm-v)
Sample ID	Screening Date				
BG-1	4/17/2025	0.0	0.0	0.0	0.0
BG-2	4/17/2025	0.0	0.0	0.0	0.0
BG-3	4/17/2025	0.0	0.0	0.0	0.0
BG-4	4/17/2025	0.0	0.0	0.0	0.0
SGP-1	4/17/2025	0.5	22.8	>>>	98
SGP-2	4/17/2025	1.2	43.2	>>>	16
SGP-3	4/17/2025	1.1	47.2	>>>	2.0
SGP-4	4/17/2025	0.9	66.9	>>>	1.0
SGP-5	4/17/2025	1.2	41.2	>>>	0.0
SGI-6	4/17/2025	0.8	54.6	>>>	14
SGP-7	4/17/2025	1.8	73.2	>>>	47
SGP-8	4/17/2025	0.2	68.4	>>>	20
SGP-9	4/17/2025	1.1	61.2	>>>	0.0
SGP-10	4/17/2025	3.5	57.6	>>>	11
SGP-11	4/17/2025	2.1	58.9	>>>	13
SGI-12	4/17/2025	3.3	71.2	>>>	18
SGP-13	4/17/2025	2.1	64.2	>>>	1.0
SGP-14	4/17/2025	4.3	61.8	>>>	2.0
SGI-18	4/17/2025	1.2	58.0	>>>	22
SGP-19	4/17/2025	1.6	56.4	>>>	27
SGP-20	4/17/2025	0.0	59.7	>>>	46
SGP-21	4/17/2025	1.1	19.9	>>>	2.0
SGP-22	4/17/2025	0.4	62.2	>>>	12
SGP-23	4/17/2025	1.0	64.6	>>>	10
SGP-24	4/17/2025	1.1	29.8	>>>	0.0
SGI-25	4/17/2025	1.6	66.2	>>>	16
SGI-26	4/17/2025	0.0	54.1	>>>	22
SGP-27	4/17/2025	0.0	0.0	0.0	0.0
SGP-28	4/17/2025	0.0	0.0	0.0	0.0
SGP-29	4/17/2025	1.5	61.2	>>>	13
SGI-30	4/17/2025	0.7	22.2	>>>	1.0
SGP-31	4/17/2025	0.9	33.4	>>>	1.0
SGP-33	4/17/2025	0.0	0.0	0.0	1.0
SGI-34	4/17/2025	0.0	62.8	>>>	19
SGP-35	4/17/2025	10.5	0.00	0.00	0.00
SGP-36	4/17/2025	0.0	12.0	>>>	1.0
SGP-37	4/17/2025	0.0	52.2	>>>	8.0
SGP-38	4/17/2025	0.0	0.0	0.0	1.0
SGP-39	4/17/2025	0.0	0.0	0.0	0.0
SGI-40	4/17/2025	0.0	0.0	0.0	0.0
SGI-42	4/17/2025	0.0	0.0	0.0	0.0
SGI-44	4/17/2025	0.0	0.0	0.0	0.0
SGI-46	4/17/2025	0.0	0.0	0.0	0.0
SGP-47	4/17/2025	0.0	0.0	0.0	1.0
SGP-48	4/17/2025	0.0	0.0	0.0	0.0

Notes:
SGP-32,41,43, and 45 were not screened due to water in the probe/implant
Percent %: Percent methane in air, Lower Explosive Limit for Methane is 5%.
PPM-V: Parts Per Million by Volume in Air
Bold indicates a concentration greater than background concentrations.
Highlighted indicates a concentration exceeding the lower explosive limit for methane
>>>: Greater than 100% LEL for Methane.
See **Figure 2A** for landfill screening locations
See **Figure 2B** for residential screening locations

TABLE 4
Groundwater Field Screening Parameters
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

Sample Location ID	Date	Field Parameter			
		pH	Temperature (°C)	Conductivity (µS/cm)	Turbidity (NTU)
MW-1	4/16/2025	7.0	18.1	299	549
MW-2	4/16/2025	Unable to Measure Field Parameters Due to Lack of Water			
MW-3	4/16/2025	7.3	17.2	2,686	5.40
MW-4	4/16/2025	Unable to Measure Field Parameters Due to Lack of Water			
MW-5	4/16/2025				
MW-6	4/16/2025				
MW-7	4/16/2025	7.1	20.7	1,130	9.90
MW-8	4/16/2025	7.3	18.5	1,582	62.00
MW-9	4/16/2025	7.1	16.6	939	8.70

Notes:
Temperature: degrees Celsius (°C)
Conductivity: microsiemens per centimeter (µS/cm)
Turbidity: Nephelometric Turbidity Units

TABLE 5A
Landfill Gas Sample Analytical Results Summary
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

Analytical Method	Analyte	CAS Number	Sample ID	SGP-01	SGP-02	SGP-03	SGP-04	SGP-05	SGI-06	SGP-07	SGP-08	SGP-09	SGP-10	SGP-11	SGI-12	SGP-13	SGP-14	SGI-18	SGP-19	SGP-20	SGP-21	SGP-22	SGP-23	SGP-24	SGI-25	SGI-26	SGP-27	SGP-28	SGP-29	DUPLICATE-01	DUPLICATE-02	DUPLICATE-03	DUPLICATE-04
			Date Collected	4/8/2025	4/8/2025	4/8/2025	4/8/2025	4/8/2025	4/8/2025	4/8/2025	4/9/2025	4/9/2025	4/9/2025	4/9/2025	4/9/2025	4/9/2025	4/9/2025	4/10/2025	4/10/2025	4/10/2025	4/11/2025	4/11/2025	4/11/2025	4/11/2025	4/11/2025	4/10/2025	4/10/2025	4/10/2025	4/10/2025	4/8/2025	4/9/2025	4/10/2025	4/11/2025
Volatile Organic Compounds by Method TO-15 (µg/m3)	1,1-Dichloroethane	75-34-3		<24	**130**	<4.9	<24	**1700**	<150	<150	<24	**130**	<150	**120 J**	<49	<4.9	<12	<36	<36	<73	<150	<150	<73	<150	<73	<36	<36	<15	<73	<24	<12	<36	<73
	1,1-Dichloroethylene	75-35-4		<24	<24	<4.8	<24	**260**	<140	<140	<24	<24	<140	<48	<48	<4.8	<12	<36	<36	<71	<140	<140	<71	<140	<71	<36	<36	<14	<71	<24	<12	<36	<71
	1,2,4-Trimethylbenzene	95-63-6		<29	**81**	<5.9	<29	<120	**350 J**	<180	**35 J**	<29	**580**	**140 J**	<59	<5.9	<15	**100 J**	**250**	<88	<180	**230 J**	**610**	<180	<88	<44	<44	<18	<88	<29	<15	**84 J**	<88
	1,2-Dichlorotetrafluoroethane	76-14-2		**390**	**1600**	**380**	**1400**	**2100**	**2100**	**970**	**1200**	**680**	**960**	**220**	**2200**	**210**	**69**	**630**	**410**	**610**	<250	**740**	**1500**	**810**	**860**	**120 J**	**340**	**200**	**460**	**380**	**670 C**	**600**	**1100**
	1,3,5-Trimethylbenzene	108-67-8		<29	**87**	<5.9	<29	<120	<180	<180	<29	**40 J**	**310 J**	**100 J**	<59	<5.9	<15	**100 J**	**150**	<88	<180	<180	<88	<180	<88	<44	<44	<18	<88	<29	<15	**82 J**	<88
	1,4-Dichlorobenzene	106-46-7		**58 J**	<36	<7.2	<36	<140	<220	<220	**56 J**	<36	**250 J**	<72	<72	<7.2	**19 J**	<54	**100 J**	<110	<220	<220	<110	<220	<110	<54	<54	<22	<110	**58 J**	<18	<54	<110
	2-Butanone (MEK)	78-93-3		<18	<18	**5.1 J**	<18	<71	**150 J**	<110	<18	<18	<110	<35	<35	<3.5	<8.8	<27	<27	<53	<110	<110	<53	<110	**53 J**	<27	<27	**13 J**	<53	<18	<8.8	<27	<53
	Benzene	71-43-2		**130**	**720**	<3.8	**480**	**360**	**1300**	**2700**	**570**	**230**	**2500**	**580**	**1900**	<3.8	**95**	**680**	**860**	**960**	**810**	**2700**	**960**	**560**	**650**	**200**	**540**	**72**	**310**	**130**	**210**	**650**	**870**
	Carbon Disulfide	75-15-0		<47	<47	<9.3	<47	<190	<280	<280	<47	<47	<280	<93	<93	<9.3	<23	<70	<70	<140	<280	<280	<140	<280	<140	<70	<70	<28	<140	<47	<23	<70	<140
	Chlorobenzene	108-90-7		<28	<28	<5.5	<28	<110	<170	<170	<28	<28	<170	<55	**420**	<5.5	**42**	**190**	**1400**	**4000**	<170	<170	<83	<170	**4900**	**180**	**710**	**660**	**260**	<28	<14	**170**	**7400**
	Chloroethane	75-00-3		<16	**510**	<3.2	**33 J**	**570**	**34000**	**210 J**	<16	**620**	**320**	**250**	<32	<3.2	<7.9	**40 J**	**280**	<47	<95	**140 J**	**100 J**	**950**	**240**	**91**	**130**	<9.5	**640**	<16	<7.9	**42 J**	**320**
	Chloroform	67-66-3		<29	<29	<5.9	<29	<120	<180	<180	<29	<29	<180	<59	<59	**130**	<15	<44	<44	<88	<180	<180	<88	<180	<88	<44	<44	<18	<88	<29	<15	<44	<88
	cis-1,2-Dichloroethylene	156-59-2		<24	<24	<4.8	**120**	**1200**	<140	<140	<24	**51 J**	<140	**64 J**	<48	<4.8	<12	**41 J**	<36	<71	<140	<140	**190**	**400**	<71	<36	<36	<14	<71	<24	<12	**36 J**	<71
	Cyclohexane	110-82-7		**110**	**1000**	<4.1	**1200**	**3400**	**4300**	**14000**	**500**	**780**	**7400**	**1100**	**590**	**31**	**180**	**630**	**1900**	**2900**	**3100**	**3100**	**820**	**5800**	**360**	**220**	**330**	**56**	**1100**	**110**	**190**	**590**	**510**
	Dichlorodifluoromethane	75-71-8		**240**	**9800**	**100**	**120**	<300	**1300**	<450	**210**	**1000**	<450	**490**	<150	**88**	**170**	**420**	**3100**	<220	<450	<450	**4400**	**2500**	<220	<110	<110	**370**	<220	**230**	**110 C**	**410**	<220
	Ethylbenzene	100-41-4		<26	**140**	<5.2	**670**	<100	<160	**1500**	**140**	**81**	**10000**	**720**	**65 J**	<5.2	**36**	**1400**	**550**	<78	<160	**4100**	**7800**	<160	**460**	<39	<39	<16	<78	<26	**42**	**1300**	**710**
	Heptane	142-82-5		**670**	**1900**	<4.9	**2800**	**6100**	**8400**	**50000**	**1400**	**1100**	**21000**	**3600**	**1500**	**25**	**550**	**2900**	**6000**	**3400**	**8200**	**13000**	**3200**	**7700**	**2000**	**170**	**820**	**66**	**840**	**660**	**460**	**2700**	**2800**
	Hexane	110-54-3		**360**	**1100**	**4.2 J**	**1900**	**4400**	**6000**	**17000**	**670**	**600**	**13000**	**1200**	**1500**	**69**	**220**	**1800**	**3800**	**2200**	**3200**	**3200**	**1400**	**7600**	**1400**	**590**	**890**	**170**	**2900**	**350**	**230**	**1700**	**2000**
	Isopropylbenzene	98-82-8		<29	<29	<5.9	<29	<120	<180	<180	<29	<29	<180	<59	<59	<5.9	<15	<44	<44	<88	<180	<180	**88 J**	<180	<88	<44	<44	<18	<88	<29	<15	<44	<88
	m+p-Xylenes	179601-23-1		<52	**220**	<10	**790**	<210	<310	**3200**	**230**	**280**	**13000**	**4100**	<100	<10	**72**	**880**	**2700**	<160	<310	**4800**	**11000**	<310	**1100**	<78	**98 J**	<31	<160	<52	**70**	**790**	**1700**
	Methylene chloride	75-09-2		<52	<52	**28**	<52	<210	<310	<310	<52	<52	<310	<100	<100	<10	**41 J**	<78	<78	<160	<310	<310	<160	<310	<160	<78	<78	<31	<160	<52	<26	<78	<160
	Naphthalene	91-20-3		<31 C	<31 C	<6.3 C	<31 C	<130 C	<190 C	<190 C	**310 C**	**100 C**	<190	<63	<63	**14 C**	**51**	<47	<47	<94	<190	<190	<94	<190	<94	<47	<47	<19	<94	<31 C	**17**	<47	<94
	o-Xylene	95-47-6		<26	**57 J**	<5.2	<26	<100	<160	<160	**47 J**	**74**	**440**	**1500**	<52	<5.2	<13	**76 J**	**340**	<78	<160	**750**	**550**	<160	**140 J**	<39	<39	<16	<78	<26	**14 J**	**66 J**	**210**
	Propylene	115-07-1		<8.3	**670**	<1.7	<8.3	<33	**330**	<50	**670**	**630**	<50	<17	<17	**9.1**	**110**	**1700**	**1200**	**1400**	**290**	<50	**2400**	**490**	<25	**840**	**1300**	**95**	**190**	<8.3	**140**	**1400**	**1900**
	Tetrachloroethylene (PCE)	127-18-4		<41	<41	**42**	<41	<160	<240	<240	<41	**85 J**	<240	<81	<81	**10 J**	<20	<61	<61	<120	<240	<240	**130 J**	<240	<120	<61	<61	<24	<120	<41	<20	<61	<120
	Tetrahydrofuran	109-99-9		<18	<18	<3.5	<18	<71	<110	<110	<18	<18	<110	<35	<35	<3.5	**9.3 J**	<27	<27	<53	<110	<110	**280**	<110	**58 J**	<27	**210**	<11	<53	<18	<8.8	<27	**61 J**
	Toluene	108-88-3		<23	**93**	<4.5	**23 J**	<90	<140	<140	**41 J**	**29 J**	**170 J**	<45	<45	<4.5	<11	**70 J**	**510**	**78 J**	<140	**2100**	**450**	<140	**85 J**	**34 J**	**46 J**	**33 J**	<68	<23	**15 J**	**58 J**	**88 J**
	trans-1,2-Dichloroethylene	156-60-5		<24	<24	<4.8	<24	**150 J**	<140	<140	<24	<24	<140	**52 J**	<48	<4.8	<12	<36	<36	<71	<140	<140	<71	<140	<71	<36	<36	<14	<71	<24	<12	<36	<71
	Trichloroethylene	79-01-6		<32	<32	<6.4	<32	**260**	<190	<190	<32	**68**	<190	<64	<64	<6.4	<16	<48	**68**	<97	<190	<190	<97	<190	<97	<48	<48	<19	<97	<32	<16	<48	<97
	Trichlorofluoromethane	75-69-4		<84	<84	<17	<84	<340	<510	<510	<84	<84	<510	<170	<170	<17	<42	<130	<130	<250	<510	<510	**970**	<510	<250	<130	<130	<51	<250	<84	<42	<130	<250
	Vinyl chloride	75-01-4		**25 J**	**63**	<3.1	**48**	**1400**	<92	<92	**74**	<15	<92	<31	<31	<3.1	<7.7	**68**	**28 J**	**64 J**	<92	**690**	**590**	**180 J**	<46	<23	<23	<9.2	<46	**25 J**	**53 C**	**67**	**55 J**
	Xylenes, Total	1330-20-7		<78	**280**	<16	**810**	<310	<470	**3200**	**270**	**350**	**13000**	**5600**	<160	<16	**72 J**	**960**	**3100**	<230	<470	**5600**	**11000**	<470	**1200**	<120	**120 J**	<47	<230	<78	**83 J**	**860**	**1900**
EPA Method TO-15 (µg/m3)	Hydrogen Sulfide	7783-06-4		**2600**	**12000**	<42	**690**	<420	**17000**	**38000**	**21000**	<210	**5900**	<630	**37000**	<42	<630	**3100**	**3800**	<1300	<250	**420**	**6900**	<1300	**15000**	<500	**9100**	**1200**	<1300	**2500**	**6100**	**25000**	<630
NIOSH 6009 (µg/m3)	Mercury	7439-97-6		<0.33	<0.33	<0.67	<0.33	<0.31	<0.33	<0.33	<0.67	<0.33	<0.32	<0.33	<0.33	<0.63	<0.31	<0.31	<0.33	<0.30	<0.58	<0.32	<0.31	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	<0.33	**NA**	
EPA Method 3C (%)	Methane	74-82-8		**6.13**	**22.1**	<0.45	**37.0**	**42.8**	**73.4**	**74.0**	**69.9**	**30.7**	**64.7**	**10.2**	**73.0**	**1.02**	**6.73**	**64.2**	**61.0**	**64.4**	**16.8**	**62.0**	**65.6**	**52.2**	**58.4**	**24.3**	**63.6**	**2.23**	**33.6**	**6.38**	**33.8**	**62.3**	**65.3**
NCDEQ Risk Calculator Values	Vapor Intrusion Resident Soil Gas To Indoor Air	Sitewide Risk																														
		Cumulative Carcinogenic Risk	6.6E-04	2.2E-05	7.7E-05	1.2E-07	6.6E-05	3.3E-04	1.1E-04	2.7E-04	1.8E-04	6.4E-05	5.0E-04	7.0E-05	1.6E-04	3.7E-05	3.0E-05	1.1E-04	1.1E-04	9.1E-05	6.8E-05	4.6E-04	3.9E-04	7.9E-05	1.0E-04	1.7E-05	4.5E-05	6.0E-06	2.60E-05	2.2E-05	1.8E-04	1.1E-04	1.0E-04
		Non-Carcinogenic Hazard Quotiennt	580	38	180	0.061	11	8.4	250	550	300	2.8	93	2.8	530	2.1	0.73	46	59	3.6	1.5	12	110	2.6	220	0.34	130	18	0.64	38	300	46	220
	Vapor Intrusion Non-Residential Worker Soil Gas To Indoor Air	Cumulative Carcinogenic Risk	5.90E-05	1.4E-06	5.3E-06	9.1E-09	4.6E-06	1.0E-05	8.3E-06	2.0E-05	1.3E-05	4.8E-06	3.9E-05	5.3E-06	1.2E-05	2.8E-06	2.3E-06	7.4E-06	7.8E-06	6.3E-06	5.2E-06	2.8E-05	2.4E-05	4.2E-06	7.20E-06	1.30E-06	3.4E-06	4.6E-07	2.00E-06	1.4E-06	1.3E-05	7.2E-06	7.20E-06
		Non-Carcinogenic Hazard Quotiennt	46	3.0	14	0.0048	0.88	0.66	20	44	24	0.22	7.4	0.23	42	0.17	0.058	3.7	4.7	0.29	0.12	0.95	8.4	0.2	18	0.027	10	1.4	0.051	3	24	3.7	18

Notes:
µg/m^3: micrograms per cubic meter.
Concentrations shown with "<" do not exceed the laboratory method detection limits (MDLs).
Concentrations shown in **BOLD** exceed the laboratory MDLs.
Compound not in the NCDEQ Risk Calculator, compound was not entered..
Exceeds the Lower Explosive Limit (LEL) of methane which is 5% by volume, the screening level is 1.25% by volume. Exceedances of the LEL are highlighted yellow.
NCDEQ Risk Calculator Values shown in red exceed risk.
E: Estimated value, exceeds instrument calibration range.
CN: See Case Narrative
J: The reported result is an estimated value

TO-15 & 3C Duplicate Locations:
Duplicate-01: SGP-01
Duplicate-02: SGP-08
Duplicate-03: SGI-18
Duplicate-04: SGI-25

NIOSH 6009 Mercury Sample Duplicate Locations:
Duplicate-01: SGP-31
Duplicate-02: SGP-11

TABLE 5B
Residental Soil Gas Sample Analytical Results Summary
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

Analytical Method	Analyte	CAS Number	Sample ID	SGI-30	SGP-31	SGP-33	SGI-34	SGP-35	SGP-36	SGP-37	SGP-39	SGI-40	SGI-42	SGI-44	SGI-46	SGP-47	SGP-48	DUP-05	DUP-06
			Date Collected	4/14/2025	4/14/2025	4/14/2025	4/14/2025	4/14/2025	4/14/2025	4/14/2025	4/15/2025	4/15/2025	4/15/2025	4/15/2025	4/15/2025	4/15/2025	4/15/2025	4/14/2025	4/15/2025
Volatile Organic Compounds by Method TO-15 (µg/m3)	1,1-Dichloroethane	75-34-3		<6.1	<18	<6.1	**1800**	**880**	<150	<73	<7.3	<6.1	<6.1	<6.1	<15	<6.1	<6.1	<18	<15
	1,1-Dichloroethylene	75-35-4		<5.9	<18	<5.9	<140	<140	<140	<71	<7.1	<5.9	<5.9	<5.9	<14	<5.9	<5.9	<18	<14
	1,2,4-Trimethylbenzene	95-63-6		<7.4	<22	<7.4	<180	<180	<180	<88	<8.8	<7.4	<7.4	<7.4	<18	<7.4	<7.4	<22	<18
	1,2-Dichlorotetrafluoroethane	76-14-2		<10	**380**	<10	**2000**	**1200**	**1200**	**2100**	**170**	<10	<10	<10	<25	<10	<10	**360**	**96**
	1,3,5-Trimethylbenzene	108-67-8		<7.4	<22	<7.4	<180	<180	**210 J**	<88	<8.8	<7.4	<7.4	<7.4	<18	<7.4	<7.4	<22	<18
	1,4-Dichlorobenzene	106-46-7		<9.0	<27	<9.0	<220	<220	**230 J**	<110	<11	<9.0	<9.0	<9.0	<22	<9.0	<9.0	<27	<22
	2-Butanone (MEK)	78-93-3		<4.4	**15 J**	<4.4	<110	<110	<110	<53	**7.4 J**	<4.4	<4.4	<4.4	<11	<4.4	**5.8 J**	<13	<11
	Benzene	71-43-2		<4.8	<14	<4.8	**680**	**120**	**2100**	**250**	<5.8	<4.8	<4.8	<4.8	<12	<4.8	<4.8	<14	<12
	Carbon Disulfide	75-15-0		<12	<35	<12	<280	<280	<280	<140	**22**	<12	<12	<12	<28	<12	<12	<35	<28
	Chlorobenzene	108-90-7		<6.9	<21	<6.9	<170	<170	<170	<83	<8.3	<6.9	<6.9	<6.9	<17	<6.9	<6.9	<21	<17
	Chloroethane	75-00-3		<4.0	<12	<4.0	**1300**	**850**	**210 J**	<47	<4.7	<4.0	<4.0	<4.0	<9.5	<4.0	<4.0	<12	<9.5
	Chloroform	67-66-3		<7.3	<22	<7.3	<180	<180	<180	<88	<8.8	<7.3	<7.3	**7.7**	<18	<7.3	<7.3	<22	<18
	cis-1,2-Dichloroethylene	156-59-2		<5.9	<18	<5.9	**210 J**	**200 J**	<140	<71	<7.1	<5.9	<5.9	<5.9	<14	<5.9	<5.9	<18	<14
	Cyclohexane	110-82-7		<5.2	**34 J**	<5.2	**4300**	**3100**	**3400**	**1900**	**8.7 J**	<5.2	<5.2	<5.2	<12	<5.2	<5.2	**31 J**	**20 J**
	Dichlorodifluoromethane	75-71-8		<19	<56	<19	**2800**	**1100**	**1200**	**2200**	**440**	<19	<19	<19	<45	<19	<19	<56	**260**
	Ethylbenzene	100-41-4		<6.5	<20	<6.5	<160	<160	**330 J**	<78	<7.8	<6.5	<6.5	<6.5	<16	<6.5	<6.5	<20	<16
	Heptane	142-82-5		<6.1	<18	<6.1	**14000**	**12000**	**15000**	**1300**	**8.9 J**	**6.5 J**	**12 J**	<6.1	<15	<6.1	<6.1	<18	**44**
	Hexane	110-54-3		<5.3	**17 J**	<5.3	**7100**	**3800**	**4500**	**2400**	**26**	<5.3	**8.5 J**	**9.0 J**	<13	**5.8 J**	**5.8 J**	<16	**33**
	Isopropylbenzene	98-82-8		<7.4	<22	<7.4	<180	<180	<180	<88	<8.8	<7.4	<7.4	<7.4	<18	<7.4	<7.4	<22	<18
	m+p-Xylenes	179601-23-1		<13	<39	<13	<310	<310	<310	**170 J**	<16	<13	<13	<13	<31	<13	<13	<39	<31
	Methylene chloride	75-09-2		<13	<39	<13	<310	<310	<310	<160	<16	<13	<13	**68**	<31	<13	<13	<39	<31
	Naphthalene	91-20-3		**8.3**	<24	<7.9	<190	<190	<190	<94	**14**	<7.9	**9**	<7.9	<19	<7.9	<7.9	<24	<19
	o-Xylene	95-47-6		<6.5	<20	<6.5	<160	<160	<160	<78	<7.8	<6.5	<6.5	<6.5	<16	<6.5	<6.5	<20	<16
	Propylene	115-07-1		<2.1	<6.2	<2.1	**2500**	**2700**	**3200**	<25	<2.5	<2.1	<2.1	<2.1	<5.0	<2.1	<2.1	<6.2	<5.0
	Tetrachloroethylene (PCE)	127-18-4		<10	<31	<10	<240	<240	<240	<120	<12	<10	<10	<10	<24	<10	<10	<31	<24
	Tetrahydrofuran	109-99-9		<4.4	<13	<4.4	<110	<110	**220 J**	<53	<5.3	<4.4	<4.4	<4.4	<11	<4.4	<4.4	<13	<11
	Toluene	108-88-3		<5.7	<17	<5.7	<140	<140	<140	**930**	<6.8	<5.7	**5.7 J**	<5.7	<14	<5.7	**6.2 J**	<17	**26 J**
	trans-1,2-Dichloroethylene	156-60-5		<5.9	<18	<5.9	<140	**280 J**	<140	<71	<7.1	<5.9	<5.9	<5.9	<14	<5.9	<5.9	<18	<14
	Trichloroethylene	79-01-6		<8.1	<24	<8.1	<190	<190	<190	<97	<9.7	<8.1	<8.1	<8.1	<19	<8.1	<8.1	<24	<19
	Trichlorofluoromethane	75-69-4		<21	<63	<21	<510	<510	<510	<250	<25	<21	<21	<21	<51	<21	<21	<63	<51
	Vinyl chloride	75-01-4		<3.8	<12	<3.8	**3200**	**500**	**240**	<46	<4.6	<3.8	<3.8	<3.8	<9.2	<3.8	<3.8	<12	<9.2
	Xylenes, Total	1330-20-7		<20	<59	<20	<470	<470	<470	<230	<23	<20	<20	<20	<47	<20	<20	<59	<47
EPA Method TO-15 (µg/m3)	Hydrogen Sulfide	7783-06-4		<84	<1300	<84	**26000**	<2500	<2500	**2600**	**96**	**130**	<84	<84	<130	<84	<84	<1300	<130
NIOSH 6009 (µg/m3)	Mercury	7439-97-6		<0.33	<0.33	<0.67	<0.33	<0.33	<0.33	<0.33	<0.31	<0.31	<0.33	<0.67	<0.33	<0.31	<0.31	NA	
EPA Method 3C (%)	Methane	74-82-8		<0.45	**28.4**	<0.45	**57.9**	**55.9**	**62.7**	**59.5**	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	<0.45	**28.4**	<0.90
NCDEQ Risk Calculator Values			**Sitewide Risk**																
	Vapor Intrusion Resident Soil Gas To Indoor Air	**Cumulative Carcinogenic Risk**	6.60E-04	3.00E-06	0		6.60E-04	1.1E-04	2.5E-04	2.1E-05	5.1E-06	0	3.3E-06	0		0	0	3.00E-06	5.10E-06
		Non-Carcinogenic Hazard Quotiennt	580	0.08	9.50E-04		380	2.1	3.9	39	1.6	1.9	0.088	3.7E-04		2.4E-04	3.1E-04	0.08	1.6
	Vapor Intrustion Non-Residential Worker Soil Gas To Indoor Air	**Cumulative Carcinogenic Risk**	5.90E-05	2.30E-07	0		1.80E-05	3.70E-06	1.70E-05	1.60E-06	3.90E-07	0	2.50E-07	0		0	0	2.30E-07	3.90E-07
		Non-Carcinogenic Hazard Quotiennt	46	0.0063	7.50E-05		30	0.17	0.31	3.1	0.13	0.15	0.0069	2.9E-05		1.9E-05	2.4E-05	0.0063	0.13

Notes:
µg/m^3: micrograms per cubic meter.
Concentrations shown with "<" do not exceed the laboratory method detection limits (MDLs).
Concentrations shown in **BOLD** exceed the laboratory MDLs.
Compound not in the NCDEQ Risk Calculator, compound was not entered..
No detections above laboratory detection limits, no risk calculator is required
Exceeds the Lower Explosive Limit (LEL) of methane which is 5% by volume, the screening level is 1.25% by volume. Exceedances of the LEL are highlighted yellow.
NCDEQ Risk Calculator Values shown in red exceed risk.
J: The reported result is an estimated value

TO-15 & 3C Duplicate Locations:
Duplicate-05: SGI-30
Duplicate-06: SGP-39

Table 6
Groundwater Sample Analytical Results Summary
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

Analytical Method		Method 8260D - Volatile Organic Compounds (VOC) (µg/l)																			Method 8270E SIM (µg/l)	Method 9056A (mg/L)	NCDEQ Risk Calculator Values			
																							Resident Groundwater Use		Non-Resident Groundwater Use	
Sample Location ID	Date	Acetone	Benzene	Chlorobenzene	cis-1,2-Dichloroethene	1,2-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichloropropane	Ethylbenzene	Isopropylbenzene	Isopropyl ether	4-Isopropyltoluene	Methyl tert-butyl ether	Naphthalene	N-Propylbenzene	Toluene	trans-1,2-Dichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Vinyl chloride	Xylenes, Total	1,4-Dioxane	Sulfate	Cumulative Carcinogenic Risk	Non-Carcinogenic Hazard Quotiennt	Cumulative Carcinogenic Risk	Non-Carcinogenic Hazard Quotiennt
CAS Numbers:		67-64-1	71-43-2	108-90-7	156-59-2	95-50-1	106-46-7	78-87-5	100-41-4	98-82-8	108-20-3	99-87-6	1634-04-4	91-20-3	103-65-1	108-88-3	156-60-5	95-63-6	108-67-8	75-01-4	1330-20-7	123-91-1	14808-79-8				
MW-1	4/16/2025	<10.0	<0.500	<0.420	<0.200	<0.500	**0.969 J**	<0.500	<0.500	<0.530	<0.740	**4.66**	<0.220	<3.00	<0.690	<0.900	<0.500	<0.820	<0.560	<0.500	<6.00	**0.745**	**3.92**	5.0E-04	26	1.0E-04	5.9
MW-3	4/16/2025	<10.0	**11.3**	**15.1**	<0.200	**0.586 J**	**5.45**	<0.500	**5.68**	**3.06**	**0.750 J**	**1.8**	**0.261 J**	**51.2**	**2.49**	**2.22**	<0.500	**3.39**	**1.75**	<0.500	**23**	**30.5**	**2.88**	5.8E-04	230	1.5E-04	55
MW-5	4/16/2025	<10.0	**5.04**	**6.31**	<0.200	<0.500	**14.2**	**1.3**	**1.01**	**1.22**	<0.740	<0.710	**0.322 J**	**3.91 J**	<0.690	<0.900	<0.500	**1.47**	<0.560	<0.500	<6.00	<0.369	**4.1**	2.1E-04	4.1	4.6E-05	0.73
MW-6	4/16/2025	**10.1 J**	**4.85**	**3**	**15.8**	<0.500	**5.98**	<0.500	**11.6**	**0.816 J**	**1.43**	**0.730 J**	**0.349 J**	<3.00	<0.690	**1.25**	**1.88**	**1.15**	<0.560	**0.946 J**	**12.6**	**Unable to Sample**		8.2E-05	1.6	9.9E-06	0.35
MW-7	4/16/2025	<10.0	**5.39**	**9.71**	<0.200	<0.500	**2.6**	<0.500	**3.91**	**2.2**	<0.740	**1.04**	<0.220	**13.5**	**2.04**	**1.08**	<0.500	**0.945 J**	<0.560	<0.500	**7.30 J**	**0.583**	**1.16**	1.5E-04	36	3.9E-05	8.5
MW-8	4/16/2025	<10.0	**1.24**	**1.75**	<0.200	<0.500	**0.824 J**	<0.500	<0.500	<0.530	<0.740	<0.710	<0.220	<3.00	<0.690	<0.900	<0.500	<0.820	<0.560	<0.500	<6.00	**20.5**	**6.49**	1.4E-04	98	2.8E-05	23
MW-9	4/16/2025	<10.0	**2.99**	**8.56**	<0.200	<0.500	**1.48**	<0.500	<0.500	**1.05**	<0.740	<0.710	<0.220	**6.56**	<0.690	<0.900	<0.500	<0.820	<0.560	<0.500	<6.00	**5.85**	**2.11**	2.0E-04	43	4.30E-05	10
DUP-01	4/16/2025	<10.0	**10.8**	**14.2**	<0.200	**0.562 J**	**5.34**	<0.500	**5.28**	**2.83**	**0.793 J**	**1.63**	<0.220	**50**	**2.34**	**1.85**	<0.500	**3.15**	**1.66**	<0.500	**21.2**	**30.6**	**2.91**	5.8E-04	11	1.5E-04	2.6
MW-2	4/16/2025	**Not Enough Water in Well to Collect A Sample**																						**Sitewide Risk**			
MW-4	4/16/2025																										
15A NCAC 2L Groundwater Standards & IMACs		**6000**	**1**	**50**	**70**	**20**	**6**	**0.6**	**600**	**70**	**70**	**25**	**20**	**6**	**70**	**600**	**100**	**400**	**400**	**0.03**	**500**	**3**	**250000**	1.1E-03	250	2.5E-04	59

Notes:

ug/l: Micrograms per liter.
mg/L: Milligrams per liter
Concentrations shown with "<" do not exceed the laboratory method detection limits (MDLs).
Concentrations shown in **BOLD** exceed the laboratory MDLs.
IMACs: NCDEQ Groundwater Interim Maximum Allowable Concentrations
Detections that exceed the 15 NCAC 2L Standards or IMACs are highlighted yellow.
Compound not in the NCDEQ Risk Calculator, compound was not entered..
J: The reported result is an estimated value

Duplicate Location
Duplicate-01: MW-3

Table 6
Groundwater Sample Analytical Results Summary
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

Analytical Method		Method 8270E SIM - Semi Volatile Organic Compounds (SVOC) (µg/l)											Metals (16) by EPA Method 6020 (µg/l)												Method 350.1/353.2 - General Chemistry (mg/L)			NCDEQ Risk Calculator Values			
																												Resident Groundwater Use		Non-Resident Groundwater Use	
Sample Location ID	Date	1,1'-Biphenyl	2,4-Dimethylphenol	2-Methylnaphthalene	3 & 4 Methylphenol	4-Chloro-3-methylphenol	Benzaldehyde	Caprolactam	Diethyl phthalate	Di-n-butyl phthalate	N-Nitrosodiphenylamine	Phenol	Arsenic	Barium	Beryllium	Cadmium	Hexavalent Chromium	Cobalt	Copper	Lead	Manganese	Nickel	Selenium	Vanadium	Zinc	Ammonia as N	Nitrate Nitrite as N	Nitrate as N	Cumulative Carcinogenic Risk	Non-Carcinogenic Hazard Quotiennt	Cumulative Carcinogenic Risk	Non-Carcinogenic Hazard Quotiennt
CAS Numbers:		92-52-4	105-67-9	91-57-6	15831-10-4	59-50-7	100-52-7	105-60-2	84-66-2	84-74-2	86-30-6	108-95-2	7440-38-2	7440-39-3	7440-41-7	7440-43-9	7440-47-3	7440-48-4	7440-50-8	7439-92-1	7439-96-5	7440-02-0	7782-49-2	7440-62-2	7440-66-6	7664-41-7	14797-65-0	14797-55-8				
MW-1	4/16/2025	<0.410	<0.235	<0.792	<4.50	<0.713	<0.655 *1	**14.2**	<3.91 *-	<3.91 *-	<0.186	<0.664	**25.8**	**15.3**	<0.200	<0.0780	**2.85 J**	**0.460 J**	**2.07 J**	**0.215 J**	**68.3**	**0.585 J**	**1.03 J B**	**8.32 J**	**22.7**	**22.6 F1**	**0.168**	**0.168**	5.3E-04	27	1.0E-04	5.9
MW-3	4/16/2025	<0.404	<0.231	**5.28 J**	<4.42	**12.5**	**2.22 J *1**	**19.4**	**15.3 *-**	**4.66 J *-**	**1.26 J**	**1.08 J**	**1.53 J**	**79.6**	<0.200	**0.220 J**	**3.85 J**	**3.59**	**2.23 J**	**8.13**	**69.7**	**13.4**	<0.990	**2.31 J**	**25.7**	**230**	**0.0669**	**0.0669**	6.1E-04	230	1.5E-04	55
MW-5	4/16/2025	<0.408	<0.233	<0.786	<4.47	<0.709	<0.650 *1	**9.07 J**	<3.88 *-	<3.88 *-	<0.184	<0.660	**7.03**	**206**	**1.16**	**0.355 J**	**10.6**	**2.87**	**7.20**	**20.7**	**440**	**27.5**	**1.57 J B**	**53.0**	**1120**	**0.0303 J**	<0.1	<0.1	3.1E-04	4.9	5.6E-05	0.92
MW-6	4/16/2025	**0.464 J**	**1.11 J**	<0.797	<4.52	**1.51 J**	<0.659 *1	**24.3**	<3.93 *-	<3.93 *-	**1.88 J**	**0.715 J**	Unable to Sample - Not Enough Water to Fill up All Sample Bottles																8.2E-05	1.6	9.9E-06	0.35
MW-7	4/16/2025	<0.412	<0.235	**0.839 J**	<4.51	**3.23 J**	<0.657 *1	**8.21 J**	<3.92 *-	<3.92 *-	**1.77 J**	**0.699 J**	**0.880 J**	**381**	<0.200	**0.170 J**	**2.07 J**	**1.35**	**2.15 J**	**11.2**	**1150**	**3.35 J**	<0.990	**1.29 J**	**228**	**33.8**	**0.0963 J**	**0.0963**	1.7E-04	36	4.1E-05	8.5
MW-8	4/16/2025	<0.409	<0.234	<0.789	**21.9 I**	**5.95 J**	<0.653 *1	**9.61 J**	<3.90 *-	<3.90 *-	**0.607 J**	**8.88 J**	**4.55**	**239**	<0.200	<0.0780	**2.87 J**	**1.87**	<1.08	**0.705 J**	**245**	**7.35**	<0.990	**7.53 J**	**14.2 J**	**100**	**0.0928 J**	**0.0928 J**	1.6E-04	98	3.1E-05	23
MW-9	4/16/2025	<0.416	<0.238	<0.802	<4.55	**5.74 J**	<0.663 *1	**8.31 J**	<3.96 *-	<3.96 *-	**2.49 J**	<0.673	**6.03**	**111**	<0.200	<0.0780	<1.20	**0.610**	<1.08	<0.210	**137**	**1.10 J**	<0.990	**6.27 J**	**6.55 J**	**42.4**	**0.098 J**	**0.098 J**	2.0E-04	43	4.30E-05	10
DUP-01	4/16/2025	<0.410	<0.235	**5.35 J**	<4.50	**12.6**	**2.28 J *1**	**17.5**	**16.0 *-**	**4.67 J *-**	**1.27 J**	**1.07 J**	**1.64 J**	**80.4**	<0.200	**0.190 J**	**3.78 J**	**3.52**	**3.64 J**	**9.11**	**67.3**	**13.7**	<0.990	**1.70 J**	**26.4**	**217**	**0.0783 J**	**0.0783 J**	5.8E-04	11	1.5E-04	2.6
MW-2	4/16/2025	Not Enough Water in Well to Collect A Sample																										Sitewide Risk			
MW-4	4/16/2025																														
15A NCAC 2L Groundwater Standards & IMACs		**400**	**100**	**30**	**NL**	**NL**	**700**	**4000**	**6000**	**700**	**30**	**30**	**10**	**700**	**4**	**2**	**10**	**1**	**1000**	**15**	**50**	**100**	**20**	**7**	**1000**	**1.5**	**NL**	**10**	1.2E-03	250	2.6E-04	59

Notes:
ug/l: Micrograms per liter.
mg/L: Milligrams per liter
Concentrations shown with "<" do not exceed the laboratory method detection limits (MDLs).
Concentrations shown in **BOLD** exceed the laboratory MDLs.
IMACs: NCDEQ Groundwater Interim Maximum Allowable Concentrations
NL: No standard is established for the constituent
All detections that exceed the 15 NCAC 2L Standards or IMACs are highlighted.
Compound not in the NCDEQ Risk Calculator, compound was not entered..

J: The reported result is an estimated value.
*-: LCS and/or LCSD is outside acceptance limits, low biased.
*1: LCS/LCSD RPD exceeds control limits.
I: Value is estimated maximum possible concentration.

Duplicate Location
Duplicate-01: MW-3

Appendices

Appendix I – Coordinates of Selected Features

APPENDIX I
Coordinates of Selected Features
Cumberland County/Cliffdale Landfill (NCD980502900)
7583 Lowell Harris Road, Fayetteville, Cumberland County, North Carolina
S&ME Project No. 23050459 Task Order 2900 RI-12

Site Feature	Type	Location			
		Latitude	Longitude	Northing	Easting
SGP-1	Soil Gas Probe	-79.05643066	35.04555352	471512.3403	1983110.364
SGP-2	Soil Gas Probe	-79.05653304	35.04502771	471320.9985	1983079.613
SGP-3	Soil Gas Probe	-79.05565303	35.044989	471306.7616	1983342.992
SGP-4	Soil Gas Probe	-79.05487998	35.04484266	471253.374	1983574.339
SGP-5	Soil Gas Probe	-79.05675815	35.04382471	470883.2192	1983011.988
SGI-6	Soil Gas Implant	-79.05566431	35.04408927	470979.3171	1983339.433
SGP-7	Soil Gas Probe	-79.05479623	35.04408966	470979.3171	1983599.254
SGP-8	Soil Gas Probe	-79.05391626	35.04409006	470979.3171	1983862.633
SGP-9	Soil Gas Probe	-79.05338057	35.04394634	470926.9258	1984022.939
SGP-10	Soil Gas Probe	-79.05567559	35.04319931	470655.4316	1983335.874
SGP-11	Soil Gas Probe	-79.05480752	35.04319971	470655.4316	1983595.694
SGI-12	Soil Gas Implant	-79.05392755	35.04318054	470648.3132	1983859.074
SGP-13	Soil Gas Probe	-79.0530714	35.04322982	470666.1091	1984115.335
SGP-14	Soil Gas Probe	-79.056769	35.04232841	470338.6645	1983008.429
SGP-15*	Abandoned SGP	-79.055675	35.04232892	470338.6645	1983335.874
SGP-16*	Abandoned SGP	-79.05480693	35.04231954	470335.1055	1983595.694
SGP-17*	Abandoned SGP	-79.05390319	35.04231016	470331.5461	1983866.192
SGI-18	Soil Gas Implant	-79.05298755	35.04229101	470324.4277	1984140.249
SGP-19	Soil Gas Probe	-79.05258086	35.04226732	470315.7433	1984261.973
SGP-20	Soil Gas Probe	-79.05168199	35.04186881	470170.5687	1984530.938
SGP-21	Soil Gas Probe	-79.05674644	35.04124819	469945.5314	1983014.956
SGP-22	Soil Gas Probe	-79.05598988	35.04111083	469895.4124	1983241.376
SGP-23	Soil Gas Probe	-79.05482985	35.04102861	469865.2934	1983588.576
SGP-24	Soil Gas Probe	-79.05384289	35.04102905	469865.2934	1983883.988
SGI-25	Soil Gas Implant	-79.05291537	35.04100012	469854.6159	1984161.604
SGI-26	Soil Gas Implant	-79.05217814	35.04102978	469865.2934	1984382.273
SGP-27	Soil Gas Probe	-79.05129841	35.04136267	469986.3056	1984645.653
SGP-28	Soil Gas Probe	-79.05046597	35.04126522	469950.7138	1984894.795
SGP-29	Soil Gas Probe	-79.05131925	35.04077827	469773.6233	1984639.307
SGI-30	Soil Gas Implant	-79.05691909	35.04562272	471537.6099	1982964.193
SGP-31	Soil Gas Probe	-79.05710342	35.04532518	471429.3543	1982908.96
SGP-32	Soil Gas Probe	-79.05697038	35.04507635	471338.7731	1982948.728
SGP-33	Soil Gas Pribe	-79.05702145	35.04422037	471027.2616	1982933.263
SGI-34	Soil Gas Implant	-79.05707263	35.04352223	470773.1922	1982917.797
SGP-35	Soil Gas Probe	-79.05708704	35.0430123	470587.6109	1982913.379
SGP-36	Soil Gas Probe	-79.05709401	35.04242952	470375.5181	1982911.169
SGP-37	Soil Gas Probe	-79.05709413	35.04217237	470281.932	1982911.081
SGP-38	Soil Gas Probe	-79.05710839	35.04188316	470176.6809	1982906.751
SGP-39	Soil Gas Probe	-79.05713772	35.0416039	470075.0532	1982897.914
SGI-40	Soil Gas Implant	-79.05721128	35.04082416	469791.2906	1982875.732
SGI-41	Soil Gas Implant	-79.05684929	35.04079665	469781.2161	1982984.076
SGI-42	Soil Gas Implant	-79.0565614	35.04075429	469765.7513	1983070.239
SGI-43	Soil Gas Implant	-79.05564614	35.04075472	469765.7513	1983344.193
SGI-44	Soil Gas Implant	-79.05388178	35.04035486	469619.9373	1983872.215
SGP-45	Soil Gas Probe	-79.05357912	35.0403125	469604.4721	1983962.797
SGI-46	Soil Gas Implant	-79.05325849	35.04029253	469597.1538	1984058.763
SGP-47	Soil Gas Probe	-79.05170157	35.04034064	469614.414	1984524.787
SGP-48	Soil Gas Probe	-79.05105558	35.04011327	469531.5654	1984718.101
MW-1	Monitor Well	1983072.495	471477.6025	471477.6025	1983072.495
MW-2	Monitor Well	1983168.593	470676.7865	470676.7865	1983168.593
MW-3	Monitor Well	1983897.557	470671.2255	470671.2255	1983897.557
MW-4	Monitor Well	1984553.323	470140.8401	470140.8401	1984553.323
MW-5	Monitor Well	1983032.541	469927.1263	469927.1263	1983032.541
MW-6	Monitor Well	1983763.796	469840.0261	469840.0261	1983763.796
MW-7	Monitor Well	1984474.812	469879.5303	469879.5303	1984474.812
MW-8	Monitor Well	1984935.797	469935.3379	469935.3379	1984935.797
MW-9	Monitor Well	1984834.931	469745.1404	469745.1404	1984834.931

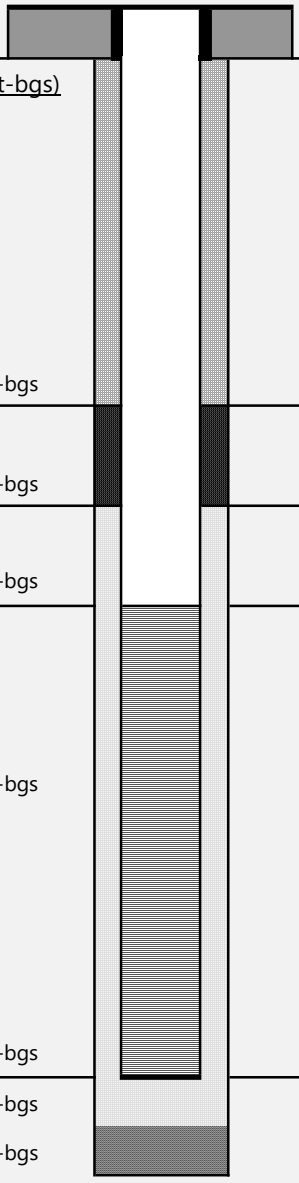
Notes:

Site feature locations are reported in decimal degrees for Lattitude/Longitude and in feet in the North Carolina State Plane Coordinate System (NAD83).

Appendix II – Soil Gas Probe Construction Logs

Well Construction Details

Well ID	Project Name		Project Number	Address
SGI-30	Cumberland County/Cliffdale LF		23050459	7591 Levi Road
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/1/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	3.0	0.1 ft-bgs
Top of Filter Pack -	3.0	0.1 ft-bgs
Top of Screen -	4.5	0.1 ft-bgs
Screened Interval -	0.5	0.5 ft-bgs
Bottom of Screen -	5.0	0.1 ft-bgs
Bottom of Filter Pack -	6.0	0.1 ft-bgs
Cave In -	6.0	0.1 ft-bgs
Total Boring Depth -	6.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
Teflon Tubing		
0.0	to	4.5
Screen Type		
Soil Gas Implant		
4.5	to	5.0
Seal Type		
Granular Bentonite		
0.0	to	3.0
Filter Pack		
No. 2 Sand		
3.0	to	5.0

BTOC - Below Top of Casing

TBD - To Be Determined

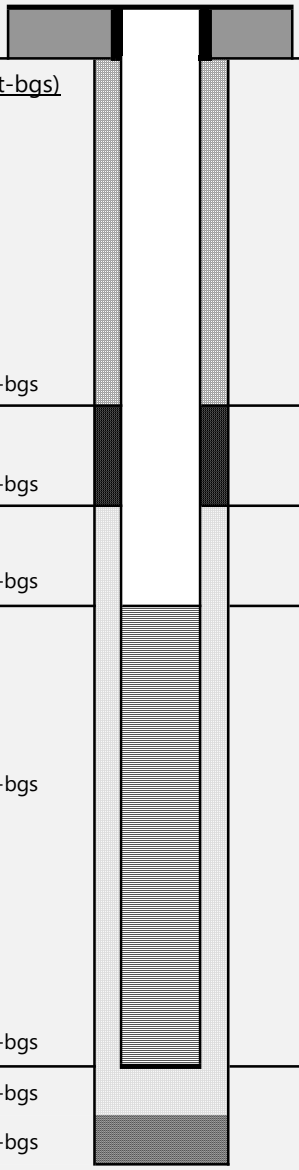
Notes

Groundwater was at a depth of 6 ft-bgs, implant was placed at 5 ft-bgs.

Lithologic Description	
0 ft-bgs - 5 ft-bgs	Brown/tan silty sand
6 ft-bgs	gray wet clays

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-31	Cumberland County/Cliffdale LF		23050459	7502 Martha Court
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/1/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	4.0	0.1 ft-bgs
Top of Filter Pack -	4.0	0.1 ft-bgs
Top of Screen -	5.0	0.1 ft-bgs
Screened Interval -	5.0	0.5 ft-bgs
Bottom of Screen -	10.0	0.1 ft-bgs
Bottom of Filter Pack -	10.0	0.1 ft-bgs
Cave In -	10.0	0.1 ft-bgs
Total Boring Depth -	10.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	5.0
Screen Type		
1-in Sch 40 0.01-in PVC		
5.0	to	10.0
Seal Type		
Granular Bentonite		
0.0	to	4.0
Filter Pack		
No. 2 Sand		
4.0	to	10.0

BTOC - Below Top of Casing

TBD - To Be Determined

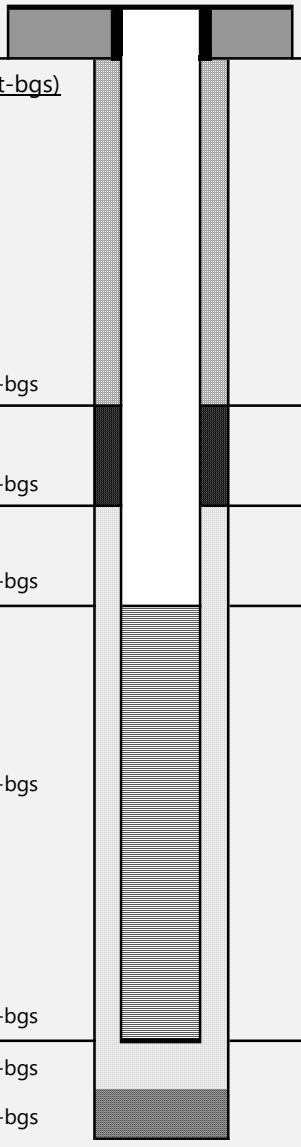
Notes

SGP is located to the east of the house inbetween the LF and property

Lithologic Description	
0 ft-bgs - 10 ft-bgs	Brown/tan silty sand

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-32	Cumberland County/Cliffdale LF		23050459	7500 Martha Court
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/2/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	4.0	0.1 ft-bgs
Top of Filter Pack -	4.0	0.1 ft-bgs
Top of Screen -	5.0	0.1 ft-bgs
Screened Interval -	2.0	0.5 ft-bgs
Bottom of Screen -	7.0	0.1 ft-bgs
Bottom of Filter Pack -	7.0	0.1 ft-bgs
Cave In -	7.0	0.1 ft-bgs
Total Boring Depth -	7.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	5.0
Screen Type		
1-in Sch 40 0.01-in PVC		
5.0	to	7.0
Seal Type		
Granular Bentonite		
0.0	to	4.0
Filter Pack		
No. 2 Sand		
4.0	to	7.0

BTOC - Below Top of Casing

TBD - To Be Determined

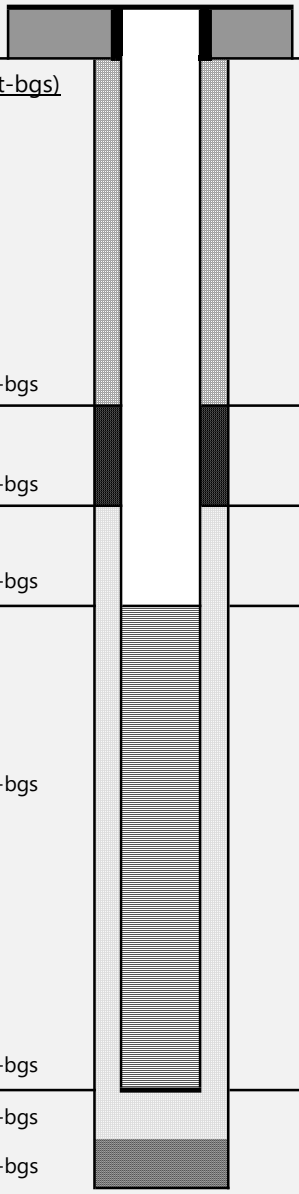
Notes

Auger refusal at 7 ft-bgs, set probe at that depth

Lithologic Description	
0 ft-bgs - 7 ft-bgs	Brown/orange silty sand

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-33	Cumberland County/Cliffdale LF		23050459	7590 Lowell Harris Road
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/3/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height - 0.0 ft

Depth Below Ground Surface (ft-bgs)

Top of Seal - 5.0 0.1 ft-bgs

Top of Filter Pack - 5.0 0.1 ft-bgs

Top of Screen - 6.0 0.1 ft-bgs

Screened Interval - 5.0 0.5 ft-bgs

Bottom of Screen - 11.0 0.1 ft-bgs

Bottom of Filter Pack - 11.0 0.1 ft-bgs

Cave In - 11.0 0.1 ft-bgs

Total Boring Depth - 11.0 0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	6.0
Screen Type		
1-in Sch 40 0.01-in PVC		
6.0	to	11.0
Seal Type		
Granular Bentonite		
0.0	to	5.0
Filter Pack		
No. 2 Sand		
5.0	to	11.0

BTOC - Below Top of Casing

TBD - To Be Determined

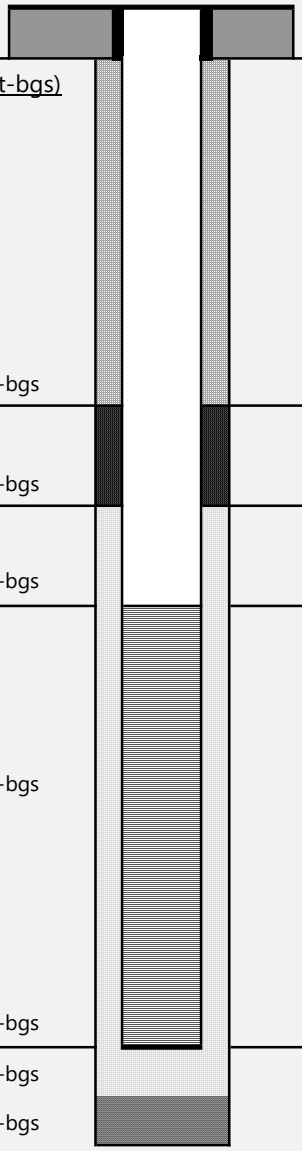
Notes

SGP is located by corner of two white fences on east end of property

Lithologic Description	
0 ft-bgs - 10 ft-bgs	Brown silty sand

Well Construction Details

Well ID	Project Name		Project Number	Address
SGI-34	Cumberland County/ Cliffdale LF		23050459	1005 Leslie Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	3/31/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height - 0.0 ft

Depth Below Ground Surface (ft-bgs)

Top of Seal - 3.0 0.1 ft-bgs

Top of Filter Pack - 3.0 0.1 ft-bgs

Top of Screen - 5.0 0.1 ft-bgs

Screened Interval - 0.5 0.5 ft-bgs

Bottom of Screen - 5.5 0.1 ft-bgs

Bottom of Filter Pack - 5.5 0.1 ft-bgs

Cave In - 5.5 0.1 ft-bgs

Total Boring Depth - 5.5 0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
Teflon Tubing		
0.0	to	5.0
Screen Type		
Soil Gas Implant		
5.0	to	5.5
Seal Type		
Granular Bentonite		
0.0	to	3.0
Filter Pack		
No. 2 Sand		
3.0	to	5.5

BTOC - Below Top of Casing

TBD - To Be Determined

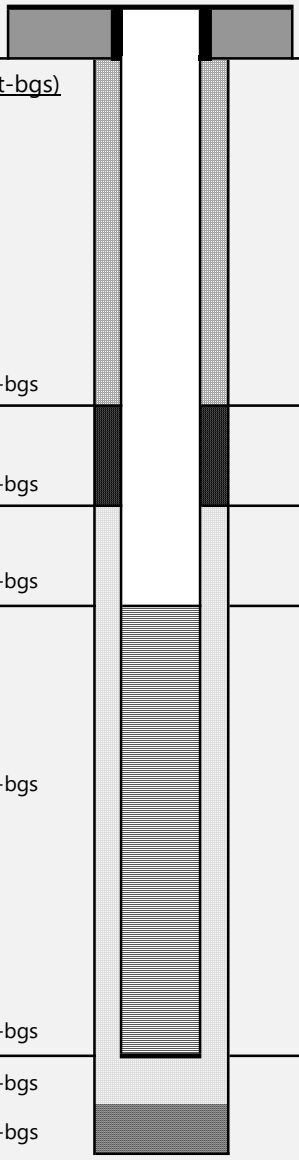
Notes

Hit auger refusal at 5.5 ft-bgs and set implant

Lithologic Description	
0 ft-bgs - 5.5 ft-bgs	Brown/tan silty sand

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-35	Cumberland County/Cliffdale LF		23050459	1013 Leslie Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	3/31/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height - 0.0 ft

Depth Below Ground Surface (ft-bgs)

Top of Seal - 5.0 0.1 ft-bgs

Top of Filter Pack - 5.0 0.1 ft-bgs

Top of Screen - 6.0 0.1 ft-bgs

Screened Interval - 5.0 0.5 ft-bgs

Bottom of Screen - 11.0 0.1 ft-bgs

Bottom of Filter Pack - 11.0 0.1 ft-bgs

Cave In - 11.0 0.1 ft-bgs

Total Boring Depth - 11.0 0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	6.0
Screen Type		
1-in Sch 40 0.01-in PVC		
6.0	to	11.0
Seal Type		
Granular Bentonite		
0.0	to	5.0
Filter Pack		
No. 2 Sand		
5.0	to	11.0

BTOC - Below Top of Casing

TBD - To Be Determined

Notes

SGP is located in the backyard north of the small shed

Lithologic Description	
0 ft-bgs - 11 ft-bgs	Brown/tan silty sand

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-36	Cumberland County/Cliffdale LF		23050459	1021 Leslie Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	3/31/2025	Cumberland	Fayetteville	Hand Auger

Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	5.0	0.1 ft-bgs
Top of Filter Pack -	5.0	0.1 ft-bgs
Top of Screen -	6.0	0.1 ft-bgs
Screened Interval -	5.0	0.5 ft-bgs
Bottom of Screen -	11.0	0.1 ft-bgs
Bottom of Filter Pack -	11.0	0.1 ft-bgs
Cave In -	11.0	0.1 ft-bgs
Total Boring Depth -	11.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	6.0
Screen Type		
1-in Sch 40 0.01-in PVC		
6.0	to	11.0
Seal Type		
Granular Bentonite		
0.0	to	5.0
Filter Pack		
No. 2 Sand		
5.0	to	11.0

BTOC - Below Top of Casing

TBD - To Be Determined

Notes
SGP is located in the northeast area of the backyard

Lithologic Description	
0 ft-bgs - 11 ft-bgs	Brown/tan silty sand with some maroon clays mixed throughout the boring

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-37	Cumberland County/Cliffdale LF		23050459	1026 Leslie Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	3/31/2025	Cumberland	Fayetteville	Hand Auger

Stickup Height - 0.0 ft

Depth Below Ground Surface (ft-bgs)

Top of Seal - 5.0 0.1 ft-bgs

Top of Filter Pack - 5.0 0.1 ft-bgs

Top of Screen - 6.0 0.1 ft-bgs

Screened Interval - 5.0 0.5 ft-bgs

Bottom of Screen - 11.0 0.1 ft-bgs

Bottom of Filter Pack - 11.0 0.1 ft-bgs

Cave In - 11.0 0.1 ft-bgs

Total Boring Depth - 11.0 0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	6.0
Screen Type		
1-in Sch 40 0.01-in PVC		
6.0	to	11.0
Seal Type		
Granular Bentonite		
0.0	to	5.0
Filter Pack		
No. 2 Sand		
5.0	to	11.0

BTOC - Below Top of Casing

TBD - To Be Determined

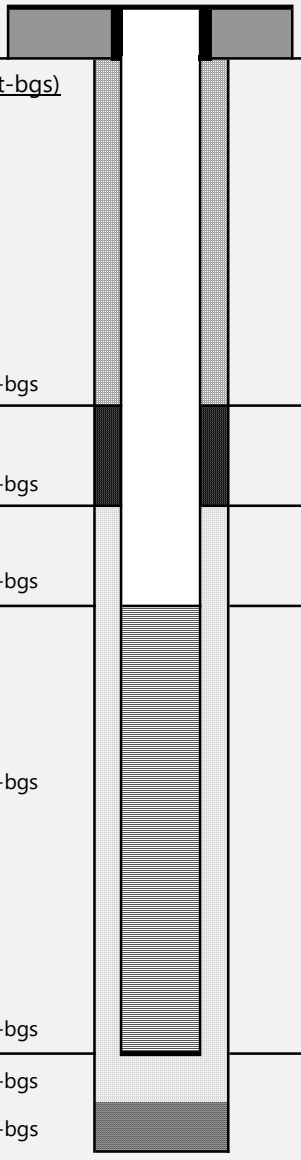
Notes

SGP is located in the southeast portion of the backyard

Lithologic Description	
0 ft-bgs - 11 ft-bgs	Brown/tan silty sand, very firm

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-38	Cumberland County/Cliffdale LF		23050459	1029 Leslie Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/1/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft	
Depth Below Ground Surface (ft-bgs)			
Top of Seal -	4.0	0.1	ft-bgs
Top of Filter Pack -	4.0	0.1	ft-bgs
Top of Screen -	5.0	0.1	ft-bgs
Screened Interval -	2.0	0.5	ft-bgs
Bottom of Screen -	7.0	0.1	ft-bgs
Bottom of Filter Pack -	7.0	0.1	ft-bgs
Cave In -	7.0	0.1	ft-bgs
Total Boring Depth -	7.0	0.1	ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	5.0
Screen Type		
1-in Sch 40 0.01-in PVC		
5.0	to	7.0
Seal Type		
Granular Bentonite		
0.0	to	4.0
Filter Pack		
No. 2 Sand		
4.0	to	7.0

BTOC - Below Top of Casing

TBD - To Be Determined

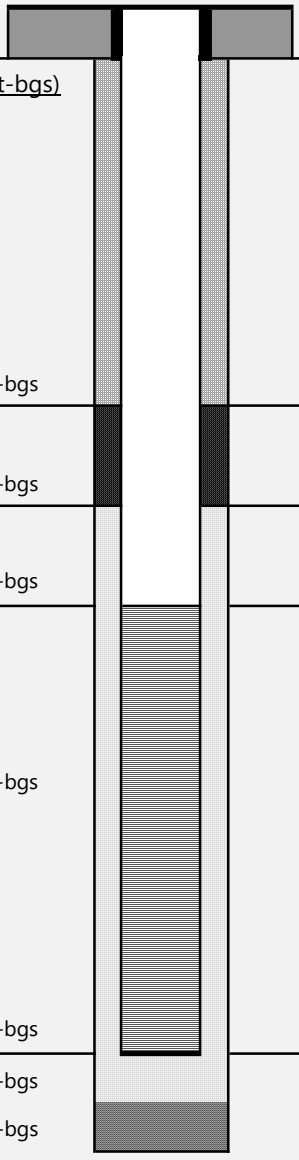
Notes

Groundwater is at 8.5 ft-bgs, screen set at 7 ft-bgs

Lithologic Description	
0 ft-bgs - 8.5 ft-bgs	Brown/tan silty sand, very firm
8.5 ft-bgs - 9 ft-bgs	Groundwater

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-39	Cumberland County/Cliffdale LF		23050459	1033 Leslie Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/1/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	4.0	0.1 ft-bgs
Top of Filter Pack -	4.0	0.1 ft-bgs
Top of Screen -	5.0	0.1 ft-bgs
Screened Interval -	5.0	0.5 ft-bgs
Bottom of Screen -	10.0	0.1 ft-bgs
Bottom of Filter Pack -	10.0	0.1 ft-bgs
Cave In -	10.0	0.1 ft-bgs
Total Boring Depth -	10.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	5.0
Screen Type		
1-in Sch 40 0.01-in PVC		
5.0	to	10.0
Seal Type		
Granular Bentonite		
0.0	to	4.0
Filter Pack		
No. 2 Sand		
4.0	to	10.0

BTOC - Below Top of Casing

TBD - To Be Determined

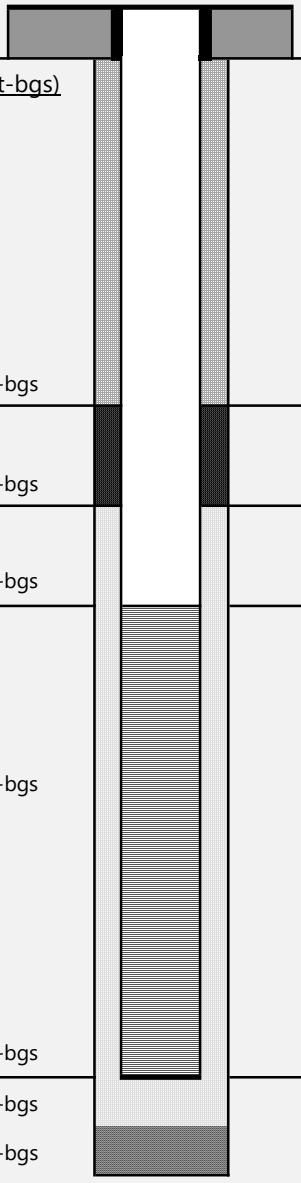
Notes

Groundwater is at 8.5 ft-bgs, screen set at 7 ft-bgs

Lithologic Description	
0 ft-bgs - 3 ft-bgs	Gray sands with strong LFG odor
3 ft-bgs - 10 ft-bgs	Brown/tan/orange silty sand

Well Construction Details

Well ID	Project Name		Project Number	Address
SGI-40	Cumberland County/Cliffdale LF		23050459	7598 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/1/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	1.0	0.1 ft-bgs
Top of Filter Pack -	1.0	0.1 ft-bgs
Top of Screen -	2.0	0.1 ft-bgs
Screened Interval -	0.5	0.5 ft-bgs
Bottom of Screen -	2.5	0.1 ft-bgs
Bottom of Filter Pack -	3.0	0.1 ft-bgs
Cave In -	3.0	0.1 ft-bgs
Total Boring Depth -	3.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
Teflon Tubing		
0.0	to	2.0
Screen Type		
Soil Gas Implant		
2.0	to	2.5
Seal Type		
Granular Bentonite		
0.0	to	1.0
Filter Pack		
No. 2 Sand		
1.0	to	2.5

BTOC - Below Top of Casing

TBD - To Be Determined

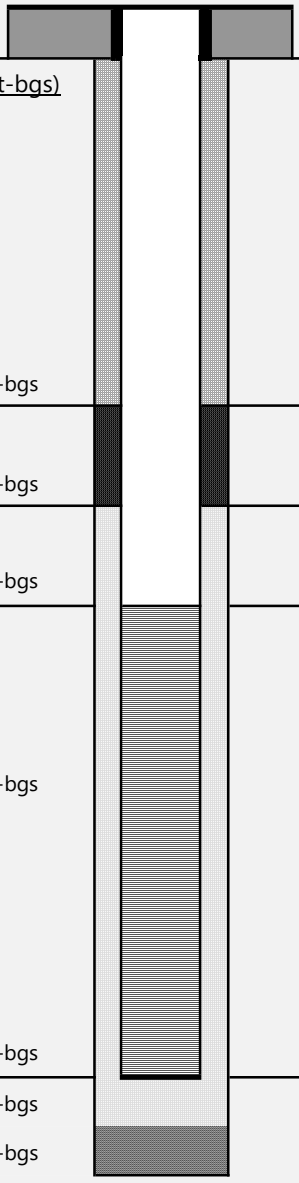
Notes

Groundwater was at a depth of 3 ft-bgs, implant was placed at 2.5 ft-bgs.

Lithologic Description	
0 ft-bgs - 2.5 ft-bgs	Black top soil
3 ft-bgs	Groundwater

Well Construction Details

Well ID	Project Name		Project Number	Address
SGI-41	Cumberland County/Cliffdale LF		23050459	7594 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/2/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	1.0	0.1 ft-bgs
Top of Filter Pack -	1.0	0.1 ft-bgs
Top of Screen -	2.0	0.1 ft-bgs
Screened Interval -	0.5	0.5 ft-bgs
Bottom of Screen -	2.5	0.1 ft-bgs
Bottom of Filter Pack -	3.0	0.1 ft-bgs
Cave In -	3.0	0.1 ft-bgs
Total Boring Depth -	3.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
Teflon Tubing		
0.0	to	2.0
Screen Type		
Soil Gas Implant		
2.0	to	2.5
Seal Type		
Granular Bentonite		
0.0	to	1.0
Filter Pack		
No. 2 Sand		
1.0	to	2.5

BTOC - Below Top of Casing

TBD - To Be Determined

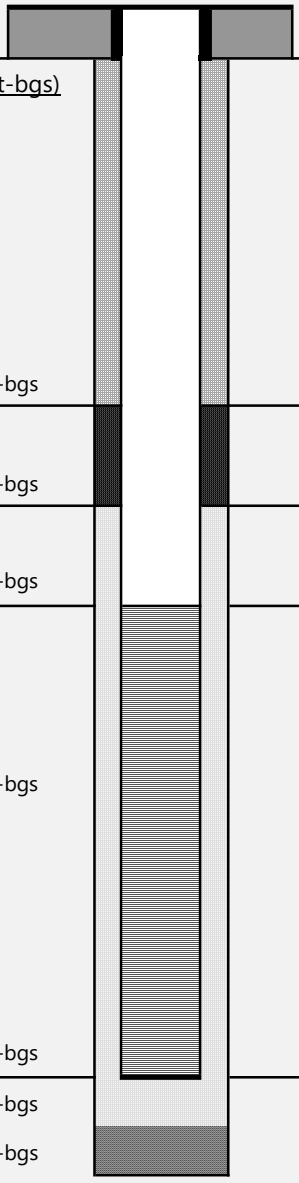
Notes

Groundwater was at a depth of 3 ft-bgs, implant was placed at 2.5 ft-bgs.

Lithologic Description	
0 ft-bgs - 2.5 ft-bgs	Tan silty sand
3 ft-bgs	Groundwater

Well Construction Details

Well ID	Project Name		Project Number	Address
SGI-42	Cumberland County/Cliffdale LF		23050459	7590 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/2/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	1.0	0.1 ft-bgs
Top of Filter Pack -	1.0	0.1 ft-bgs
Top of Screen -	1.0	0.1 ft-bgs
Screened Interval -	1.0	0.5 ft-bgs
Bottom of Screen -	2.0	0.1 ft-bgs
Bottom of Filter Pack -	2.5	0.1 ft-bgs
Cave In -	2.5	0.1 ft-bgs
Total Boring Depth -	2.5	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
Teflon Tubing		
0.0	to	1.0
Screen Type		
Soil Gas Implant		
1.0	to	2.0
Seal Type		
Granular Bentonite		
0.0	to	1.0
Filter Pack		
No. 2 Sand		
1.0	to	2.0

BTOC - Below Top of Casing

TBD - To Be Determined

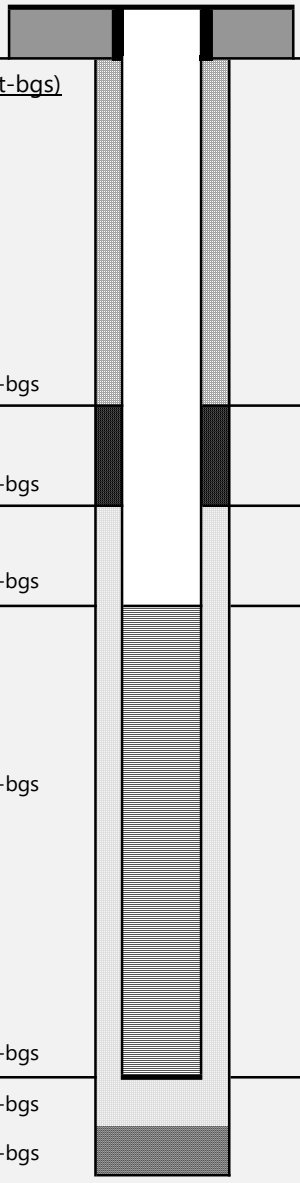
Notes

Groundwater was at a depth of 2.5 ft-bgs, implant was placed at 2 ft-bgs.

Lithologic Description	
0 ft-bgs - 2.5 ft-bgs	Tan silty sand
2.5 ft-bgs	Groundwater

Well Construction Details

Well ID	Project Name		Project Number	Address
SGI-43	Cumberland County/Cliffdale LF		23050459	7578 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/2/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	3.0	0.1 ft-bgs
Top of Filter Pack -	3.0	0.1 ft-bgs
Top of Screen -	3.5	0.1 ft-bgs
Screened Interval -	0.5	0.5 ft-bgs
Bottom of Screen -	4.0	0.1 ft-bgs
Bottom of Filter Pack -	4.0	0.1 ft-bgs
Cave In -	4.0	0.1 ft-bgs
Total Boring Depth -	4.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
Teflon Tubing		
0.0	to	3.5
Screen Type		
Soil Gas Implant		
3.5	to	4.0
Seal Type		
Granular Bentonite		
0.0	to	3.0
Filter Pack		
No. 2 Sand		
3.0	to	4.0

BTOC - Below Top of Casing

TBD - To Be Determined

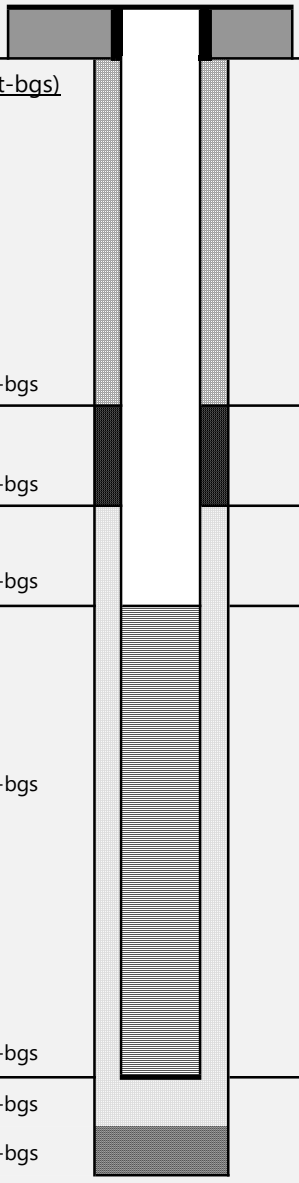
Notes

Groundwater was at a depth of 5 ft-bgs, implant was placed at 4 ft-bgs.

Lithologic Description	
0 ft-bgs - 5 ft-bgs	Tan/orange silty sand
5 ft-bgs	Groundwater

Well Construction Details

Well ID	Project Name		Project Number	Address
SGI-44	Cumberland County/Cliffdale LF		23050459	7554 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/2/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	3.0	0.1 ft-bgs
Top of Filter Pack -	3.0	0.1 ft-bgs
Top of Screen -	3.5	0.1 ft-bgs
Screened Interval -	0.5	0.5 ft-bgs
Bottom of Screen -	4.0	0.1 ft-bgs
Bottom of Filter Pack -	4.0	0.1 ft-bgs
Cave In -	4.0	0.1 ft-bgs
Total Boring Depth -	4.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
Teflon Tubing		
0.0	to	3.5
Screen Type		
Soil Gas Implant		
3.5	to	4.0
Seal Type		
Granular Bentonite		
0.0	to	3.0
Filter Pack		
No. 2 Sand		
3.0	to	4.0

BTOC - Below Top of Casing

TBD - To Be Determined

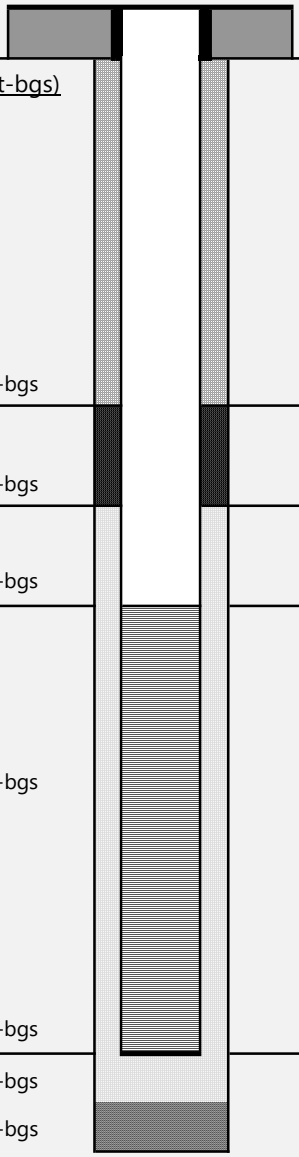
Notes

Groundwater was at a depth of 5 ft-bgs, implant was placed at 4 ft-bgs.

Lithologic Description	
0 ft-bgs - 5 ft-bgs	Tan/orange silty sand
5 ft-bgs	Groundwater

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-45	Cumberland County/Cliffdale LF		23050459	7550 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/2/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	4.0	0.1 ft-bgs
Top of Filter Pack -	4.0	0.1 ft-bgs
Top of Screen -	5.0	0.1 ft-bgs
Screened Interval -	5.0	0.5 ft-bgs
Bottom of Screen -	10.0	0.1 ft-bgs
Bottom of Filter Pack -	10.0	0.1 ft-bgs
Cave In -	10.0	0.1 ft-bgs
Total Boring Depth -	10.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	5.0
Screen Type		
1-in Sch 40 0.01-in PVC		
5.0	to	10.0
Seal Type		
Granular Bentonite		
0.0	to	4.0
Filter Pack		
No. 2 Sand		
4.0	to	10.0

BTOC - Below Top of Casing

TBD - To Be Determined

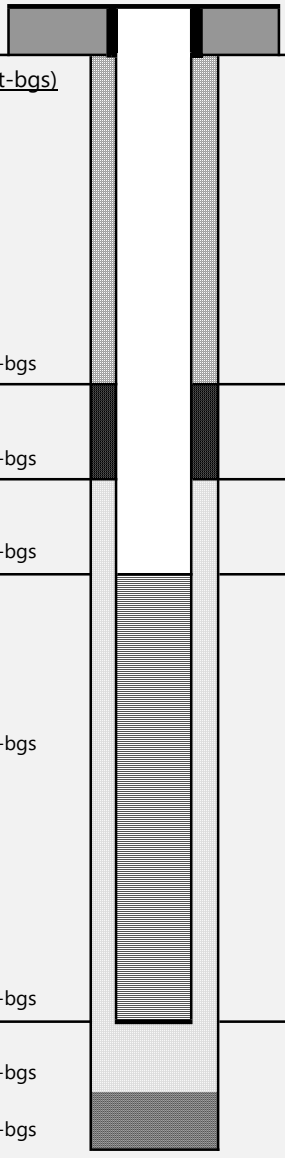
Notes

SGP is located in the center of the backyard next to the fence

Lithologic Description	
0 ft-bgs - 9 ft-bgs	Tan/orange sandy silt
9 ft-bgs - 10 ft-bgs	Gray firm clays

Well Construction Details

Well ID	Project Name		Project Number	Address
SGI-46	Cumberland County/Cliffdale LF		23050459	7546 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/3/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height - 0.0 ft

Depth Below Ground Surface (ft-bgs)

Top of Seal - 4.0 0.1 ft-bgs

Top of Filter Pack - 4.0 0.1 ft-bgs

Top of Screen - 4.5 0.1 ft-bgs

Screened Interval - 0.5 0.5 ft-bgs

Bottom of Screen - 5.0 0.1 ft-bgs

Bottom of Filter Pack - 5.0 0.1 ft-bgs

Cave In - 5.0 0.1 ft-bgs

Total Boring Depth - 5.0 0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
Teflon Tubing		
0.0	to	4.5
Screen Type		
Soil Gas Implant		
4.5	to	5.0
Seal Type		
Granular Bentonite		
0.0	to	4.0
Filter Pack		
No. 2 Sand		
4.0	to	5.0

BTOC - Below Top of Casing

TBD - To Be Determined

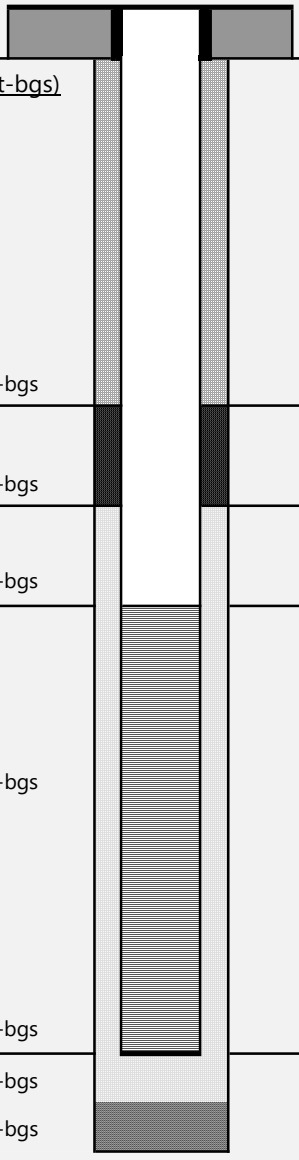
Notes

Groundwater was at a depth of 5 ft-bgs, implant was placed at 4 ft-bgs.

Lithologic Description	
0 ft-bgs - 6 ft-bgs	Tan/orange silty sand
6-7 ft-bgs	Groundwater - gray wet clays

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-47	Cumberland County/Cliffdale LF		23050459	7526 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/3/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	4.0	0.1 ft-bgs
Top of Filter Pack -	4.0	0.1 ft-bgs
Top of Screen -	5.0	0.1 ft-bgs
Screened Interval -	5.0	0.5 ft-bgs
Bottom of Screen -	10.0	0.1 ft-bgs
Bottom of Filter Pack -	10.0	0.1 ft-bgs
Cave In -	10.0	0.1 ft-bgs
Total Boring Depth -	10.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	5.0
Screen Type		
1-in Sch 40 0.01-in PVC		
5.0	to	10.0
Seal Type		
Granular Bentonite		
0.0	to	4.0
Filter Pack		
No. 2 Sand		
4.0	to	10.0

BTOC - Below Top of Casing

TBD - To Be Determined

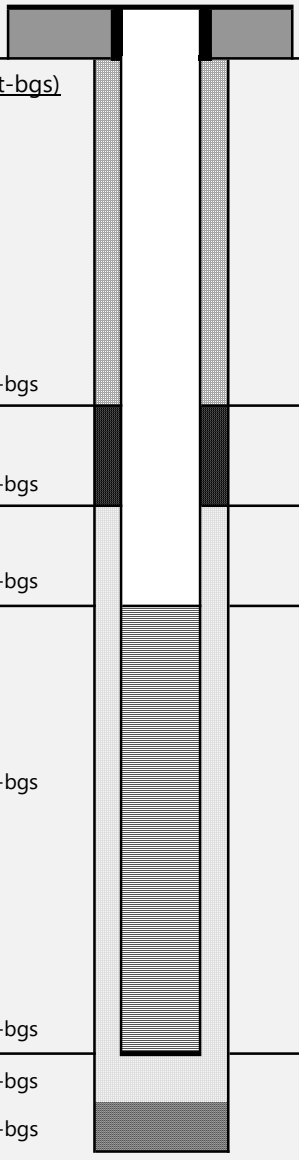
Notes

SGP is located inbetween the trees in the backyard

Lithologic Description	
0 ft-bgs - 6 ft-bgs	Brown/tan silty sand
6 ft-bgs - 10 ft-bgs	Hard gray/maroon

Well Construction Details

Well ID	Project Name		Project Number	Address
SGP-48	Cumberland County/Cliffdale LF		23050459	7518 Beverly Drive
S&ME Staff	Installation Date	County	City	Drilling Method
Connor Hicks	4/3/2025	Cumberland	Fayetteville	Hand Auger



Stickup Height -	0.0	ft
Depth Below Ground Surface (ft-bgs)		
Top of Seal -	4.0	0.1 ft-bgs
Top of Filter Pack -	4.0	0.1 ft-bgs
Top of Screen -	5.0	0.1 ft-bgs
Screened Interval -	5.0	0.5 ft-bgs
Bottom of Screen -	10.0	0.1 ft-bgs
Bottom of Filter Pack -	10.0	0.1 ft-bgs
Cave In -	10.0	0.1 ft-bgs
Total Boring Depth -	10.0	0.1 ft-bgs

Pad Type		
Flushmount		
Protective Casing		
Plastic Valve Box		
Casing Material		
1-in Sch 40 PVC		
0.0	to	5.0
Screen Type		
1-in Sch 40 0.01-in PVC		
5.0	to	10.0
Seal Type		
Granular Bentonite		
0.0	to	4.0
Filter Pack		
No. 2 Sand		
4.0	to	10.0

BTOC - Below Top of Casing

TBD - To Be Determined

Notes

SGP is located in the very back of the property along the fence

Lithologic Description	
0 ft-bgs - 6 ft-bgs	Brown/tan silty sand

Appendix III– Field Notes

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/8/2025
Weather:	Overcast	**Air Temp (°F):**	55
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant
Sample ID	SGP-1	SGP-2	SGP-3	SGP-4	SGP-5
Canister ID	49690	46768	49507	49289	49670
Regulator ID	20248	16688	20115	10525	14198
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	50	52	54	54	58
Barometric Pressure (inHg)	30.0	30.1	30.1	30.1	30.1

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	17.9	15.9	16.2	15	15.8
He Detected in Leak Test (Y or N)	Yes	Yes	Yes	Yes	Yes
He Conc. Detected in Leak Test (ppm)	120	427	0	0	0
Percent of He in the Leak Test versus the Shroud	0.067%	0.269%	0.000%	0.000%	0.000%
Leak Test Passed (Yes/No)[1]	Yes	Yes	Yes	Yes	Yes

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	10	0	72	10	0	72	10	0	72	7	0	72	10	0	72
Sand Pack Interval Depth (in-bgs)	60	to	132	60	to	132	60	to	132	60	to	132	60	to	132
Volume (mL)	1543			1543			1543			1530			1543		
Purge Flow Rate (mL/min)	200			200			200			200			200		
Purge Interval (3x Vol.) (min)	23.1			23.1			23.1			22.9			23.1		
Actual Purge Time (min)	25.0			25.0			25.0			25.0			25.0		

Sample Collection

Start Time	08:50	09:20	10:00	10:30	11:40
Initial Vacuum (inHg)	30	29	30	29	30
End Time	11:35	12:00	12:45	13:15	14:15
Final Vacuum (inHg)	5	5	5	5	5
Approximate Total Time (min)	165	160	165	165	155
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/8/2025
Weather:	Overcast	**Air Temp (°F):**	55
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant		
Sample ID	SGI-6	SGP-7	Duplicate-1		
Canister ID	48098	50957	49679		
Regulator ID	10521	16525	20123		
Canister Volume (L)	6	6	6		
Ambient Temp (°F)	57	55	50		
Barometric Pressure (inHg)	30.1	30.1	30.0		

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump		
He Concentration in Shroud (%)	16.3	15.9			
He Detected in Leak Test (Y or N)	Yes	Yes			
He Conc. Detected in Leak Test (ppm)	0	32			
Percent of He in the Leak Test versus the Shroud	0.000%	0.020%			
Leak Test Passed (Yes/No)[1]	Yes	Yes			

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	7	0	12	7	0	72		0			0			0	
Sand Pack Interval Depth (in-bgs)	48	to	60	60	to	132		to			to			to	
Volume (mL)	281			1530											
Purge Flow Rate (mL/min)	200			200											
Purge Interval (3x Vol.) (min)	4.2			22.9											
Actual Purge Time (min)	5.0			25.0											

Sample Collection

Start Time	11:10	11:00	09:25		
Initial Vacuum (inHg)	30	30	29		
End Time	13:30	14:00	11:35		
Final Vacuum (inHg)	3	8	5		
Approximate Total Time (min)	140	180	130		
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15		

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2. Duplicate is taken at SGP-1

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/9/2025
Weather:	Sunny	**Air Temp (°F):**	40
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant
Sample ID	SGP-8	SGP-9	SGP-10	SGP-11	SGI-12
Canister ID	43909	49320	49316	49501	47671
Regulator ID	16061	17210	16689	20083	16058
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	40	40	50	50	45
Barometric Pressure (inHg)	30.3	30.3	30.3	30.3	30.4

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	17.1	16	15.9	16.4	16.9
He Detected in Leak Test (Y or N)	No	Yes	No	Yes	No
He Conc. Detected in Leak Test (ppm)	0	509	0	321	0
Percent of He in the Leak Test versus the Shroud	0.000%	0.318%	0.000%	0.196%	0.000%
Leak Test Passed (Yes/No)[1]	Yes	Yes	Yes	Yes	Yes

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	7	0	36	10	0	72	7	0	24	7	0	24	5	0	12
Sand Pack Interval Depth (in-bgs)	60	to	96	60	to	132	60	to	84	60	to	84	36	to	48
Volume (mL)	781			1543			531			531			272		
Purge Flow Rate (mL/min)	200			200			200			200			200		
Purge Interval (3x Vol.) (min)	11.7			23.1			8.0			8.0			4.1		
Actual Purge Time (min)	15.0			25.0			10.0			10.0			5.0		

Sample Collection

Start Time	09:15	09:45	11:00	10:40	10:25
Initial Vacuum (inHg)	30	30	26	25	30
End Time	12:10	12:05	13:45	12:20	13:05
Final Vacuum (inHg)	5	4	5	5	5
Approximate Total Time (min)	175	140	165	100	160
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2. Duplicate-2 is taken at SGP-8

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/9/2025
Weather:	Overcast	**Air Temp (°F):**	40
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information					
Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant		
Sample ID	SGP-13	SGP-14	Duplicate-2		
Canister ID	49326	47533	36965		
Regulator ID	20127	10524	14092		
Canister Volume (L)	6		6		
Ambient Temp (°F)	44	50	40		
Barometric Pressure (inHg)	30.3	30.3	30.3		
Leak Test Information					
Purge Method	Personal Pump	Personal Pump	Personal Pump		
He Concentration in Shroud (%)	15.7	17			
He Detected in Leak Test (Y or N)	No	No			
He Conc. Detected in Leak Test (ppm)	0	0			
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%			
Leak Test Passed (Yes/No)[1]	Yes	Yes			

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	10	0	72	10	0	72	7	0	24		0			0	
Sand Pack Interval Depth (in-bgs)	60	to	132	60	to	132	60	to	84		to			to	
Volume (mL)	1543			1543			531								
Purge Flow Rate (mL/min)	200			200			200								
Purge Interval (3x Vol.) (min)	23.1			23.1			8.0								
Actual Purge Time (min)	25.0			25.0			10.0								

Sample Collection					
Start Time	10:25	11:30	09:15		
Initial Vacuum (inHg)	30	28	30		
End Time	11:35	14:30	12:10		
Final Vacuum (inHg)	5	5	3		
Approximate Total Time (min)	70	180	175		
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15		

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2. Duplicate-2 is taken at SGP-8

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/10/2025
Weather:	Sunny	**Air Temp (°F):**	60
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant
Sample ID	SGI-18	SGP-19	SGP-20	Duplicate-3	SGP-27
Canister ID	44623	50954	50711	48086	49346
Regulator ID	10518	20256	20228	10527	10523
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	50	50	50	50	52
Barometric Pressure (inHg)	30.4	30.4	30.4	30.4	30.4

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	15.2	18.1	15.5	15.2	17.2
He Detected in Leak Test (Y or N)	No	No	Yes	No	Yes
He Conc. Detected in Leak Test (ppm)	0	0	638	0	423
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.412%	0.000%	0.246%
Leak Test Passed (Yes/No)[1]	Yes	Yes	Yes	Yes	Yes

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	4	0	12	6	0	24	7	0	24	4	0	12	8	0	60
Sand Pack Interval Depth (in-bgs)	36	to	48	60	to	84	60	to	84	36	to	48	60	to	120
Volume (mL)	268			526			531			268			1285		
Purge Flow Rate (mL/min)	200			200			200			200			200		
Purge Interval (3x Vol.) (min)	4.0			7.9			8.0			4.0			19.3		
Actual Purge Time (min)	15.0			8.0			8.0			20.0			20.0		

Sample Collection

Start Time	09:30	09:45	10:00	09:30	10:25
Initial Vacuum (inHg)	30	30	29	30	29
End Time	12:30	12:00	DID NOT SAMPLE	12:30	12:45
Final Vacuum (inHg)	5	5	REGULATOR BROKEN	5	5
Approximate Total Time (min)	180	135	#VALUE!	180	140
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

DUP-3 is taken at SGI-18

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/10/2025
Weather:	Overcast	**Air Temp (°F):**	60
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information															
Sample Type	Soil Gas Implant			Soil Gas Implant			Soil Gas Implant								
Sample ID	SGP-28			SGP-29			SGI-26								
Canister ID	50958			46743			49515								
Regulator ID	20258			10516			20072								
Canister Volume (L)	6			6			6								
Ambient Temp (°F)	55			55			55								
Barometric Pressure (inHg)	30.4			30.4			30.4								
Leak Test Information															
Purge Method	Personal Pump			Personal Pump			Personal Pump								
He Concentration in Shroud (%)	15			15.9			15.6								
He Detected in Leak Test (Y or N)	No			No			No								
He Conc. Detected in Leak Test (ppm)	0			0			0								
Percent of He in the Leak Test versus the Shroud	0.000%			0.000%			0.000%								
Leak Test Passed (Yes/No)[1]	Yes			Yes			Yes								
Purge Information															
Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	10	0	24	10	0	72	6	0	12		0			0	
Sand Pack Interval Depth (in-bgs)	72	to	96	60	to	132	48	to	60		to			to	
Volume (mL)	544			1543			277								
Purge Flow Rate (mL/min)	200			200			200								
Purge Interval (3x Vol.) (min)	8.2			23.1			4.1								
Actual Purge Time (min)	10.0			25.0			5.0								
Sample Collection															
Start Time	10:45			11:15			11:30								
Initial Vacuum (inHg)	30			30			30								
End Time	13:20			14:00			13:00								
Final Vacuum (inHg)	5			5			5								
Approximate Total Time (min)	155			165			90								
Sample Analysis	VOCs by TO-15			VOCs by TO-15			VOCs by TO-15								

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 5/15/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/11/2025
Weather:	Overcast	**Air Temp (°F):**	60
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant	Soil Gas Implant
Sample ID	SGP-21	SGP-22	SGP-23	SGP-24	SGI-25
Canister ID	49327	38753	48094	41726	41608
Regulator ID	20122	14091	20060	20217	20079
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	60	60	60	60	60
Barometric Pressure (inHg)	30.2	30.2	30.2	30.2	30.2

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	16.3	15.4	15.1	16	15.2
He Detected in Leak Test (Y or N)	No	No	Yes	No	No
He Conc. Detected in Leak Test (ppm)	0	0	129	0	0
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.085%	0.000%	0.000%
Leak Test Passed (Yes/No)[1]	Yes	Yes	Yes	Yes	Yes

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	10	0	72	7	0	36	10	0	72	7	0	36	5	0	12
Sand Pack Interval Depth (in-bgs)	60	to	132	60	to	96	60	to	132	60	to	96	36	to	48
Volume (mL)	1543			781			1543			781			272		
Purge Flow Rate (mL/min)	200			200			200			200			200		
Purge Interval (3x Vol.) (min)	23.1			11.7			23.1			11.7			4.1		
Actual Purge Time (min)	25.0			15.0			25.0			15.0			5.0		

Sample Collection

Start Time	12:00	11:20	11:00	10:20	10:00
Initial Vacuum (inHg)	30	29	30	29	25
End Time	15:00	14:00	13:40	13:00	12:30
Final Vacuum (inHg)	5	5	5	5	5
Approximate Total Time (min)	180	160	160	160	150
Sample Analysis	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15	VOCs by TO-15

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2. Duplicate-4 is taken at SGI-25.

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/11/2025
Weather:	Overcast	**Air Temp (°F):**	60
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information															
Sample Type	Soil Gas Implant			Soil Gas Implant											
Sample ID	SGP-20R			Duplicate-4											
Canister ID	36452			31333											
Regulator ID	17211			14197											
Canister Volume (L)	6			6											
Ambient Temp (°F)	60			60											
Barometric Pressure (inHg)	30.2			30.2											
Leak Test Information															
Purge Method	Personal Pump			Personal Pump											
He Concentration in Shroud (%)															
He Detected in Leak Test (Y or N)															
He Conc. Detected in Leak Test (ppm)															
Percent of He in the Leak Test versus the Shroud															
Leak Test Passed (Yes/No)[1]															
Purge Information															
Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	7	0	24	5	0	12		0			0			0	
Sand Pack Interval Depth (in-bgs)	60	to	84	36	to	48		to			to			to	
Volume (mL)	531			272											
Purge Flow Rate (mL/min)	200			200											
Purge Interval (3x Vol.) (min)	8.0			4.1											
Actual Purge Time (min)	5.0			5.0											
Sample Collection															
Start Time	09:45			10:00											
Initial Vacuum (inHg)	30			30											
End Time	12:30			12:30											
Final Vacuum (inHg)	5			5											
Approximate Total Time (min)	165			150											
Sample Analysis	VOCs by TO-15			VOCs by TO-15											

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2. Duplicate-4 is taken at SGI-25.

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/14/2025
Weather:	Overcast	**Air Temp (°F):**	80
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant			
Sample ID	OF-SGI-30 (7591 Levi Rd)	OF-SGP-31 (7502 Martha Ct)	OF-SGP-32 (7500 Martha Ct)	OF-SGP-33 (7590 Lowell Harris)	OF-SGP-34 (1005 Lesli Dr)
Canister ID	46897	47666		39976	49288
Regulator ID	17207	16523		16059	20118
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	61	61		61	61
Barometric Pressure (inHg)	30.0	30.0		30.0	30.0

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	15.2	16.2		14.9	14.1
He Detected in Leak Test (Y or N)	No	No	No	No	No
He Conc. Detected in Leak Test (ppm)	0	0		0	0
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%		0.000%	0.000%
Leak Test Passed (Yes/No)[1]	Yes	Yes		Yes	Yes

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	5	0	24	10	0	72	7	0	36	10	0	72	5.5	0	36
Sand Pack Interval Depth (in-bgs)	36	to	60	48	to	120	48	to	84	48	to	120	36	to	72
Volume (mL)	522			1543			781			1543			774		
Purge Flow Rate (mL/min)	200			200			200			200			200		
Purge Interval (3x Vol.) (min)	7.8			23.1			11.7			23.1			11.6		
Actual Purge Time (min)	8.0			25.0						25.0			12.0		

Sample Collection

Start Time	09:15	09:40		10:15	10:30
Initial Vacuum (inHg)	30	29		30	28
End Time	12:15	12:25		12:22	12:30
Final Vacuum (inHg)	5	5		4	2
Approximate Total Time (min)	180	165		127	120
Sample Analysis	Select List by TO-15	Select List by TO-15	Select List by TO-15	Select List by TO-15	Select List by TO-15

Sampler Information

Sampled by: Logan Hester Sampler Signature: Logan Hester Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2. SGP-32 had water in the probe, was not sampled. DUP-5 was sampled at SGI-30

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/14-15/2025
Weather:	Overcast	**Air Temp (°F):**	80
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant			
Sample ID	OF-SGP-35 (1013 Leslie Dr)	OF-SGP-36 (1021 Leslie Dr)	OF-SGP-37 (1025 Leslie Dr)	OF-SGP-38 (1029 Leslie Dr)	OF-SGP-39 (1033 Leslie Dr)
Canister ID	49325	47526	41718		44632
Regulator ID	20255	20098	13288		16661
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)	7068	70	71		71
Barometric Pressure (inHg)	30.0	30.0	30.0		28.8

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)	14.6	15.9	13.9		17.3
He Detected in Leak Test (Y or N)	No	Yes	No	No	No
He Conc. Detected in Leak Test (ppm)	0	1,200	0		0
Percent of He in the Leak Test versus the Shroud	0.000%	0.755%	0.000%		0.000%
Leak Test Passed (Yes/No)[1]	Yes	Yes	Yes		Yes

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	11	0	72	11	0	72	11	0	72	7	0	36	10	0	72
Sand Pack Interval Depth (in-bgs)	60	to	132	60	to	132	60	to	132	48	to	84	48	to	120
Volume (mL)	1548			1548			1548			781			1543		
Purge Flow Rate (mL/min)	200			200			200			200			200		
Purge Interval (3x Vol.) (min)	23.2			23.2			23.2			11.7			23.1		
Actual Purge Time (min)	25.0			25.0			25.0						25.0		

Sample Collection

Start Time	10:55	11:20	11:50		10:40
Initial Vacuum (inHg)	28	30	30		29
End Time	12:45	13:12	14:10		14:00
Final Vacuum (inHg)	4	5	6		5
Approximate Total Time (min)	110	112	140		200
Sample Analysis	Select List by TO-15	Select List by TO-15	Select List by TO-15	Select List by TO-15	Select List by TO-15

Sampler Information

Sampled by: Logan Hester Sampler Signature: Logan Hester Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2. Sample locations 35-37 were sampled on 4/14/2025. 38-39 were sampled on 4/15/2025. SGP-38 had water in the probe and was not sampled, DUP-6 was taken at SGP-39

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/15/2025
Weather:	Overcast	**Air Temp (°F):**	80
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant			
Sample ID	OF-SGI-40 (7598 Beverly Dr)	OF-SGI-41 (7594 Beverly Dr)	OF-SGI-42 (7590 Beverly Dr)	OF-SGI-43 (7578 Beverly Dr)	OF-SGI-44 (7554 Beverly Dr)
Canister ID					
Regulator ID					
Canister Volume (L)	6	6	6	6	6
Ambient Temp (°F)					
Barometric Pressure (inHg)					

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	Personal Pump
He Concentration in Shroud (%)					
He Detected in Leak Test (Y or N)	No	No	No	No	No
He Conc. Detected in Leak Test (ppm)	0	0	0	0	0
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%	0.000%	0.000%	0.000%
Leak Test Passed (Yes/No)[1]	Yes	Yes	Yes	Yes	Yes

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	3	0	12	2.5	0	12	2	0	12	4	0	12	4	0	12
Sand Pack Interval Depth (in-bgs)	24	to	36	24	to	36	12	to	24	36	to	48	36	to	48
Volume (mL)	263			261			259			268			268		
Purge Flow Rate (mL/min)	200			200			200			200			200		
Purge Interval (3x Vol.) (min)	3.9			3.9			3.9			4.0			4.0		
Actual Purge Time (min)	5.0						5.0						5.0		

Sample Collection

Start Time	11:20		11:45		12:15
Initial Vacuum (inHg)	29		29		26
End Time	14:00		14:30		14:40
Final Vacuum (inHg)	5		5		5
Approximate Total Time (min)	160		165		145
Sample Analysis	Select List by TO-15	Select List by TO-15	Select List by TO-15	Select List by TO-15	Select List by TO-15

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/15/2025
Weather:	Overcast	**Air Temp (°F):**	80
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information

Sample Type	Soil Gas Implant	Soil Gas Implant			
Sample ID	OF-SGP-45 (7550 Beverly Dr)	OF-SGI-46 (7546 Beverly Dr)	OF-SGP-47 (7526 Beverly Dr)	OF-SGP-48 (7518 Beverly Dr)	
Canister ID		49516	48092	48100	
Regulator ID		20259	20114	20120	
Canister Volume (L)		6	6	6	
Ambient Temp (°F)		75	75	75	
Barometric Pressure (inHg)		28.8	28.8	28.8	

Leak Test Information

Purge Method	Personal Pump	Personal Pump	Personal Pump	Personal Pump	
He Concentration in Shroud (%)		17.3	15.3	15.7	
He Detected in Leak Test (Y or N)		No	No	No	
He Conc. Detected in Leak Test (ppm)		0	0	0	
Percent of He in the Leak Test versus the Shroud		0.000%	0.000%	0.000%	
Leak Test Passed (Yes/No)[1]		Yes	Yes	Yes	

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
	10	0	72	5	0	24	10	0	72	10	0	72		0	
Sand Pack Interval Depth (in-bgs)	48	to	120	36	to	60	48	to	120	48	to	120		to	
Volume (mL)	1543			522			1543			1543					
Purge Flow Rate (mL/min)	200			200			200			200					
Purge Interval (3x Vol.) (min)	23.1			7.8			23.1			23.1					
Actual Purge Time (min)				10.0			25.0			25.0					

Sample Collection

Start Time		12:35	13:10	13:45	
Initial Vacuum (inHg)		30	29	28	
End Time		15:20	15:00	16:00	
Final Vacuum (inHg)		5	5	5	
Approximate Total Time (min)		165	110	135	
Sample Analysis	Select List by TO-15	Select List by TO-15	Select List by TO-15	Select List by TO-15	

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

2. SGP-45 observed water while being pumped, tubing was cut to top of PVC but still pumped water, no sample was taken.

Revision Date: 5/3/18 11:30

SOIL VAPOR FIELD SAMPLING FORM

Project Name:	Cliffdale Landfill		
Project Number:	23050459 RI-11		
Location:	7583 Lowell Harris Rd Fayetteville, NC	**Date:**	4/14-15/2025
Weather:	Overcast	**Air Temp (°F):**	80
Helium Detector Serial No.:	Field Environmental Instruments Rental 42444	**Calibration Date:**	4/4/2025

Sample Information					
Sample Type	Soil Gas Implant	Soil Gas Implant			
Sample ID	Duplicate-5	Duplicate-6			
Canister ID	50710	45159			
Regulator ID	20251	20071			
Canister Volume (L)	6	6			
Ambient Temp (°F)	61	71			
Barometric Pressure (inHg)	30.0	28.8			
Leak Test Information					
Purge Method	Personal Pump	Personal Pump			
He Concentration in Shroud (%)	16.2	17.2			
He Detected in Leak Test (Y or N)	No	No			
He Conc. Detected in Leak Test (ppm)	0	0			
Percent of He in the Leak Test versus the Shroud	0.000%	0.000%			
Leak Test Passed (Yes/No)[1]	Yes	Yes			

Purge Information

Enter Construction Details →	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)	0.17" ID Total Tubing (ft)	0.25" ID Total Tubing (in)	Sand Pack Interval (in)
		0			0			0			0			0	
Sand Pack Interval Depth (in-bgs)		to			to			to			to			to	
Volume (mL)															
Purge Flow Rate (mL/min)															
Purge Interval (3x Vol.) (min)															
Actual Purge Time (min)															

Sample Collection					
Start Time	09:40	10:40			
Initial Vacuum (inHg)	29	29			
End Time	12:25	14:00			
Final Vacuum (inHg)	5	5			
Approximate Total Time (min)	165	200			
Sample Analysis	Select List by TO-15	Select List by TO-15			

Sampler Information

Sampled by: Connor Hicks Sampler Signature: Date: 4/17/2025

Notes: 1. Per the NCDEQ DWM VI Guidance dated March 2018, the helium concentration detected during the leak test shall not exceed 10% of the helium concentration in the shroud.

DUP-5 was taken at SGI-30 and DUP-6 was taken at SGP-39

Revision Date: 5/3/18 11:30

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-1**	Purge Time (Min.):	15
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	10:20
Weather:	Sunny	Air Temp:	60 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm		1,413 µS/cm	

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	34.25	ft-TOC
Total Well Depth:	40.50	ft-TOC
Height of Water Column:	6.25	feet
Screen Length:	10	ft-GRD
Stickup Height:	2.6	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	1.0	gal
3 * Well Volume	3.1	gal
5 * Well Volume	5.1	gal

Well Purging Information

Purge Method: Submersible Pump **Purge Start Time:** 10:00 **End Time:** 10:15

Total Volume Purged: 4.0 gal **Well Purged Dry?:** No

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
1.3	10:05	7.6	18.2	299	Over Range	No Odors
2.6	10:10	7.0	18.4	392	549	No Odors
4.0	10:15	7.0	18.1	347	Over Range	Landfill Odors

Sample Method: Submersible Pump **Sample Time:** 10:20

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A. Waters	4/16/2025

Notes:

Form Revision Date: 9/13/17 8:00 AM

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-2**	Purge Time (Min.):	
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	
Weather:	Sunny	Air Temp:	60 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm		1,413 µS/cm	

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	32.66	ft-TOC
Total Well Depth:	32.70	ft-TOC
Height of Water Column:	0.04	feet
Screen Length:	10	ft-GRD
Stickup Height:	2.5	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	0.0	gal
3 * Well Volume	0.0	gal
5 * Well Volume	0.0	gal

Well Purging Information

Purge Method: Bailer **Purge Start Time:** **End Time:**

Total Volume Purged: gal **Well Purged Dry?:** Yes

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments

Sample Method: Bailer **Sample Time:**

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A. Waters	4/16/2025

Notes: MW-2 was dry. Not enough water to record parameters or sample.

Form Revision Date: 9/13/17 8:00 AM

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-3**	Purge Time (Min.):	25
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	11:50
Weather:	Sunny	Air Temp:	65 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm		1,413 µS/cm	

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	11.76	ft-TOC
Total Well Depth:	17.50	ft-TOC
Height of Water Column:	5.74	feet
Screen Length:	10	ft-GRD
Stickup Height:	2.6	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	0.9	gal
3 * Well Volume	2.8	gal
5 * Well Volume	4.7	gal

Well Purging Information

Purge Method: Peristaltic Pump **Purge Start Time:** 11:20 **End Time:** 11:45

Total Volume Purged: 1.3 gal **Well Purged Dry?:** No

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	11:25	7.0	18.2	2,564	45	No Odors
0.5	11:30	7.3	17.7	2,687	120	No Odors
0.8	11:35	7.3	16.9	2,703	22	No Odors
1.0	11:40	7.4	17	2,685	11	No Odors
1.3	11:45	7.3	17.2	2,686	5.4	No Odors

Sample Method: Peristaltic Pump **Sample Time:** 11:50

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A Waters	4/16/2025

Notes: Duplicate sample DUP-01 taken at MW-3.

Form Revision Date: 9/13/17 8:00 AM

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-4**	Purge Time (Min.):	
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	
Weather:	Sunny	Air Temp:	65 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm		1,413	µS/cm

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	29.45	ft-TOC
Total Well Depth:	30.20	ft-TOC
Height of Water Column:	0.75	feet
Screen Length:	10	ft-GRD
Stickup Height:	2.3	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	0.1	gal
3 * Well Volume	0.4	gal
5 * Well Volume	0.6	gal

Well Purging Information

Purge Method: Bailer **Purge Start Time:** **End Time:**

Total Volume Purged: gal **Well Purged Dry?:** Yes

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments

Sample Method: Bailer **Sample Time:**

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A Waters	4/16/2025

Notes: MW-4 was dry. Not enough water to record parameters or sample.

Form Revision Date: 9/13/17 8:00 AM

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-5**	Purge Time (Min.):	
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	13:00
Weather:	Sunny	Air Temp:	65 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm		1,413 µS/cm	

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	28.90	ft-TOC
Total Well Depth:	30.30	ft-TOC
Height of Water Column:	1.40	feet
Screen Length:	10	ft-GRD
Stickup Height:	2.5	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	0.2	gal
3 * Well Volume	0.7	gal
5 * Well Volume	1.1	gal

Well Purging Information

Purge Method: Bailer **Purge Start Time:** **End Time:**

Total Volume Purged: gal **Well Purged Dry?:** Yes

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments

Sample Method: Bailer **Sample Time:** 13:00

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A Waters	4/16/2025

Notes: MW-5 was nearly dry. Only able to fill some of the containers initially. Had to allow the water in MW-5 to recharge to fill the remaining containers.

Form Revision Date: 9/13/17 8:00 AM

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-6**	Purge Time (Min.):	
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	14:30
Weather:	Sunny	Air Temp:	70 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm		1,413 µS/cm	

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	29.13	ft-TOC
Total Well Depth:	30.30	ft-TOC
Height of Water Column:	1.17	feet
Screen Length:	10	ft-GRD
Stickup Height:	3.5	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	0.2	gal
3 * Well Volume	0.6	gal
5 * Well Volume	1.0	gal

Well Purging Information

Purge Method: Bailer **Purge Start Time:** **End Time:**

Total Volume Purged: gal **Well Purged Dry?:** Yes

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments

Sample Method: Bailer **Sample Time:** 14:30

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A. Waters	4/16/2025

Notes: MW-6 was nearly dry. Only able to fill VOA containers. MW-6 water level did not recover.

Form Revision Date: 9/13/17 8:00 AM

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-7**	Purge Time (Min.):	30
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	15:25
Weather:	Overcast	Air Temp:	75 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm		1,413 µS/cm	

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	13.60	ft-TOC
Total Well Depth:	16.50	ft-TOC
Height of Water Column:	2.90	feet
Screen Length:	10	ft-GRD
Stickup Height:	2.6	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	0.5	gal
3 * Well Volume	1.4	gal
5 * Well Volume	2.4	gal

Well Purging Information

Purge Method: Peristaltic Pump **Purge Start Time:** 14:50 **End Time:** 15:20

Total Volume Purged: 1.5 gal **Well Purged Dry?:** No

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	14:55	7.3	19.3	1,159	58	Landfill Odors
0.5	15:00	7.1	19.7	1,124	15	Landfill Odors
0.8	15:05	7.0	18.9	1,114	10	Landfill Odors
1.0	15:10	7.1	19.1	1,116	12	Landfill Odors
1.3	15:15	7.0	22.6	1,127	8.5	Landfill Odors
1.5	15:20	7.1	20.7	1,130	9.9	Landfill Odors

Sample Method: Peristaltic Pump **Sample Time:** 15:25

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A. Waters	4/16/2025

Notes:

Form Revision Date: 9/13/17 8:00 AM

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-8**	Purge Time (Min.):	30
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	16:15
Weather:	Sunny	Air Temp:	75 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm		1,413	µS/cm

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	13.74	ft-TOC
Total Well Depth:	16.50	ft-TOC
Height of Water Column:	2.76	feet
Screen Length:	10	ft-GRD
Stickup Height:	3.4	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	0.5	gal
3 * Well Volume	1.4	gal
5 * Well Volume	2.3	gal

Well Purging Information

Purge Method: Peristaltic Pump **Purge Start Time:** 15:40 **End Time:** 16:10

Total Volume Purged: 1.3 gal **Well Purged Dry?:** Yes

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	15:50	7.3	20.4	1,560	36	No Odors
0.5	15:55	7.3	19.3	1,567	17	No Odors
0.8	16:00	7.3	19.1	1,566	38	No Odors
1.0	16:05	7.3	18.3	1,573	28	No Odors
1.3	16:10	7.3	18.5	1,582	62	No Odors

Sample Method: Peristaltic Pump **Sample Time:** 16:15

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A Waters	4/16/2025

Notes: MW-8 was being purged dry. MW-8 was sampled before going completely dry.

GROUNDWATER SAMPLING FORM

Project Name:	Colonial Pipeline		
Project Location:	7581 Lowell Harris Rd. Fayetteville, NC		
Project Number:	23050459	Purge Date:	April 16, 2025
Source Well:	**MW-9**	Purge Time (Min.):	30
Locked?:	Yes	Sample Date:	April 16, 2025
Sampled By:	James Waters	Sample Time:	17:30
Weather:	Sunny	Air Temp:	75 ° F

Equipment Calibration Information:

Equipment	Date	Time	Calibration Solution	Calibration Check		
pH	4/16/25	09:30	4.00, 7.00, 10.00	4.0	7.0	10.0
Conductivity	4/16/25	09:30	1,413 µS/cm	1,413 µS/cm		

Water Level & Well Data

Measuring Point:	Top of Casing	
Depth to Water:	8.28	ft-TOC
Total Well Depth:	16.50	ft-TOC
Height of Water Column:	8.22	feet
Screen Length:	10	ft-GRD
Stickup Height:	3	ft-GRD

Well Volume		
Well Diameter	2	inch
Well Volume	1.3	gal
3 * Well Volume	4.0	gal
5 * Well Volume	6.7	gal

Well Purging Information

Purge Method: Peristaltic Pump **Purge Start Time:** 16:55 **End Time:** 17:25

Total Volume Purged: 1.5 gal **Well Purged Dry?:** No

Field Parameters

Cumulative Volume (Gal)	Time	pH (s.u.)	Temp (°C)	Cond µS/cm	Turbidity NTU	Comments
0.3	17:00	7.5	17.9	1,014	67	No Odors
0.5	17:05	7.2	17.2	993	43	No Odors
0.8	17:10	7.1	16.8	996	36	No Odors
1.0	17:15	7.1	16.7	991	19	No Odors
1.3	17:20	7.1	16.5	986	14	No Odors
1.5	17:25	7.1	16.6	939	8.7	No Odors

Sample Method: Peristaltic Pump **Sample Time:** 17:30

Analytical Data

Method	Qty	Container	Pres.	Method	Qty	Container	Pres.
8260D-VOC NC 02L List	3	40 ml VOAs	HCl	6020B-PRLF 16 Metals, inc. prep; 7470A	1	250 ml P	HNO3
8270E-SVOCs TCL OLM4.2	4	40 ml VOAs	None	350.1-Ammonia as N	1	250 ml P	H2SO4
8270E-SIM-MS-ID-1,4 Dioxane	2	250 ml A	None				
9056A-ORGFM-28D/48H	1	125 ml P	None				

Name	Signature	Date
(1) James Waters	James A. Waters	4/16/2025

Notes:

Form Revision Date: 9/13/17 8:00 AM

LANDFILL GAS SCREENING FORM

Project Name:	**Cliffdale LF**	Location:	7583 Lowell Harris Rd	**Meter Type/ Meter Name/ Serial No.:**				
NCDEQ ID No.:	**NCD980502900**	Date:	4/17/2025	Gas Analyzer	GEM 5000	500537		
S&ME Project No.:	**23050459**	Weather:	Sunny	PID	Mini Rae 3000 (Pine)	592-600854	Pre Calibration Time:	815
Task Order:	**RI-10**	S&ME Personnel:	Logan Hester	Thermo Hygrometer	PROTMEX	H11I-H17911	Post Calibration Time:	

PRE Equipment Calibration					**Calibration Notes**
PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA	
Fresh Air	CH_4 (0%) =	0.0%	O_2 (20.9%) =	20.9%	
Methane High	CH_4 (50%) =	50.0%	CO_2 (35%) =	35.0%	
	O_2 (0%) =	0.0%			
H2S Mix	CH_4 (2.5%) =	2.5%	O_2 (18%) =	18.0%	
	H_2S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm	

POST Equipment Calibration				
PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA
Fresh Air	CH_4 (0%) =	0.0%	O_2 (20.9%) =	20.7%
Methane High	CH_4 (50%) =	50.2%	CO_2 (35%) =	34.8%
	O_2 (0%)=	0.0%		
H2S Mix	CH_4 (2.5%) =	2.5%	O_2 (18%) =	17.9%
	H_2S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm

Screening Data

Sample Location	Time	VOCs		Methane		Carbon Dioxide	Oxygen	Hydrogen Sulfide	Barometric Pressure	Temperature	Humidity
ID	hr:min	ppm-v	%	volume in air (%)	% LEL (100% LEL = 5% CH4)	%	%	ppm-v	in-Hg	°F	%
BG-1	08:20	0.0	0	0.0	0	2.1	19.8	0	30.21	57.0	50
BG-2	08:22	0.0	0	0.0	0	2.0	19.6	0	29.91	57.0	50
SGP-1	08:30	0.5	0	22.8	100	28.7	0.0	98	29.78	57.0	50
SGP-2	08:33	1.2	0	43.2	100	31.8	0.0	16	30.00	57.0	50
SGP-3	08:36	1.1	0	47.2	100	36.1	0.0	2	29.78	58.0	50
SGP-4	08:39	0.9	0	66.9	100	22.1	0.0	1	30.00	59.0	49
SGP-5	08:50	1.2	0	41.2	100	22.6	0.1	0	30.01	59.0	50
SGP-6	08:55	0.8	0	54.6	100	32.1	0.1	14	29.77	59.0	48
SGP-7	09:01	1.8	0	73.2	100	25.5	0.0	47	30.01	59.0	49
SGP-8	09:07	0.2	0	68.4	100	34.5	0.1	20	29.78	59.0	49
SGP-9	09:15	1.1	0	61.2	100	35.1	0.0	0	30.00	59.0	49
SGP-10	09:22	3.5	0	57.6	100	42.1	0.1	11	29.75	60.0	50
SGP-11	09:31	2.1	0	58.9	100	38.7	0.1	13	29.77	60.0	50
SGP-12	09:36	3.3	0	71.2	100	31.5	0.1	18	29.76	60.0	48
SGP-13	09:40	2.1	0	64.2	100	30.2	0.1	1	29.78	60.0	48
SGP-14	09:51	4.3	0	61.8	100	39.7	0.1	2	29.74	60.0	48
SGP-18	10:00	1.2	0	58.0	100	41.9	0.1	22	29.77	60.0	48
SGP-19	10:04	1.6	0	56.4	100	42.1	0.1	27	29.76	61.0	50
SGP-20	10:15	0.0	0	59.7	100	42.5	0.1	46	29.76	61.0	48
SGP-21	10:20	1.1	0	19.9	100	15.4	12.8	2	29.76	61.0	48
SGP-22	10:26	0.4	0	62.2	100	39.6	0.1	12	30.01	61.0	47
SGP-23	10:32	1.0	0	64.6	100	36.5	0.0	10	30.01	61.0	47
SGP-24	10:40	1.1	0	29.8	100	16.4	11.2	0	29.77	62.0	47

Name	Signature	Date	Notes:
(1) Logan Hester	Logan Hester	4/17/2025	

LANDFILL GAS SCREENING FORM

Project Name:	**Cliffdale LF**	Location:	7583 Lowell Harris Rd	**Meter Type/ Meter Name/ Serial No.:**				
NCDEQ ID No.:	**NCD980502900**	Date:	4/17/2025	Gas Analyzer	GEM 5000	500537		
S&ME Project No.:	**23050459**	Weather:	Sunny	PID	Mini Rae 3000 (Pine)	592-600854	Pre Calibration Time:	845
Task Order:	**RI-10**	S&ME Personnel:	Logan Hester	Thermo Hygrometer	PROTMEX	H11I-H17911	Post Calibration Time:	1345

PRE Equipment Calibration					**Calibration Notes**	**POST Equipment Calibration**				
PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA		PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA
Fresh Air	CH_4 (0%) =	0.0%	O_2 (20.9%) =	20.9%		Fresh Air	CH_4 (0%) =	0.0%	O_2 (20.9%) =	20.7%
Methane High	CH_4 (50%) =	50.0%	CO_2 (35%) =	35.0%		Methane High	CH_4 (50%) =	50.2%	CO_2 (35%) =	34.8%
	O_2 (0%) =	0.0%					O_2 (0%)=	0.0%		
H2S Mix	CH_4 (2.5%) =	2.5%	O_2 (18%) =	18.0%		H2S Mix	CH_4 (2.5%) =	2.5%	O_2 (18%) =	17.9%
	H_2S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm			H_2S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm

Screening Data

Sample Location	**Time**	**VOCs**		**Methane**		**Carbon Dioxide**	**Oxygen**	**Hydrogen Sulfide**	**Barometric Pressure**	**Temperature**	**Humidity**
ID	**hr:min**	**ppm-v**	**%**	**volume in air (%)**	**% LEL (100% LEL = 5% CH4)**	**%**	**%**	**ppm-v**	**in-Hg**	**°F**	**%**
SGP-25	10:45	1.6	0	66.2	100	37.9	0.4	16	29.77	64.0	48
SGP-26	10:51	0.0	0	54.1	100	32.3	2.4	22	29.76	64.0	48
SGP-27	10:56	0.0	0	0.0	0	0.7	19.1	0	29.77	65.0	47
SGP-28	11:02	0.0	0	0.0	0	2.8	18.3	0	29.79	65.0	47
SGP-29	11:10	1.5	0	61.2	100	39.5	0.2	13	29.77	67.0	47
SGP-30	12:34	0.7	0	22.2	100	5.2	3.9	1	30.01	71.0	46
SGP-31	12:45	0.9	0	33.4	100	4.2	3.8	1	30.01	71.0	46
SGP-33	12:58	0.0	0	0.0	0	1.7	17.8	1	29.98	72.0	46
SGP-34	13:10	0.0	0	62.8	100	29.4	0.0	19	29.96	73.0	46
SGP-35	13:21	10.5	0	0.0	0	0.6	18.5	0	29.98	73.0	45
SGP-36	13:33	0.0	0	12.0	100	3.3	15.5	1	29.99	73.0	45
SGP-37	13:40	0.0	0	52.2	100	34.5	0.0	8	29.98	73.0	45
SGP-38	13:50	0.0	0	0.0	0	0.1	18.9	1	29.99	74.0	45
SGP-39	14:31	0.0	0	0.0	0	4.2	16.5	0	29.98	74.0	45
SGI-40	14:42	0.0	0	0.0	0	1.4	18.3	0	29.96	75.0	44
SGI-42	14:51	0.0	0	0.0	0	2.6	18.2	0	29.98	75.0	44
SGI-44	15:03	0.0	0	0.0	0	3.8	17.9	0	29.97	75.0	44
SGI-46	15:12	0.0	0	0.0	0	1.6	18.0	0	29.97	75.0	44

Name	**Signature**	**Date**	**Notes:**
(1) Logan Hester	Logan Hester	4/17/2025	

LANDFILL GAS SCREENING FORM

Project Name:	**Cliffdale LF**	Location:	7583 Lowell Harris Rd	**Meter Type/ Meter Name/ Serial No.:**				
NCDEQ ID No.:	**NCD980502900**	Date:	4/17/2025	Gas Analyzer	GEM 5000	500537		
S&ME Project No.:	**23050459**	Weather:	Sunny	PID	Mini Rae 3000 (Pine)	592-600854	Pre Calibration Time:	845
Task Order:	**RI-10**	S&ME Personnel:	Logan Hester	Thermo Hygrometer	PROTMEX	H11I-H17911	Post Calibration Time:	1345

PRE Equipment Calibration					**Calibration Notes**
PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA	
Fresh Air	CH_4 (0%) =	0.0%	O_2 (20.9%) =	20.9%	
Methane High	CH_4 (50%) =	50.0%	CO_2 (35%) =	35.0%	
	O_2 (0%) =	0.0%			
H2S Mix	CH_4 (2.5%) =	2.5%	O_2 (18%) =	18.0%	
	H_2S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm	

POST Equipment Calibration				
PID (Isobutylene)	0 ppm =	NA	100 ppm =	NA
Fresh Air	CH_4 (0%) =	0.0%	O_2 (20.9%) =	20.7%
Methane High	CH_4 (50%) =	50.2%	CO_2 (35%) =	34.8%
	O_2 (0%)=	0.0%		
H2S Mix	CH_4 (2.5%) =	2.5%	O_2 (18%) =	17.9%
	H_2S (10 ppm) =	10 ppm	CO (50 ppm) =	50 ppm

Screening Data

Sample Location	**Time**	**VOCs**		**Methane**		**Carbon Dioxide**	**Oxygen**	**Hydrogen Sulfide**	**Barometric Pressure**	**Temperature**	**Humidity**
ID	**hr:min**	**ppm-v**	**%**	**volume in air (%)**	**% LEL (100% LEL = 5% CH4)**	**%**	**%**	**ppm-v**	**in-Hg**	**°F**	**%**
SGP-47	15:26	0.0		0.0	0	0.6	18.1	1	30.00	75.0	43
SGP-48	15:45	0.0	0	0.0	0	0.8	18.3	0	30.00	75.0	43
BG-3	15:56	0.0	0	0.0	0	2.1	19.6	0	29.92	76.0	44
BG-4	16:00	0.0	0	0.0	0	2.0	19.6	0	29.91	76.0	44

Name	**Signature**	**Date**	**Notes:**
(1) Logan Hester		4/17/2025	

Environmental Field Report	
Date: 2025-04-17	**Job Number:** 23050459
Project Name: Cliffdale Landfill	**Weather/Temperature:** Sunny, 70°F
Project Location: 7583 Lowell Harris Rd, Fayetteville, NC	

Notes By:	Present at the Site:
☒	James Waters
☐	Logan Hester

Equipment Used
iPad
Bailers/String/Tubing/Tools
GEM 5000/MiniRAE PID
Pumps/Sorbent Tubes

Purpose: Soil gas screening and sampling with Sorbent Tubes.

0900- Arrive at site with Logan Hester. Open gate.

0910- Give Logan Hester the soil gas screening equipment. Logan Hester is screening the soil gas at locations in and around the site today. See Logan Hester's field notes for calibration information and soil gas screening data.

0930- Attempt to fill remaining groundwater sampling containers after allowing MW-5 and MW-6 to recover. Fill all containers at MW-5. Only able to fill VOA containers at MW-6.

1030- Gather Sorbent Tube equipment.

1100- Set out to sample at soil gas locations with the Sorbent Tubes. See the table below for Sorbent Tube sampling data, information, and sampling times.

ID	Pump Number (EMSL Number)	Pump Rate (LPM)	Time Start	Time End
SGP-30	2457	0.50	1140	1240
SGP-31	2436	0.50	1210	1310
SGP-33	2431	0.25	1220	1320
SGP-34	2442	0.50	1235	1335
SGP-35	2428	0.50	1240	1340
SGP-36	2457	0.50	1300	1400
SGP-37	2436	0.50	1325	1425
SGP-39	2442	0.50	1350	1455
SGI-40	2428	0.50	1355	1500
SGI-42	2457	0.50	1440	1540
SGI-44	2431	0.25	1450	1550
Sampling table begins on the following page.				

*Dup-01 is taken at SGP-31.

Hours	Mileage	Signature of S&ME Personnel
8.0 onsite	210	James A. Waters

ID	Pump Number (EMSL Number)	Pump Rate (LPM)	Time Start	Time End
SGI-46	2428	0.50	1510	1610
SGP-47	2436	0.50	1515	1620
SGP-48	2442	0.50	1520	1625

*Dup-01 is taken at SGP-31.

1630- Finish sampling for the day. Tidy up inside landfill gate.

1700- Lock gate. Leave site for the day.

Environmental Field Report	
Date: 2025-04-18	**Job Number:** 23050459
Project Name: Cliffdale Landfill	**Weather/Temperature:** Sunny, 80°F
Project Location: 7583 Lowell Harris Rd, Fayetteville, NC	
Notes By: ☒ ☐	**Present at the Site:** James Waters Logan Hester

Equipment Used
iPad Pumps/Sorbent Tubes

Purpose: Soil gas screening and sampling with Sorbent Tubes.

0800- Arrive at site with Logan Hester. Open gate.

0810- Gather Sorbent Tube equipment.

0830- Set out to sample at soil gas locations with the Sorbent Tubes. See the table below for Sorbent Tube sampling data, information, and sampling times. Unable to run all pumps less than 0.50 LPM.

ID	Pump Number (EMSL Number)	Pump Rate (LPM)	Time Start	Time End
SGP-1	2457	0.50	0853	0953
SGP-2	2436	0.50	0900	1000
SGP-3	2431	0.25	0903	1003
SGP-4	2442	0.50	0906	1006
SGP-5	2428	0.50	0911	1015
SGI-6	2457	0.50	1005	1105
SGP-7	2436	0.50	1012	1112
SGP-8	2431	0.25	1015	1115
SGP-9	2442	0.50	1021	1121
SGP-10	2428	0.50	1025	1128
SGP-11	2457	0.50	1118	1218
SGI-12	2436	0.50	1122	1222
SGP-13	2431	0.25	1128	1232
SGP-14	2442	0.50	1133	1238
SGI-18	2428	0.50	1138	1242
SGP-19	2457	0.50	1226	1326
SGP-20	2436	0.50	1230	1337
SGP-21	2431	0.25	1235	1344

*Dup-02 is taken at SGP-11

Hours	Mileage	Signature of S&ME Personnel
8.0 onsite	210	James A. Waters

ID	Pump Number (EMSL Number)	Pump Rate (LPM)	Time Start	Time End
SGP-22	2442	0.50	1245	1348
SGP-23	2428	0.50	1248	1352
SGP-24	2457	0.50	1332	1432
SGI-25	2436	0.50	1400	1500
SGI-26	2431	0.25	1402	1502
SGP-27	2442	0.50	1405	1505
SGP-28	2428	0.50	1408	1508
SGP-29	2457	0.50	1435	1535

*Dup-02 is taken at SGP-11.

1540- Finish sampling for the day. Load the UTV onto the trailer.

1600- Lock gate. Leave site for the day.

Appendix IV- Laboratory Reports and Chains of Custody

S&ME, Inc.
Quality Assurance and Quality Control
Laboratory Data Review

Project Name	Cumberland County/Cliffdale Landfill
S&ME Project No.	23050459
Date of Review	May 12, 2025

1.0 Project Identification

Project Description	Landfill and Soil Gas Sampling: Mercury Sampling
Project Location	7583 Lowell Haris Road, Fayetteville, Cumberland County, North Carolina
NCDEQ ID	NCD980502900
PRLF Task Order(s)	2900RI-12

2.0 Laboratory Information

Primary Laboratory Name	EMSL analytical, Inc (The laboratory states its N.C. certification - 41 status for all analytes tested, within the "Accreditations & Locations" Section of their report.)
Location	10801 Southern Loop Blvd, Pineville NC 28134
EMSL Lab Report IDs, and Sample Collection Dates	EMSL Order 412504097, Sampled on 4/17/25 and 4/18/25.

3.0 Chain of Custody and Log-in Review(s)

COC Item	Yes	No	Comments
COC Signed by All Parties	X		
Correct Project No. on COC	X		
Samples Received Within Holding Time	X		
Samples Received in Acceptable Condition	X		
QA/QC Samples Received in Acceptable Condition	X		Duplicate samples were collected and analyzed for each of the two days of sampling activity.

4.0 Laboratory Quality Control Review

QC Item	Yes	No	Comments
Samples Analyzed Outside of Holding Time		X	
Matrix Spike and Matrix Spike Duplicate Included in Analysis	X		
Method Blank Included in Analysis	X		
Surrogate Recovery Monitored	X		
Were Any Samples Reported as Rejected		X	
QC Qualifiers Identified	X		Reference definitions of qualifiers in the Glossary section of Laboratory Report. Qualification details are presented below, organized by Method:
According to the EMSL report, all sample aliquots were receive, in the proper containers and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control were within established criteria and addressed, or properly qualified within the sample results. The laboratory affirmed by signature that all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data were identified by the laboratory, and that no information or data were knowingly withheld that would affect the quality of the data.			

5.0 Data Review Summary

S&ME has reviewed the analytical results for the samples collected and submitted to the laboratory for quality and validity. Quality control and assurance concerns have been discussed within the report, and accuracy and precision were determined by an evaluation of the laboratory control spike recovery and laboratory duplicate analysis, respectively. It should be noted that a trip blank was inadvertently not submitted within the cooler delivered to the laboratory. S&ME did not identify significant qualitative or quantitative limitations associated with the laboratory analytical results. Therefore, the laboratory data appears suitable for its intended use.	
Reviewed By	Connor Hicks

EMSL Analytical, Inc.
10801 Southern Loop Blvd, Pineville, NC 28134
Phone: (704) 525-2205 Fax: (704) 525-2382 Email: charlottelab@emsl.com

Attn: **Tom Raymond**
S&ME, Inc.
3201 Spring Forest Rd.
Raleigh, NC 27616
Phone: (919) 872-2660
Fax: (919) 790-9827

4/29/2025

The following analytical report covers the analysis performed on samples submitted to EMSL Analytical, Inc. on 4/22/2025. The results are tabulated on the attached data pages for the following client designated project:

Cliffdale Landfill/23050459

The reference number for these samples is EMSL Order #412504097. Please use this reference when calling about these samples. If you have any questions, please do not hesitate to contact me at (704) 525-2205.

Approved By:

Lee Plumley, Laboratory Manager

The samples associated with this report were received in good condition unless otherwise noted. This report relates only to those items tested as received by the laboratory. The QC data associated with the sample results meet the recovery and precision requirements established by the NELAP, unless specifically indicated. All results for soil samples are reported on a dry weight basis, unless otherwise noted. This report may not be reproduced except in full and without written approval by EMSL Analytical, Inc.

EMSL Analytical, Inc.
10801 Southern Loop Blvd, Pineville, NC 28134
Phone/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com charlottelab@emsl.com

EMSL Order:	412504097
CustomerID:	SMEI60
CustomerPO:	23050459
ProjectID:	

Attn: **Tom Raymond**
S&ME, Inc.
3201 Spring Forest Rd.
Raleigh, NC 27616

Phone: (919) 872-2660
Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGP-30
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0001*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-31
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0002*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-33
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0003*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.67	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-34
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0004*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-35
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0005*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

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Phone/Fax: (704) 525-2205 / (704) 525-2382
http://www.EMSL.com charlottelab@emsl.com

EMSL Order:	412504097
CustomerID:	SMEI60
CustomerPO:	23050459
ProjectID:	

Attn: **Tom Raymond**
S&ME, Inc.
3201 Spring Forest Rd.
Raleigh, NC 27616

Phone: (919) 872-2660
Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGP-36
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0006*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-37
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0007*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-39
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0008*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.31	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGI-40
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0009*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.31	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGI-42
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0010*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

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EMSL Order:	412504097
CustomerID:	SMEI60
CustomerPO:	23050459
ProjectID:	

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Raleigh, NC 27616

Phone: (919) 872-2660
Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGI-44
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0011*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.67	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGI-46
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0012*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGI-47
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0013*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.31	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGI-48
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0014*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.31	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description Dup-01
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0015*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

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EMSL Order:	412504097
CustomerID:	SMEI60
CustomerPO:	23050459
ProjectID:	

Attn: **Tom Raymond**
S&ME, Inc.
3201 Spring Forest Rd.
Raleigh, NC 27616

Phone: (919) 872-2660
Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGP-1
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0016*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-2
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0017*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-3
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0018*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.67	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-4
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0019*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-5
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0020*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.31	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

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EMSL Order:	412504097
CustomerID:	SMEI60
CustomerPO:	23050459
ProjectID:	

Attn: **Tom Raymond**
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3201 Spring Forest Rd.
Raleigh, NC 27616

Phone: (919) 872-2660
Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGP-6
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0021*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-7
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0022*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-8
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0023*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.67	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-9
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0024*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-10
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0025*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.32	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

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EMSL Order:	412504097
CustomerID:	SMEI60
CustomerPO:	23050459
ProjectID:	

Attn: **Tom Raymond**
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Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGP-11
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0026*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-12
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0027*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-13
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0028*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.63	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-14
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0029*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.31	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-18
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0030*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.31	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

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EMSL Order: 412504097
CustomerID: SMEI60
CustomerPO: 23050459
ProjectID:

Attn: **Tom Raymond**
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Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGP-19
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0031*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-20
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0032*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.30	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-21
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0033*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.58	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-22
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0034*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.32	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-23
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0035*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.31	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

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EMSL Order:	412504097
CustomerID:	SMEI60
CustomerPO:	23050459
ProjectID:	

Attn: **Tom Raymond**
S&ME, Inc.
3201 Spring Forest Rd.
Raleigh, NC 27616

Phone: (919) 872-2660
Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGP-24
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0036*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-25
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0037*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-26
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0038*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-27
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0039*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

Client Sample Description SGP-28
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0040*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*	*Analysis Date & Analyst*
METALS						
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025 NC	4/23/2025 15:30 NC

EMSL Analytical, Inc.
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http://www.EMSL.com charlottelab@emsl.com

EMSL Order:	412504097
CustomerID:	SMEI60
CustomerPO:	23050459
ProjectID:	

Attn: **Tom Raymond**
S&ME, Inc.
3201 Spring Forest Rd.
Raleigh, NC 27616

Phone: (919) 872-2660
Fax: (919) 790-9827
Received: 4/22/2025 09:40 AM
Collected: 4/17/2025

Project: **Cliffdale Landfill/23050459**

Analytical Results

Client Sample Description SGP-29
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0041*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*		*Analysis Date & Analyst*	
METALS								
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025	NC	4/23/2025 15:30	NC

Client Sample Description Dup-02
Soil Gas Samples
Collected: 4/17/2025 ***Lab ID:*** *412504097-0042*

Method	*Parameter*	*Result*	*RL*	*Units*	*Prep Date & Analyst*		*Analysis Date & Analyst*	
METALS								
Mercury by CVAA, NIOSH 6009	Mercury	ND	0.33	µg/m³	4/23/2025	NC	4/23/2025 15:30	NC

Definitions:

MDL - method detection limit
J - Result was below the reporting limit, but at or above the MDL
ND - indicates that the analyte was not detected at the reporting limit
RL - Reporting Limit (Analytical)
D - Dilution Sample required a dilution which was used to calculate final results

EMSL ANALYTICAL, INC.
TESTING | ENVIRONMENTAL | PRODUCTS | TRAINING

Industrial Hygiene - Chain of Custody

EMSL Order Number / Lab Use Only: 412504097

EMSL Analytical, Inc.
10041 Southern Loop Blvd
Pineville, NC 28134
PHONE: (704) 525-2205
EMAIL: CharlotteLab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information

Customer ID:
Company Name: S&ME Inc.
Contact Name: Tom Raymond, Connor Hicks
Street Address: 3201 Spring Forest Rd.
City, State, Zip: Raleigh NC 27616
Country: USA
Phone: 919-872-2660
Email(s) for Report: traymond@smeinc.com, connorhicks@smeinc.com

Billing Information

Billing ID:
Company Name: Same
Billing Contact:
Street Address:
City, State, Zip:
Country:
Phone:
Email(s) for invoice:

Project Name/No: Cliffdale Landfill / 23050459
Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide)
US State where samples collected: NC
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)

Media Type:
Media Manufacturer/ Part Number:
Media Lot Number:

Sampled By Name: James Waters
Sampled By Signature: James A. Waters
No. Samples In Shipment: 42

Turnaround Time (TAT) Options - Please check: (If no selection made, Standard 2 Week (EOD) TAT will apply)
☐ 2 Week ☒ 1 Week ☐ 4 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day ☐ Other (Call Lab)

Client Sample ID	Location/Description	Analyte/ Method	Media	Flow (lpm)	Sample Time On	Sample Time Off	Sample Type	Sample Date	Comments
SGP-30		NIOSH 6009		0.50	1140	1240	☐ Area ☐ Personal	4/17/25	Soil Gas Samples
SGP-31				0.50	1210	1310	☐ Area ☐ Personal		
SGP-33				0.25	1220	1320	☐ Area ☐ Personal		
SGP-34				0.50	1235	1335	☐ Area ☐ Personal		
SGP-35				0.50	1240	1340	☐ Area ☐ Personal		
SGP-36				0.50	1300	1400	☐ Area ☐ Personal		
SGP-37				0.50	1325	1425	☐ Area ☐ Personal		
SGP-39				0.50	1350	1455	☐ Area ☐ Personal		
SGI-40				0.50	1355	1500	☐ Area ☐ Personal		
SGI-42				0.50	1440	1540	☐ Area ☐ Personal		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)
1 Wk TAT Per Connor H (Verbal) 4/22/25 1610 AG

Method of Shipment: Ship
Sample Condition Upon Receipt:

Relinquished by: James A. Waters — Date/Time: 4/21/25
Received by: [illegible] 4/22/25 0940 FX 7972 — Date/Time: 4916 46360

Relinquished by: — Date/Time:
Received by: — Date/Time

Controlled Document - COC-21 Industrial Hygiene R3 03/18/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

Page 1 of 5

OrderID: 412504097

Industrial Hygiene - Chain of Custody

EMSL Order Number / Lab Use Only: 4097

EMSL ANALYTICAL, INC.

EMSL Analytical, Inc.
Pineville, NC 28134
PHONE: (704) 525-2205
EMAIL: CharlotteLab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information

Customer ID:
Company Name: S+ME Inc.
Contact Name: Tom Raymond, Connor Hicks
Street Address: 3201 Spring Forest Rd.
City, State, Zip: Raleigh NC 27616 Country: USA
Phone: 919-872-2660
Email(s) for Report: traymond@smeinc.com, ConnorHicks@smeinc.com

Billing Information

Billing ID:
Company Name: Same
Billing Contact:
Street Address:
City, State, Zip: Country:
Phone:
Email(s) for invoice:

Project Name/No: Cliffdale Landfill / 23050459
Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide)
US State where samples collected: NC
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)

Media Type:
Media Manufacturer/ Part Number:
Media Lot Number:

Sampled By Name: James Waters
Sampled By Signature: James A. Waters
No. Samples in Shipment: 42

Turnaround Time (TAT) Options - Please check: (If no selection made, Standard 2 Week (EOD) TAT will apply) ☐ 2 Week ☒ 1 Week ☒ 4 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day ☐ Other (Call Lab)

Client Sample ID	Location/Description	Analyte/ Method	Media	Flow (lpm)	Sample Time On	Sample Time Off	Sample Type	Sample Date	Comments
SGI-44		NIOSH 6009		0.25	1450	1550	☐ Area ☐ Personal	4/17/25	Soil Gas Samples.
SGI-46				0.50	1510	1610	☐ Area ☐ Personal		
SGP-47				0.50	1515	1620	☐ Area ☐ Personal		
SGP-48				0.50	1520	1625	☐ Area ☐ Personal		
Dup-01				0.50	1 Hour		☐ Area ☐ Personal		
SGP-1				0.50	0853	0953	☐ Area ☐ Personal	4/18/25	
SGP-2				0.50	0900	1000	☐ Area ☐ Personal		
SGP-3				0.25	0903	1003	☐ Area ☐ Personal		
SGP-4				0.50	0906	1006	☐ Area ☐ Personal		
SGP-5				0.50	0911	1015	☐ Area ☐ Personal		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment: Ship
Sample Condition Upon Receipt:

Relinquished by: James A. Waters Date/Time: 4/21/25
Received by: Date/Time:

Relinquished by: Date/Time:
Received by: Date/Time:

Controlled Document - COC-21 Industrial Hygiene R3 03/18/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety. Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.

OrderID: 412504097

Industrial Hygiene - Chain of Custody

EMSL ANALYTICAL, INC.

EMSL Analytical, Inc.
[illegible] Southern Loop Blvd
Pineville, NC 28134
PHONE: (704) 525-2205
EMAIL: CharlotteLab@EMSL.com

EMSL Order Number (Lab Use Only): 4097

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information

Customer ID:	
Company Name:	S+ME INC.
Contact Name:	Tom Raymond, Connor Hicks
Street Address:	3201 Spring Forest Rd.
City, State, Zip:	Raleigh NC 27616
Country:	USA
Phone:	919-872-2660
Email(s) for Report:	traymond@smeinc.com, connorhicks@smeinc.com

Billing Information

Billing ID:	
Company Name:	Same
Billing Contact:	
Street Address:	
City, State, Zip:	
Country:	
Phone:	
Email(s) for Invoice:	

Project Name/No: Cliffdale Landfill / 23050459

Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide)

US State where samples collected: NC

State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)

Media Type:

Media Manufacturer/ Part Number:

Media Lot Number:

Sampled By Name: James Waters

Sampled By Signature: James A. Waters

No. Samples in Shipment: 42

Turnaround Time (TAT) Options - Please check: (If no selection made, Standard 2 Week (EOD) TAT will apply) ☐ 2 Week ☑ 1 Week ☐ 4 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day ☐ Other (Call Lab)

Client Sample ID	Location/Description	Analyte/ Method	Media	Flow (lpm)	Sample Time On	Sample Time Off	Sample Type	Sample Date	Comments
SGI-6		NIOSH 6009		0.50	1005	1105	☐ Area ☐ Personal	4/18/25	Soil Gas Samples
SGP-7				0.50	1012	1112	☐ Area ☐ Personal		
SGP-8				0.25	1015	1115	☐ Area ☐ Personal		
SGP-9				0.50	1021	1121	☐ Area ☐ Personal		
SGP-10				0.50	1025	1128	☐ Area ☐ Personal		
SGP-11				0.50	1118	1218	☐ Area ☐ Personal		
SGI-12				0.50	1122	1222	☐ Area ☐ Personal		
SGP-13				0.25	1128	1232	☐ Area ☐ Personal		
SGP-14				0.50	1133	1238	☐ Area ☐ Personal		
SGI-18				0.50	1138	1242	☐ Area ☐ Personal		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment: Ship

Sample Condition Upon Receipt:

Relinquished by: James A. Waters	Date/Time: 4/21/25	Received by:	Date/Time
Relinquished by:	Date/Time:	Received by:	Date/Time

Controlled Document - COC-21 Industrial Hygiene R3 03/16/2021

☐ AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

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OrderID: 412504097

Page 3 Of 5

EMSL ANALYTICAL, INC.

Industrial Hygiene - Chain of Custody

EMSL Order Number / Lab Use Only: 4097

EMSL Analytical, Inc.
10801 Southern Loop Blvd
Pineville, NC 28134
PHONE: (704) 525-2205
EMAIL: CharlotteLab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information

Customer ID:
Company Name: SME Inc.
Contact Name: Tom Raymond, Connor Hicks
Street Address: 3201 Spring Forest Rd.
City, State, Zip: Raleigh NC 27616 Country: USA
Phone: 919-872-2660
Email(s) for Report: traymond@smeinc.com, ConnorHicks@smeinc.com

Billing Information

Billing ID:
Company Name: Same
Billing Contact:
Street Address:
City, State, Zip: Country:
Phone:
Email(s) for Invoice:

Project Name/No: Cliffdale Landfill / 23050459
Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide)
US State where samples collected: NC
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)

Media Type:
Media Manufacturer/ Part Number:
Media Lot Number:

Sampled By Name: James Waters
Sampled By Signature: James A. Waters
No. Samples in Shipment: 42

Turnaround Time (TAT) Options - Please check: (If no selection made, Standard 2 Week (EOD) TAT will apply)
☐ 2 Week ☑ 1 Week ☐ 4 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day ☐ Other (Call Lab)

Client Sample ID	Location/Description	Analyte/ Method	Media	Flow (lpm)	Sample Time On	Sample Time Off	Sample Type	Sample Date	Comments
SGP-19		NIOSH 6009		0.50	1226	1326	☐ Area ☐ Personal	4/18/25	Soil Gas Samples
SGP-20				0.50	1230	1337	☐ Area ☐ Personal		
SGP-21				0.25	1235	1344	☐ Area ☐ Personal		
SGP-22				0.50	1245	1348	☐ Area ☐ Personal		
SGP-23				0.50	1248	1352	☐ Area ☐ Personal		
SGP-24				0.50	1332	1432	☐ Area ☐ Personal		
SGI-25				0.50	1400	1500	☐ Area ☐ Personal		
SGI-26				0.25	1402	1502	☐ Area ☐ Personal		
SGP-27				0.50	1405	1505	☐ Area ☐ Personal		
SGP-28				0.50	1408	1508	☐ Area ☐ Personal		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment: Ship
Sample Condition Upon Receipt:

Relinquished by: James A. Waters Date/Time: 4/21/25
Received by: Date/Time

Relinquished by: Date/Time:
Received by: Date/Time

Controlled Document - COC-21 Industrial Hygiene R3 03/18/2021

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Page 4 Of 5

OrderID: 412504097

Industrial Hygiene - Chain of Custody

EMSL ANALYTICAL, INC.

EMSL Order Number (Lab Use Only): 4097

EMSL Analytical, Inc.
[illegible] Southern Loop Blvd
Pineville, NC 28134
PHONE: (704) 525-2205
EMAIL: CharlotteLab@EMSL.com

If Bill-To is the same as Report-To leave this section blank. Third-party billing requires written authorization.

Customer Information

Customer ID:
Company Name: S+ME Inc.
Contact Name: Tom Raymond, Connor Hicks
Street Address: 3201 Spring Forest Rd.
City, State, Zip: Raleigh NC 27616 Country: USA
Phone: 919-872-2660
Email(s) for Report: traymond@smeinc.com ConnorHicks@smeinc.com

Billing Information

Billing ID:
Company Name: Same
Billing Contact:
Street Address:
City, State, Zip: Country:
Phone:
Email(s) for Invoice:

Project Name/No: Cliffdale Landfill / 23050459
Purchase Order:

EMSL LIMS Project ID: (If applicable, EMSL will provide)
US State where samples collected: NC
State of Connecticut (CT) must select project location: ☐ Commercial (Taxable) ☐ Residential (Non-Taxable)

Media Type:
Media Manufacturer/ Part Number:
Media Lot Number:

Sampled By Name: James Waters
Sampled By Signature: James A. Waters
No. Samples in Shipment: 42

Turnaround Time (TAT) Options - Please check: (If no selection made, Standard 2 Week (EOD) TAT will apply)
☐ 2 Week ☐ 1 Week ☒ 4 Day ☐ 3 Day ☐ 2 Day ☐ 1 Day ☐ Other (Call Lab)

Client Sample ID	Location/Description	Analyte/ Method	Media	Flow (lpm)	Sample Time On	Sample Time Off	Sample Type	Sample Date	Comments
SGP-29		NIOSH 6009		0.50	1435	1535	☒ Area ☐ Personal	4/18/25	Soil Gas Samples
Dup-02		"		0.50	1 Hour		☐ Area ☐ Personal	"	
							☐ Area ☐ Personal		
							☐ Area ☐ Personal		
							☐ Area ☐ Personal		
							☐ Area ☐ Personal		
							☐ Area ☐ Personal		
							☐ Area ☐ Personal		
							☐ Area ☐ Personal		
							☐ Area ☐ Personal		

Special Instructions and/or Regulatory Requirements (Sample Specifications, Processing Methods, Limits of Detection, etc.)

Method of Shipment: Ship
Sample Condition Upon Receipt:

Relinquished by: James A. Waters Date/Time: 4/21/25 Received by: Date/Time

Relinquished by: Date/Time: Received by: Date/Time

Controlled Document - COC-21 Industrial Hygiene R3 03/18/2021

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OrderID: 412504097

S&ME, Inc.
Quality Assurance and Quality Control
Laboratory Data Review

Project Name	Cumberland County/Cliffdale Landfill
S&ME Project No.	23050459
Date of Review	May 12, 2025

1.0 Project Identification

Project Description	Landfill and Soil Gas Sampling: TO-15, H2S, Methane
Project Location	7583 Lowell Haris Road, Fayetteville, Cumberland County, North Carolina
NCDEQ ID	NCD980502900
PRLF Task Order(s)	2900RI-12

2.0 Laboratory Information

Primary Laboratory Name	Enthalpy Analytical (The laboratory states its N.C. certification - 41 status for all analytes tested, within the "Accreditations & Locations" Section of their report.)
Location	1941 Reymet Road, Richmond Virginia 23237
Enthalpy Lab Report IDs, and Sample Collection Dates	Laboratory Order ID 25D1361 & 25D1774, Sampled from 4/8/25 to 4/15/25

3.0 Chain of Custody and Log-in Review(s)

COC Item	Yes	No	Comments
COC Signed by All Parties	X		
Correct Project No. on COC	X		
Samples Received Within Holding Time	X		
Samples Received in Acceptable Condition	X		
QA/QC Samples Received in Acceptable Condition	X		Duplicate samples were collected and analyzed for each of the six days of sampling activity.

4.0 Laboratory Quality Control Review

QC Item	Yes	No	Comments
Samples Analyzed Outside of Holding Time		X	
Matrix Spike and Matrix Spike Duplicate Included in Analysis	X		
Method Blank Included in Analysis	X		
Surrogate Recovery Monitored	X		
Were Any Samples Reported as Rejected		X	
QC Qualifiers Identified	X		Reference definitions of qualifiers in the Glossary section of Laboratory Report. Qualification details are presented below, organized by Method:
According to the Enthalpy lab report, all sample aliquots were received in the proper containers and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control were within established criteria and addressed, or properly qualified within the sample results. The laboratory affirmed by signature that all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data were identified by the laboratory, and that no information or data were knowingly withheld that would affect the quality of the data.			

5.0 Data Review Summary

S&ME has reviewed the analytical results for the samples collected and submitted to the laboratory for quality and validity. Quality control and assurance concerns have been discussed within the report, and accuracy and precision were determined by an evaluation of the laboratory control spike recovery and laboratory duplicate analysis, respectively. It should be noted that a trip blank was inadvertently not submitted within the cooler delivered to the laboratory. S&ME did not identify significant qualitative or quantitative limitations associated with the laboratory analytical results. Therefore, the laboratory data appears suitable for its intended use.	
Reviewed By	Connor Hicks

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh	Date Received:	April 14, 2025 11:55
	3201 Spring Forest Road	Date Issued:	April 28, 2025 17:05
	Raleigh, NC 27616	Project Number:	23050459
Submitted To:	Connor Hicks	Purchase Order:	
Client Site I.D.:	Cliffdale LF		

Enclosed are the results of analyses for samples received by the laboratory on 04/14/2025 11:55. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Sarah R. Endsley

Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

This report shall not be reproduced except in full without the expressed and written approval of an authorized representative of Enthalpy Analytical, Inc.

TNI Accredited
VELAP ID 460021

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh	Date Received:	April 14, 2025 11:55
	3201 Spring Forest Road	Date Issued:	April 28, 2025 17:05
	Raleigh, NC 27616	Project Number:	23050459
Submitted To:	Connor Hicks	Purchase Order:	

Client Site I.D.: Cliffdale LF

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Duplicate-02	25D1361-01	Air	04/09/2025 00:00	04/14/2025 11:55
SGP-08	25D1361-02	Air	04/09/2025 12:10	04/14/2025 11:55
SGP-09	25D1361-03	Air	04/09/2025 12:05	04/14/2025 11:55
SGP-13	25D1361-04	Air	04/09/2025 11:35	04/14/2025 11:55
SGP-02	25D1361-05	Air	04/08/2025 12:00	04/14/2025 11:55
SGP-03	25D1361-06	Air	04/08/2025 12:45	04/14/2025 11:55
Dup-01	25D1361-07	Air	04/08/2025 00:00	04/14/2025 11:55
SGP-01	25D1361-08	Air	04/08/2025 11:35	04/14/2025 11:55
SGI-06	25D1361-09	Air	04/08/2025 13:30	04/14/2025 11:55
SGP-04	25D1361-10	Air	04/08/2025 13:15	04/14/2025 11:55
SGP-05	25D1361-11	Air	04/08/2025 14:15	04/14/2025 11:55
SGP-07	25D1361-12	Air	04/08/2025 14:00	04/14/2025 11:55
SGP-14	25D1361-13	Air	04/09/2025 14:30	04/14/2025 11:55
SGI-12	25D1361-14	Air	04/09/2025 13:05	04/14/2025 11:55
SGP-10	25D1361-15	Air	04/09/2025 13:45	04/14/2025 11:55
SGP-11	25D1361-16	Air	04/09/2025 12:20	04/14/2025 11:55

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: Duplicate-02 Project Location:

Sample ID: 25D1361-01 Canister ID: 063-00048::36965 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 3

Sampled: 4/9/2025 00:00 Flow Controller ID: 063-00528::14092 Receipt Vacuum(in Hg): 0.8

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	4380	1620	1620		6100	2300	2300	162	1	4/25/25 14:10	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.4	80-120	4/25/25 14:10

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	33.8	0.45	0.45		9	1	4/22/25 13:45	DKM
Carbon dioxide, as received	13.0	0.45	0.45		9	1	4/22/25 13:45	DKM
Oxygen (O2), as received	11.5	0.45	0.45		9	1	4/22/25 13:45	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 13:45	DKM
Nitrogen (N2), as received	41.1	9.00	9.00		9	1	4/22/25 13:45	DKM
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 13:45	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	3.00	7.50		ND	16	41	6	2.5	4/17/25 2:04	DFH
1,1,1,2-Tetrachloroethane	ND	3.00	7.50		ND	21	51	6	2.5	4/17/25 2:04	DFH
1,1,2,2-Tetrachloroethane	ND	3.00	7.50		ND	21	51	6	2.5	4/17/25 2:04	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.00	7.50		ND	23	57	6	2.5	4/17/25 2:04	DFH
1,1,2-Trichloroethane	ND	3.00	7.50		ND	16	41	6	2.5	4/17/25 2:04	DFH
1,1-Dichloroethane	ND	3.00	7.50		ND	12	30	6	2.5	4/17/25 2:04	DFH
1,1-Dichloroethylene	ND	3.00	7.50		ND	12	30	6	2.5	4/17/25 2:04	DFH
1,2,4-Trimethylbenzene	ND	3.00	7.50		ND	15	37	6	2.5	4/17/25 2:04	DFH
1,2-Dibromoethane (EDB)	ND	3.00	7.50		ND	23	58	6	2.5	4/17/25 2:04	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: Duplicate-02 Project Location:

Sample ID: 25D1361-01 Canister ID: 063-00048::36965 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 3

Sampled: 4/9/2025 00:00 Flow Controller ID: 063-00528::14092 Receipt Vacuum(in Hg): 0.8

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	3.00	7.50		ND	18	45	6	2.5	4/17/25 2:04	DFH
1,2-Dichloroethane	ND	3.00	7.50		ND	12	30	6	2.5	4/17/25 2:04	DFH
1,2-Dichloropropane	ND	3.00	7.50		ND	14	35	6	2.5	4/17/25 2:04	DFH
1,2-Dichlorotetrafluoroethane	95.6	3.00	7.50	C	670	21	52	6	2.5	4/17/25 2:04	DFH
1,3,5-Trimethylbenzene	ND	3.00	7.50		ND	15	37	6	2.5	4/17/25 2:04	DFH
1,3-Butadiene	ND	3.00	7.50		ND	6.6	17	6	2.5	4/17/25 2:04	DFH
1,3-Dichlorobenzene	ND	3.00	7.50		ND	18	45	6	2.5	4/17/25 2:04	DFH
1,4-Dichlorobenzene	ND	3.00	7.50		ND	18	45	6	2.5	4/17/25 2:04	DFH
1,4-Dioxane	ND	3.00	7.50		ND	11	27	6	2.5	4/17/25 2:04	DFH
2-Butanone (MEK)	ND	3.00	7.50		ND	8.8	22	6	2.5	4/17/25 2:04	DFH
2-Chlorotoluene	ND	3.00	7.50		ND	16	39	6	2.5	4/17/25 2:04	DFH
2-Hexanone (MBK)	ND	3.00	7.50		ND	12	31	6	2.5	4/17/25 2:04	DFH
4-Methyl-2-pentanone (MIBK)	ND	3.00	7.50		ND	34	86	6	2.5	4/17/25 2:04	DFH
Allyl chloride	ND	3.00	7.50		ND	9.4	23	6	2.5	4/17/25 2:04	DFH
Benzene	66.6	3.00	3.00		210	9.6	9.6	6	2.5	4/17/25 2:04	DFH
Benzyl Chloride	ND	3.00	7.50		ND	16	39	6	2.5	4/17/25 2:04	DFH
Bromoform	ND	3.00	7.50		ND	31	78	6	2.5	4/17/25 2:04	DFH
Bromomethane	ND	3.00	7.50		ND	12	29	6	2.5	4/17/25 2:04	DFH
Carbon Disulfide	ND	7.50	7.50		ND	23	23	6	2.5	4/17/25 2:04	DFH
Carbon Tetrachloride	ND	3.00	7.50		ND	19	47	6	2.5	4/17/25 2:04	DFH
Chlorobenzene	ND	3.00	7.50		ND	14	35	6	2.5	4/17/25 2:04	DFH
Chloroethane	ND	3.00	7.50		ND	7.9	20	6	2.5	4/17/25 2:04	DFH
Chloroform	ND	3.00	3.00		ND	15	15	6	2.5	4/17/25 2:04	DFH
Chloromethane	ND	3.00	7.50		ND	6.2	15	6	2.5	4/17/25 2:04	DFH
cis-1,2-Dichloroethylene	ND	3.00	7.50		ND	12	30	6	2.5	4/17/25 2:04	DFH
cis-1,3-Dichloropropene	ND	3.00	7.50		ND	14	34	6	2.5	4/17/25 2:04	DFH
Cyclohexane	54.6	3.00	7.50		190	10	26	6	2.5	4/17/25 2:04	DFH
Dibromochloromethane	ND	3.00	7.50		ND	26	64	6	2.5	4/17/25 2:04	DFH
Dichlorodifluoromethane	22.0	7.50	7.50	C	110	37	37	6	2.5	4/17/25 2:04	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: Duplicate-02 Project Location:

Sample ID: 25D1361-01 Canister ID: 063-00048::36965 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 3

Sampled: 4/9/2025 00:00 Flow Controller ID: 063-00528::14092 Receipt Vacuum(in Hg): 0.8

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	3.00	7.50		ND	11	27	6	2.5	4/17/25 2:04	DFH
Ethylbenzene	9.75	3.00	7.50		42	13	33	6	2.5	4/17/25 2:04	DFH
Heptane	112	3.00	7.50		460	12	31	6	2.5	4/17/25 2:04	DFH
Hexachlorobutadiene	ND	3.00	7.50	C	ND	32	80	6	2.5	4/17/25 2:04	DFH
Hexane	65.8	3.00	7.50		230	11	26	6	2.5	4/17/25 2:04	DFH
Isopropylbenzene	ND	3.00	7.50		ND	15	37	6	2.5	4/17/25 2:04	DFH
m+p-Xylenes	16.0	6.00	15.0		70	26	65	6	2.5	4/17/25 2:04	DFH
Methyl methacrylate	ND	3.00	7.50		ND	12	31	6	2.5	4/17/25 2:04	DFH
Methylene chloride	ND	7.50	15.0		ND	26	52	6	2.5	4/17/25 2:04	DFH
Methyl-t-butyl ether (MTBE)	ND	3.00	7.50		ND	11	27	6	2.5	4/17/25 2:04	DFH
Naphthalene	3.30	3.00	3.00		17	16	16	6	2.5	4/17/25 2:04	DFH
o-Xylene	3.15	3.00	7.50	J	14	13	33	6	2.5	4/17/25 2:04	DFH
Propylene	83.1	2.40	2.40		140	4.1	4.1	6	2.5	4/17/25 2:04	DFH
Styrene	ND	3.00	7.50		ND	13	32	6	2.5	4/17/25 2:04	DFH
TBA	ND	7.50	7.50		ND	23	23	6	2.5	4/17/25 2:04	DFH
Tetrachloroethylene (PCE)	ND	3.00	7.50		ND	20	51	6	2.5	4/17/25 2:04	DFH
Tetrahydrofuran	ND	3.00	7.50		ND	8.8	22	6	2.5	4/17/25 2:04	DFH
Toluene	3.90	3.00	7.50	J	15	11	28	6	2.5	4/17/25 2:04	DFH
trans-1,2-Dichloroethylene	ND	3.00	7.50		ND	12	30	6	2.5	4/17/25 2:04	DFH
trans-1,3-Dichloropropene	ND	3.00	7.50		ND	14	34	6	2.5	4/17/25 2:04	DFH
Trichloroethylene	ND	3.00	3.00		ND	16	16	6	2.5	4/17/25 2:04	DFH
Trichlorofluoromethane	ND	7.50	7.50		ND	42	42	6	2.5	4/17/25 2:04	DFH
Vinyl acetate	ND	3.00	7.50		ND	11	26	6	2.5	4/17/25 2:04	DFH
Vinyl bromide	ND	3.00	7.50		ND	13	33	6	2.5	4/17/25 2:04	DFH
Vinyl chloride	20.6	3.00	7.50	C	53	7.7	19	6	2.5	4/17/25 2:04	DFH
Xylenes, Total	19.2	9.00	22.5	J	83	39	98	6	2.5	4/17/25 2:04	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	114	80-120	4/17/25 2:04

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: Duplicate-02

Project Location:

Sample ID: 25D1361-01
Sample Matrix: Air
Sampled: 4/9/2025 00:00
Sample Type: SG

Canister ID: 063-00048::36965
Canister Size: 6
Flow Controller ID: 063-00528::14092
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 3
Receipt Vacuum(in Hg): 0.8

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-08 Project Location:

Sample ID: 25D1361-02 Canister ID: 063-00337::43909 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 12:10 Flow Controller ID: 063-00458::16061 Receipt Vacuum(in Hg): 5.0

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	14700	4050	4050		21000	5600	5600	405	1	4/25/25 2:01	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.8	80-120	4/25/25 2:01

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	69.9	0.45	0.45		9	1	4/22/25 14:30	DKM
Carbon dioxide, as received	26.6	0.45	0.45		9	1	4/22/25 14:30	DKM
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/22/25 14:30	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 14:30	DKM
Nitrogen (N2), as received	ND	9.00	9.00		9	1	4/22/25 14:30	DKM
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 14:30	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/17/25 18:00	DFH
1,1,1,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/17/25 18:00	DFH
1,1,2,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/17/25 18:00	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.00	15.0		ND	46	110	12	2.5	4/17/25 18:00	DFH
1,1,2-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/17/25 18:00	DFH
1,1-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/17/25 18:00	DFH
1,1-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/17/25 18:00	DFH
1,2,4-Trimethylbenzene	7.20	6.00	15.0	J	35	29	74	12	2.5	4/17/25 18:00	DFH
1,2-Dibromoethane (EDB)	ND	6.00	15.0		ND	46	120	12	2.5	4/17/25 18:00	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-08 Project Location:

Sample ID: 25D1361-02 Canister ID: 063-00337::43909 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 12:10 Flow Controller ID: 063-00458::16061 Receipt Vacuum(in Hg): 5.0

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/17/25 18:00	DFH
1,2-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/17/25 18:00	DFH
1,2-Dichloropropane	ND	6.00	15.0		ND	28	69	12	2.5	4/17/25 18:00	DFH
1,2-Dichlorotetrafluoroethane	178	6.00	15.0		1200	42	100	12	2.5	4/17/25 18:00	DFH
1,3,5-Trimethylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/17/25 18:00	DFH
1,3-Butadiene	ND	6.00	15.0		ND	13	33	12	2.5	4/17/25 18:00	DFH
1,3-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/17/25 18:00	DFH
1,4-Dichlorobenzene	9.30	6.00	15.0	J	56	36	90	12	2.5	4/17/25 18:00	DFH
1,4-Dioxane	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 18:00	DFH
2-Butanone (MEK)	ND	6.00	15.0		ND	18	44	12	2.5	4/17/25 18:00	DFH
2-Chlorotoluene	ND	6.00	15.0		ND	31	78	12	2.5	4/17/25 18:00	DFH
2-Hexanone (MBK)	ND	6.00	15.0		ND	25	61	12	2.5	4/17/25 18:00	DFH
4-Methyl-2-pentanone (MIBK)	ND	6.00	15.0		ND	69	170	12	2.5	4/17/25 18:00	DFH
Allyl chloride	ND	6.00	15.0		ND	19	47	12	2.5	4/17/25 18:00	DFH
Benzene	178	6.00	6.00		570	19	19	12	2.5	4/17/25 18:00	DFH
Benzyl Chloride	ND	6.00	15.0	C	ND	31	78	12	2.5	4/17/25 18:00	DFH
Bromoform	ND	6.00	15.0		ND	62	160	12	2.5	4/17/25 18:00	DFH
Bromomethane	ND	6.00	15.0		ND	23	58	12	2.5	4/17/25 18:00	DFH
Carbon Disulfide	ND	15.0	15.0		ND	47	47	12	2.5	4/17/25 18:00	DFH
Carbon Tetrachloride	ND	6.00	15.0		ND	38	94	12	2.5	4/17/25 18:00	DFH
Chlorobenzene	ND	6.00	15.0		ND	28	69	12	2.5	4/17/25 18:00	DFH
Chloroethane	ND	6.00	15.0		ND	16	40	12	2.5	4/17/25 18:00	DFH
Chloroform	ND	6.00	6.00		ND	29	29	12	2.5	4/17/25 18:00	DFH
Chloromethane	ND	6.00	15.0		ND	12	31	12	2.5	4/17/25 18:00	DFH
cis-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/17/25 18:00	DFH
cis-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/17/25 18:00	DFH
Cyclohexane	146	6.00	15.0		500	21	52	12	2.5	4/17/25 18:00	DFH
Dibromochloromethane	ND	6.00	15.0		ND	51	130	12	2.5	4/17/25 18:00	DFH
Dichlorodifluoromethane	42.0	15.0	15.0		210	74	74	12	2.5	4/17/25 18:00	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-08 Project Location:

Sample ID: 25D1361-02 Canister ID: 063-00337::43909 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 12:10 Flow Controller ID: 063-00458::16061 Receipt Vacuum(in Hg): 5.0

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 18:00	DFH
Ethylbenzene	31.5	6.00	15.0		140	26	65	12	2.5	4/17/25 18:00	DFH
Heptane	338	6.00	15.0		1400	25	61	12	2.5	4/17/25 18:00	DFH
Hexachlorobutadiene	ND	6.00	15.0	C	ND	64	160	12	2.5	4/17/25 18:00	DFH
Hexane	190	6.00	15.0		670	21	53	12	2.5	4/17/25 18:00	DFH
Isopropylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/17/25 18:00	DFH
m+p-Xylenes	52.2	12.0	30.0		230	52	130	12	2.5	4/17/25 18:00	DFH
Methyl methacrylate	ND	6.00	15.0		ND	25	61	12	2.5	4/17/25 18:00	DFH
Methylene chloride	ND	15.0	30.0		ND	52	100	12	2.5	4/17/25 18:00	DFH
Methyl-t-butyl ether (MTBE)	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 18:00	DFH
Naphthalene	60.0	6.00	6.00	C	310	31	31	12	2.5	4/17/25 18:00	DFH
o-Xylene	10.8	6.00	15.0	J	47	26	65	12	2.5	4/17/25 18:00	DFH
Propylene	390	4.80	4.80		670	8.3	8.3	12	2.5	4/17/25 18:00	DFH
Styrene	ND	6.00	15.0		ND	26	64	12	2.5	4/17/25 18:00	DFH
TBA	ND	15.0	15.0		ND	45	45	12	2.5	4/17/25 18:00	DFH
Tetrachloroethylene (PCE)	ND	6.00	15.0		ND	41	100	12	2.5	4/17/25 18:00	DFH
Tetrahydrofuran	ND	6.00	15.0		ND	18	44	12	2.5	4/17/25 18:00	DFH
Toluene	10.8	6.00	15.0	J	41	23	57	12	2.5	4/17/25 18:00	DFH
trans-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/17/25 18:00	DFH
trans-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/17/25 18:00	DFH
Trichloroethylene	ND	6.00	6.00		ND	32	32	12	2.5	4/17/25 18:00	DFH
Trichlorofluoromethane	ND	15.0	15.0		ND	84	84	12	2.5	4/17/25 18:00	DFH
Vinyl acetate	ND	6.00	15.0		ND	21	53	12	2.5	4/17/25 18:00	DFH
Vinyl bromide	ND	6.00	15.0		ND	26	66	12	2.5	4/17/25 18:00	DFH
Vinyl chloride	29.1	6.00	15.0		74	15	38	12	2.5	4/17/25 18:00	DFH
Xylenes, Total	63.0	18.0	45.0		270	78	200	12	2.5	4/17/25 18:00	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	96.2	80-120	4/17/25 18:00

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-08

Project Location:

Sample ID: 25D1361-02
Sample Matrix: Air
Sampled: 4/9/2025 12:10
Sample Type: SG

Canister ID: 063-00337::43909
Canister Size: 6
Flow Controller ID: 063-00458::16061
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.0

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-09 Project Location:

Sample ID: 25D1361-03 Canister ID: 063-01026::49320 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 4

Sampled: 4/9/2025 12:05 Flow Controller ID: 063-00496::17210 Receipt Vacuum(in Hg): 3.8

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	150	150		ND	210	210	15	1	4/18/25 21:51	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	97.0	80-120	4/18/25 21:51

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	30.7	0.45	0.45		9	1	4/22/25 15:15	DKM
Carbon dioxide, as received	15.3	0.45	0.45		9	1	4/22/25 15:15	DKM
Oxygen (O2), as received	9.93	0.45	0.45		9	1	4/22/25 15:15	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 15:15	DKM
Nitrogen (N2), as received	43.3	9.00	9.00		9	1	4/22/25 15:15	DKM
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 15:15	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/17/25 19:28	DFH
1,1,1,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/17/25 19:28	DFH
1,1,2,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/17/25 19:28	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.00	15.0		ND	46	110	12	2.5	4/17/25 19:28	DFH
1,1,2-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/17/25 19:28	DFH
1,1-Dichloroethane	33.0	6.00	15.0		130	24	61	12	2.5	4/17/25 19:28	DFH
1,1-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/17/25 19:28	DFH
1,2,4-Trimethylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/17/25 19:28	DFH
1,2-Dibromoethane (EDB)	ND	6.00	15.0		ND	46	120	12	2.5	4/17/25 19:28	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-09 Project Location:

Sample ID: 25D1361-03 Canister ID: 063-01026::49320 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 4

Sampled: 4/9/2025 12:05 Flow Controller ID: 063-00496::17210 Receipt Vacuum(in Hg): 3.8

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/17/25 19:28	DFH
1,2-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/17/25 19:28	DFH
1,2-Dichloropropane	ND	6.00	15.0		ND	28	69	12	2.5	4/17/25 19:28	DFH
1,2-Dichlorotetrafluoroethane	97.8	6.00	15.0		680	42	100	12	2.5	4/17/25 19:28	DFH
1,3,5-Trimethylbenzene	8.10	6.00	15.0	J	40	29	74	12	2.5	4/17/25 19:28	DFH
1,3-Butadiene	ND	6.00	15.0		ND	13	33	12	2.5	4/17/25 19:28	DFH
1,3-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/17/25 19:28	DFH
1,4-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/17/25 19:28	DFH
1,4-Dioxane	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 19:28	DFH
2-Butanone (MEK)	ND	6.00	15.0		ND	18	44	12	2.5	4/17/25 19:28	DFH
2-Chlorotoluene	ND	6.00	15.0		ND	31	78	12	2.5	4/17/25 19:28	DFH
2-Hexanone (MBK)	ND	6.00	15.0		ND	25	61	12	2.5	4/17/25 19:28	DFH
4-Methyl-2-pentanone (MIBK)	ND	6.00	15.0		ND	69	170	12	2.5	4/17/25 19:28	DFH
Allyl chloride	ND	6.00	15.0		ND	19	47	12	2.5	4/17/25 19:28	DFH
Benzene	72.6	6.00	6.00		230	19	19	12	2.5	4/17/25 19:28	DFH
Benzyl Chloride	ND	6.00	15.0	C	ND	31	78	12	2.5	4/17/25 19:28	DFH
Bromoform	ND	6.00	15.0		ND	62	160	12	2.5	4/17/25 19:28	DFH
Bromomethane	ND	6.00	15.0		ND	23	58	12	2.5	4/17/25 19:28	DFH
Carbon Disulfide	ND	15.0	15.0		ND	47	47	12	2.5	4/17/25 19:28	DFH
Carbon Tetrachloride	ND	6.00	15.0		ND	38	94	12	2.5	4/17/25 19:28	DFH
Chlorobenzene	ND	6.00	15.0		ND	28	69	12	2.5	4/17/25 19:28	DFH
Chloroethane	234	6.00	15.0		620	16	40	12	2.5	4/17/25 19:28	DFH
Chloroform	ND	6.00	6.00		ND	29	29	12	2.5	4/17/25 19:28	DFH
Chloromethane	ND	6.00	15.0		ND	12	31	12	2.5	4/17/25 19:28	DFH
cis-1,2-Dichloroethylene	12.9	6.00	15.0	J	51	24	59	12	2.5	4/17/25 19:28	DFH
cis-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/17/25 19:28	DFH
Cyclohexane	225	6.00	15.0		780	21	52	12	2.5	4/17/25 19:28	DFH
Dibromochloromethane	ND	6.00	15.0		ND	51	130	12	2.5	4/17/25 19:28	DFH
Dichlorodifluoromethane	205	15.0	15.0		1000	74	74	12	2.5	4/17/25 19:28	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGP-09
Sample ID: 25D1361-03
Sample Matrix: Air
Sampled: 4/9/2025 12:05
Sample Type: SG

Project Location:
Canister ID: 063-01026::49320
Canister Size: 6
Flow Controller ID: 063-00496::17210
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 4
Receipt Vacuum(in Hg): 3.8

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 19:28	DFH
Ethylbenzene	18.6	6.00	15.0		81	26	65	12	2.5	4/17/25 19:28	DFH
Heptane	275	6.00	15.0		1100	25	61	12	2.5	4/17/25 19:28	DFH
Hexachlorobutadiene	ND	6.00	15.0	C	ND	64	160	12	2.5	4/17/25 19:28	DFH
Hexane	169	6.00	15.0		600	21	53	12	2.5	4/17/25 19:28	DFH
Isopropylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/17/25 19:28	DFH
m+p-Xylenes	63.6	12.0	30.0		280	52	130	12	2.5	4/17/25 19:28	DFH
Methyl methacrylate	ND	6.00	15.0		ND	25	61	12	2.5	4/17/25 19:28	DFH
Methylene chloride	ND	15.0	30.0		ND	52	100	12	2.5	4/17/25 19:28	DFH
Methyl-t-butyl ether (MTBE)	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 19:28	DFH
Naphthalene	19.5	6.00	6.00	C	100	31	31	12	2.5	4/17/25 19:28	DFH
o-Xylene	17.1	6.00	15.0		74	26	65	12	2.5	4/17/25 19:28	DFH
Propylene	363	4.80	4.80		630	8.3	8.3	12	2.5	4/17/25 19:28	DFH
Styrene	ND	6.00	15.0		ND	26	64	12	2.5	4/17/25 19:28	DFH
TBA	ND	15.0	15.0		ND	45	45	12	2.5	4/17/25 19:28	DFH
Tetrachloroethylene (PCE)	12.6	6.00	15.0	J	85	41	100	12	2.5	4/17/25 19:28	DFH
Tetrahydrofuran	ND	6.00	15.0		ND	18	44	12	2.5	4/17/25 19:28	DFH
Toluene	7.80	6.00	15.0	J	29	23	57	12	2.5	4/17/25 19:28	DFH
trans-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/17/25 19:28	DFH
trans-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/17/25 19:28	DFH
Trichloroethylene	12.6	6.00	6.00		68	32	32	12	2.5	4/17/25 19:28	DFH
Trichlorofluoromethane	ND	15.0	15.0		ND	84	84	12	2.5	4/17/25 19:28	DFH
Vinyl acetate	ND	6.00	15.0		ND	21	53	12	2.5	4/17/25 19:28	DFH
Vinyl bromide	ND	6.00	15.0		ND	26	66	12	2.5	4/17/25 19:28	DFH
Vinyl chloride	ND	6.00	15.0		ND	15	38	12	2.5	4/17/25 19:28	DFH
Xylenes, Total	80.7	18.0	45.0		350	78	200	12	2.5	4/17/25 19:28	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	97.8	80-120	4/17/25 19:28

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-09

Project Location:

Sample ID: 25D1361-03
Sample Matrix: Air
Sampled: 4/9/2025 12:05
Sample Type: SG

Canister ID: 063-01026::49320
Canister Size: 6
Flow Controller ID: 063-00496::17210
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 4
Receipt Vacuum(in Hg): 3.8

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-13 Project Location:

Sample ID: 25D1361-04 Canister ID: 063-01019::49326 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 11:35 Flow Controller ID: 063-00804::20127 Receipt Vacuum(in Hg): 6.4

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	30.0	30.0		ND	42	42	3	1	4/18/25 23:12	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	100	80-120	4/18/25 23:12

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	1.02	0.45	0.45		9	1	4/22/25 16:00	DKM
Carbon dioxide, as received	11.9	0.45	0.45		9	1	4/22/25 16:00	DKM
Oxygen (O2), as received	7.10	0.45	0.45		9	1	4/22/25 16:00	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 16:00	DKM
Nitrogen (N2), as received	79.1	27.0	27.0		27	1	4/23/25 13:19	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 16:00	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.20	3.00		ND	6.5	16	2.4	2.5	4/17/25 20:58	DFH
1,1,1,2-Tetrachloroethane	ND	1.20	3.00		ND	8.2	21	2.4	2.5	4/17/25 20:58	DFH
1,1,2,2-Tetrachloroethane	ND	1.20	3.00		ND	8.2	21	2.4	2.5	4/17/25 20:58	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.20	3.00		ND	9.2	23	2.4	2.5	4/17/25 20:58	DFH
1,1,2-Trichloroethane	ND	1.20	3.00		ND	6.5	16	2.4	2.5	4/17/25 20:58	DFH
1,1-Dichloroethane	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 20:58	DFH
1,1-Dichloroethylene	ND	1.20	3.00		ND	4.8	12	2.4	2.5	4/17/25 20:58	DFH
1,2,4-Trimethylbenzene	ND	1.20	3.00		ND	5.9	15	2.4	2.5	4/17/25 20:58	DFH
1,2-Dibromoethane (EDB)	ND	1.20	3.00		ND	9.2	23	2.4	2.5	4/17/25 20:58	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-13

Project Location:

Sample ID: 25D1361-04
Sample Matrix: Air
Sampled: 4/9/2025 11:35
Sample Type: SG

Canister ID: 063-01019::49326
Canister Size: 6
Flow Controller ID: 063-00804::20127
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.4

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.20	3.00		ND	7.2	18	2.4	2.5	4/17/25 20:58	DFH
1,2-Dichloroethane	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 20:58	DFH
1,2-Dichloropropane	ND	1.20	3.00		ND	5.5	14	2.4	2.5	4/17/25 20:58	DFH
1,2-Dichlorotetrafluoroethane	30.7	1.20	3.00		210	8.4	21	2.4	2.5	4/17/25 20:58	DFH
1,3,5-Trimethylbenzene	ND	1.20	3.00		ND	5.9	15	2.4	2.5	4/17/25 20:58	DFH
1,3-Butadiene	ND	1.20	3.00		ND	2.7	6.6	2.4	2.5	4/17/25 20:58	DFH
1,3-Dichlorobenzene	ND	1.20	3.00		ND	7.2	18	2.4	2.5	4/17/25 20:58	DFH
1,4-Dichlorobenzene	ND	1.20	3.00		ND	7.2	18	2.4	2.5	4/17/25 20:58	DFH
1,4-Dioxane	ND	1.20	3.00		ND	4.3	11	2.4	2.5	4/17/25 20:58	DFH
2-Butanone (MEK)	ND	1.20	3.00		ND	3.5	8.8	2.4	2.5	4/17/25 20:58	DFH
2-Chlorotoluene	ND	1.20	3.00		ND	6.2	16	2.4	2.5	4/17/25 20:58	DFH
2-Hexanone (MBK)	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 20:58	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.20	3.00		ND	14	34	2.4	2.5	4/17/25 20:58	DFH
Allyl chloride	ND	1.20	3.00		ND	3.8	9.4	2.4	2.5	4/17/25 20:58	DFH
Benzene	ND	1.20	1.20		ND	3.8	3.8	2.4	2.5	4/17/25 20:58	DFH
Benzyl Chloride	ND	1.20	3.00	C	ND	6.2	16	2.4	2.5	4/17/25 20:58	DFH
Bromoform	ND	1.20	3.00		ND	12	31	2.4	2.5	4/17/25 20:58	DFH
Bromomethane	ND	1.20	3.00		ND	4.7	12	2.4	2.5	4/17/25 20:58	DFH
Carbon Disulfide	ND	3.00	3.00		ND	9.3	9.3	2.4	2.5	4/17/25 20:58	DFH
Carbon Tetrachloride	ND	1.20	3.00		ND	7.5	19	2.4	2.5	4/17/25 20:58	DFH
Chlorobenzene	ND	1.20	3.00		ND	5.5	14	2.4	2.5	4/17/25 20:58	DFH
Chloroethane	ND	1.20	3.00		ND	3.2	7.9	2.4	2.5	4/17/25 20:58	DFH
Chloroform	25.7	1.20	1.20		130	5.9	5.9	2.4	2.5	4/17/25 20:58	DFH
Chloromethane	ND	1.20	3.00		ND	2.5	6.2	2.4	2.5	4/17/25 20:58	DFH
cis-1,2-Dichloroethylene	ND	1.20	3.00		ND	4.8	12	2.4	2.5	4/17/25 20:58	DFH
cis-1,3-Dichloropropene	ND	1.20	3.00		ND	5.4	14	2.4	2.5	4/17/25 20:58	DFH
Cyclohexane	8.88	1.20	3.00		31	4.1	10	2.4	2.5	4/17/25 20:58	DFH
Dibromochloromethane	ND	1.20	3.00		ND	10	26	2.4	2.5	4/17/25 20:58	DFH
Dichlorodifluoromethane	17.7	3.00	3.00		88	15	15	2.4	2.5	4/17/25 20:58	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-13 Project Location:

Sample ID: 25D1361-04 Canister ID: 063-01019::49326 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 11:35 Flow Controller ID: 063-00804::20127 Receipt Vacuum(in Hg): 6.4

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.20	3.00		ND	4.3	11	2.4	2.5	4/17/25 20:58	DFH
Ethylbenzene	ND	1.20	3.00		ND	5.2	13	2.4	2.5	4/17/25 20:58	DFH
Heptane	6.06	1.20	3.00		25	4.9	12	2.4	2.5	4/17/25 20:58	DFH
Hexachlorobutadiene	ND	1.20	3.00	C	ND	13	32	2.4	2.5	4/17/25 20:58	DFH
Hexane	19.5	1.20	3.00		69	4.2	11	2.4	2.5	4/17/25 20:58	DFH
Isopropylbenzene	ND	1.20	3.00		ND	5.9	15	2.4	2.5	4/17/25 20:58	DFH
m+p-Xylenes	ND	2.40	6.00		ND	10	26	2.4	2.5	4/17/25 20:58	DFH
Methyl methacrylate	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 20:58	DFH
Methylene chloride	ND	3.00	6.00		ND	10	21	2.4	2.5	4/17/25 20:58	DFH
Methyl-t-butyl ether (MTBE)	ND	1.20	3.00		ND	4.3	11	2.4	2.5	4/17/25 20:58	DFH
Naphthalene	2.64	1.20	1.20	C	14	6.3	6.3	2.4	2.5	4/17/25 20:58	DFH
o-Xylene	ND	1.20	3.00		ND	5.2	13	2.4	2.5	4/17/25 20:58	DFH
Propylene	5.28	0.96	0.96		9.1	1.7	1.7	2.4	2.5	4/17/25 20:58	DFH
Styrene	ND	1.20	3.00		ND	5.1	13	2.4	2.5	4/17/25 20:58	DFH
TBA	ND	3.00	3.00		ND	9.1	9.1	2.4	2.5	4/17/25 20:58	DFH
Tetrachloroethylene (PCE)	1.50	1.20	3.00	J	10	8.1	20	2.4	2.5	4/17/25 20:58	DFH
Tetrahydrofuran	ND	1.20	3.00		ND	3.5	8.8	2.4	2.5	4/17/25 20:58	DFH
Toluene	ND	1.20	3.00		ND	4.5	11	2.4	2.5	4/17/25 20:58	DFH
trans-1,2-Dichloroethylene	ND	1.20	3.00		ND	4.8	12	2.4	2.5	4/17/25 20:58	DFH
trans-1,3-Dichloropropene	ND	1.20	3.00		ND	5.4	14	2.4	2.5	4/17/25 20:58	DFH
Trichloroethylene	ND	1.20	1.20		ND	6.4	6.4	2.4	2.5	4/17/25 20:58	DFH
Trichlorofluoromethane	ND	3.00	3.00		ND	17	17	2.4	2.5	4/17/25 20:58	DFH
Vinyl acetate	ND	1.20	3.00		ND	4.2	11	2.4	2.5	4/17/25 20:58	DFH
Vinyl bromide	ND	1.20	3.00		ND	5.2	13	2.4	2.5	4/17/25 20:58	DFH
Vinyl chloride	ND	1.20	3.00		ND	3.1	7.7	2.4	2.5	4/17/25 20:58	DFH
Xylenes, Total	ND	3.60	9.00		ND	16	39	2.4	2.5	4/17/25 20:58	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	99.8	80-120	4/17/25 20:58

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-13

Project Location:

Sample ID: 25D1361-04
Sample Matrix: Air
Sampled: 4/9/2025 11:35
Sample Type: SG

Canister ID: 063-01019::49326
Canister Size: 6
Flow Controller ID: 063-00804::20127
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.4

ENTHALPY ANALYTICAL

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-02 Project Location:

Sample ID: 25D1361-05 Canister ID: 063-00576::46768 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 12:00 Flow Controller ID: 063-00358::16688 Receipt Vacuum(in Hg): 6.8

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	8590	2700	2700		12000	3800	3800	270	1	4/25/25 2:41	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.6	80-120	4/25/25 2:41

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	22.1	0.45	0.45		9	1	4/22/25 18:58	DKM
Carbon dioxide, as received	15.5	0.45	0.45		9	1	4/22/25 18:58	DKM
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/22/25 18:58	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 18:58	DKM
Nitrogen (N2), as received	13.8	9.00	9.00		9	1	4/22/25 18:58	DKM
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 18:58	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/17/25 22:25	DFH
1,1,1,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/17/25 22:25	DFH
1,1,2,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/17/25 22:25	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.00	15.0		ND	46	110	12	2.5	4/17/25 22:25	DFH
1,1,2-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/17/25 22:25	DFH
1,1-Dichloroethane	33.0	6.00	15.0		130	24	61	12	2.5	4/17/25 22:25	DFH
1,1-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/17/25 22:25	DFH
1,2,4-Trimethylbenzene	16.5	6.00	15.0		81	29	74	12	2.5	4/17/25 22:25	DFH
1,2-Dibromoethane (EDB)	ND	6.00	15.0		ND	46	120	12	2.5	4/17/25 22:25	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-02 Project Location:

Sample ID: 25D1361-05 Canister ID: 063-00576::46768 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 12:00 Flow Controller ID: 063-00358::16688 Receipt Vacuum(in Hg): 6.8

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/17/25 22:25	DFH
1,2-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/17/25 22:25	DFH
1,2-Dichloropropane	ND	6.00	15.0		ND	28	69	12	2.5	4/17/25 22:25	DFH
1,2-Dichlorotetrafluoroethane	231	6.00	15.0		1600	42	100	12	2.5	4/17/25 22:25	DFH
1,3,5-Trimethylbenzene	17.7	6.00	15.0		87	29	74	12	2.5	4/17/25 22:25	DFH
1,3-Butadiene	ND	6.00	15.0		ND	13	33	12	2.5	4/17/25 22:25	DFH
1,3-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/17/25 22:25	DFH
1,4-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/17/25 22:25	DFH
1,4-Dioxane	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 22:25	DFH
2-Butanone (MEK)	ND	6.00	15.0		ND	18	44	12	2.5	4/17/25 22:25	DFH
2-Chlorotoluene	ND	6.00	15.0		ND	31	78	12	2.5	4/17/25 22:25	DFH
2-Hexanone (MBK)	ND	6.00	15.0		ND	25	61	12	2.5	4/17/25 22:25	DFH
4-Methyl-2-pentanone (MIBK)	ND	6.00	15.0		ND	69	170	12	2.5	4/17/25 22:25	DFH
Allyl chloride	ND	6.00	15.0		ND	19	47	12	2.5	4/17/25 22:25	DFH
Benzene	226	6.00	6.00		720	19	19	12	2.5	4/17/25 22:25	DFH
Benzyl Chloride	ND	6.00	15.0	C	ND	31	78	12	2.5	4/17/25 22:25	DFH
Bromoform	ND	6.00	15.0		ND	62	160	12	2.5	4/17/25 22:25	DFH
Bromomethane	ND	6.00	15.0		ND	23	58	12	2.5	4/17/25 22:25	DFH
Carbon Disulfide	ND	15.0	15.0		ND	47	47	12	2.5	4/17/25 22:25	DFH
Carbon Tetrachloride	ND	6.00	15.0		ND	38	94	12	2.5	4/17/25 22:25	DFH
Chlorobenzene	ND	6.00	15.0		ND	28	69	12	2.5	4/17/25 22:25	DFH
Chloroethane	195	6.00	15.0		510	16	40	12	2.5	4/17/25 22:25	DFH
Chloroform	ND	6.00	6.00		ND	29	29	12	2.5	4/17/25 22:25	DFH
Chloromethane	ND	6.00	15.0		ND	12	31	12	2.5	4/17/25 22:25	DFH
cis-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/17/25 22:25	DFH
cis-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/17/25 22:25	DFH
Cyclohexane	292	6.00	15.0		1000	21	52	12	2.5	4/17/25 22:25	DFH
Dibromochloromethane	ND	6.00	15.0		ND	51	130	12	2.5	4/17/25 22:25	DFH
Dichlorodifluoromethane	1990	90.0	90.0		9800	450	450	72	2.5	4/18/25 11:40	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-02 Project Location:

Sample ID: 25D1361-05 Canister ID: 063-00576::46768 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 12:00 Flow Controller ID: 063-00358::16688 Receipt Vacuum(in Hg): 6.8

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 22:25	DFH
Ethylbenzene	32.4	6.00	15.0		140	26	65	12	2.5	4/17/25 22:25	DFH
Heptane	461	6.00	15.0		1900	25	61	12	2.5	4/17/25 22:25	DFH
Hexachlorobutadiene	ND	6.00	15.0	C	ND	64	160	12	2.5	4/17/25 22:25	DFH
Hexane	318	6.00	15.0		1100	21	53	12	2.5	4/17/25 22:25	DFH
Isopropylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/17/25 22:25	DFH
m+p-Xylenes	51.3	12.0	30.0		220	52	130	12	2.5	4/17/25 22:25	DFH
Methyl methacrylate	ND	6.00	15.0		ND	25	61	12	2.5	4/17/25 22:25	DFH
Methylene chloride	ND	15.0	30.0		ND	52	100	12	2.5	4/17/25 22:25	DFH
Methyl-t-butyl ether (MTBE)	ND	6.00	15.0		ND	22	54	12	2.5	4/17/25 22:25	DFH
Naphthalene	ND	6.00	6.00	C	ND	31	31	12	2.5	4/17/25 22:25	DFH
o-Xylene	13.2	6.00	15.0	J	57	26	65	12	2.5	4/17/25 22:25	DFH
Propylene	387	4.80	4.80		670	8.3	8.3	12	2.5	4/17/25 22:25	DFH
Styrene	ND	6.00	15.0		ND	26	64	12	2.5	4/17/25 22:25	DFH
TBA	ND	15.0	15.0		ND	45	45	12	2.5	4/17/25 22:25	DFH
Tetrachloroethylene (PCE)	ND	6.00	15.0		ND	41	100	12	2.5	4/17/25 22:25	DFH
Tetrahydrofuran	ND	6.00	15.0		ND	18	44	12	2.5	4/17/25 22:25	DFH
Toluene	24.6	6.00	15.0		93	23	57	12	2.5	4/17/25 22:25	DFH
trans-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/17/25 22:25	DFH
trans-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/17/25 22:25	DFH
Trichloroethylene	ND	6.00	6.00		ND	32	32	12	2.5	4/17/25 22:25	DFH
Trichlorofluoromethane	ND	15.0	15.0		ND	84	84	12	2.5	4/17/25 22:25	DFH
Vinyl acetate	ND	6.00	15.0		ND	21	53	12	2.5	4/17/25 22:25	DFH
Vinyl bromide	ND	6.00	15.0		ND	26	66	12	2.5	4/17/25 22:25	DFH
Vinyl chloride	24.6	6.00	15.0		63	15	38	12	2.5	4/17/25 22:25	DFH
Xylenes, Total	64.5	18.0	45.0		280	78	200	12	2.5	4/17/25 22:25	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	97.6	80-120	4/18/25 11:40
4-Bromofluorobenzene (Surr)	102	80-120	4/17/25 22:25

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-02

Project Location:

Sample ID: 25D1361-05
Sample Matrix: Air
Sampled: 4/8/2025 12:00
Sample Type: SG

Canister ID: 063-00576::46768
Canister Size: 6
Flow Controller ID: 063-00358::16688
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.8

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-03 Project Location:

Sample ID: 25D1361-06 Canister ID: 063-00793::49507 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 12:45 Flow Controller ID: 063-00798::20115 Receipt Vacuum(in Hg): 7.8

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	30.0	30.0		ND	42	42	3	1	4/19/25 3:16	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	100	80-120	4/19/25 3:16

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	4/22/25 18:12	DKM
Carbon dioxide, as received	16.0	0.45	0.45		9	1	4/22/25 18:12	DKM
Oxygen (O2), as received	6.06	0.45	0.45		9	1	4/22/25 18:12	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 18:12	DKM
Nitrogen (N2), as received	87.3	27.0	27.0		27	1	4/23/25 13:34	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 18:12	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.20	3.00		ND	6.5	16	2.4	2.5	4/17/25 23:56	DFH
1,1,1,2-Tetrachloroethane	ND	1.20	3.00		ND	8.2	21	2.4	2.5	4/17/25 23:56	DFH
1,1,2,2-Tetrachloroethane	ND	1.20	3.00		ND	8.2	21	2.4	2.5	4/17/25 23:56	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.20	3.00		ND	9.2	23	2.4	2.5	4/17/25 23:56	DFH
1,1,2-Trichloroethane	ND	1.20	3.00		ND	6.5	16	2.4	2.5	4/17/25 23:56	DFH
1,1-Dichloroethane	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 23:56	DFH
1,1-Dichloroethylene	ND	1.20	3.00		ND	4.8	12	2.4	2.5	4/17/25 23:56	DFH
1,2,4-Trimethylbenzene	ND	1.20	3.00		ND	5.9	15	2.4	2.5	4/17/25 23:56	DFH
1,2-Dibromoethane (EDB)	ND	1.20	3.00		ND	9.2	23	2.4	2.5	4/17/25 23:56	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-03 Project Location:

Sample ID: 25D1361-06 Canister ID: 063-00793::49507 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 12:45 Flow Controller ID: 063-00798::20115 Receipt Vacuum(in Hg): 7.8

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.20	3.00		ND	7.2	18	2.4	2.5	4/17/25 23:56	DFH
1,2-Dichloroethane	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 23:56	DFH
1,2-Dichloropropane	ND	1.20	3.00		ND	5.5	14	2.4	2.5	4/17/25 23:56	DFH
1,2-Dichlorotetrafluoroethane	53.8	1.20	3.00		380	8.4	21	2.4	2.5	4/17/25 23:56	DFH
1,3,5-Trimethylbenzene	ND	1.20	3.00		ND	5.9	15	2.4	2.5	4/17/25 23:56	DFH
1,3-Butadiene	ND	1.20	3.00		ND	2.7	6.6	2.4	2.5	4/17/25 23:56	DFH
1,3-Dichlorobenzene	ND	1.20	3.00		ND	7.2	18	2.4	2.5	4/17/25 23:56	DFH
1,4-Dichlorobenzene	ND	1.20	3.00		ND	7.2	18	2.4	2.5	4/17/25 23:56	DFH
1,4-Dioxane	ND	1.20	3.00		ND	4.3	11	2.4	2.5	4/17/25 23:56	DFH
2-Butanone (MEK)	1.74	1.20	3.00	J	5.1	3.5	8.8	2.4	2.5	4/17/25 23:56	DFH
2-Chlorotoluene	ND	1.20	3.00		ND	6.2	16	2.4	2.5	4/17/25 23:56	DFH
2-Hexanone (MBK)	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 23:56	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.20	3.00		ND	14	34	2.4	2.5	4/17/25 23:56	DFH
Allyl chloride	ND	1.20	3.00		ND	3.8	9.4	2.4	2.5	4/17/25 23:56	DFH
Benzene	ND	1.20	1.20		ND	3.8	3.8	2.4	2.5	4/17/25 23:56	DFH
Benzyl Chloride	ND	1.20	3.00	C	ND	6.2	16	2.4	2.5	4/17/25 23:56	DFH
Bromoform	ND	1.20	3.00		ND	12	31	2.4	2.5	4/17/25 23:56	DFH
Bromomethane	ND	1.20	3.00		ND	4.7	12	2.4	2.5	4/17/25 23:56	DFH
Carbon Disulfide	ND	3.00	3.00		ND	9.3	9.3	2.4	2.5	4/17/25 23:56	DFH
Carbon Tetrachloride	ND	1.20	3.00		ND	7.5	19	2.4	2.5	4/17/25 23:56	DFH
Chlorobenzene	ND	1.20	3.00		ND	5.5	14	2.4	2.5	4/17/25 23:56	DFH
Chloroethane	ND	1.20	3.00		ND	3.2	7.9	2.4	2.5	4/17/25 23:56	DFH
Chloroform	ND	1.20	1.20		ND	5.9	5.9	2.4	2.5	4/17/25 23:56	DFH
Chloromethane	ND	1.20	3.00		ND	2.5	6.2	2.4	2.5	4/17/25 23:56	DFH
cis-1,2-Dichloroethylene	ND	1.20	3.00		ND	4.8	12	2.4	2.5	4/17/25 23:56	DFH
cis-1,3-Dichloropropene	ND	1.20	3.00		ND	5.4	14	2.4	2.5	4/17/25 23:56	DFH
Cyclohexane	ND	1.20	3.00		ND	4.1	10	2.4	2.5	4/17/25 23:56	DFH
Dibromochloromethane	ND	1.20	3.00		ND	10	26	2.4	2.5	4/17/25 23:56	DFH
Dichlorodifluoromethane	20.9	3.00	3.00		100	15	15	2.4	2.5	4/17/25 23:56	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-03 Project Location:

Sample ID: 25D1361-06 Canister ID: 063-00793::49507 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 12:45 Flow Controller ID: 063-00798::20115 Receipt Vacuum(in Hg): 7.8

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.20	3.00		ND	4.3	11	2.4	2.5	4/17/25 23:56	DFH
Ethylbenzene	ND	1.20	3.00		ND	5.2	13	2.4	2.5	4/17/25 23:56	DFH
Heptane	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 23:56	DFH
Hexachlorobutadiene	ND	1.20	3.00	C	ND	13	32	2.4	2.5	4/17/25 23:56	DFH
Hexane	1.20	1.20	3.00	J	4.2	4.2	11	2.4	2.5	4/17/25 23:56	DFH
Isopropylbenzene	ND	1.20	3.00		ND	5.9	15	2.4	2.5	4/17/25 23:56	DFH
m+p-Xylenes	ND	2.40	6.00		ND	10	26	2.4	2.5	4/17/25 23:56	DFH
Methyl methacrylate	ND	1.20	3.00		ND	4.9	12	2.4	2.5	4/17/25 23:56	DFH
Methylene chloride	7.92	3.00	6.00		28	10	21	2.4	2.5	4/17/25 23:56	DFH
Methyl-t-butyl ether (MTBE)	ND	1.20	3.00		ND	4.3	11	2.4	2.5	4/17/25 23:56	DFH
Naphthalene	ND	1.20	1.20	C	ND	6.3	6.3	2.4	2.5	4/17/25 23:56	DFH
o-Xylene	ND	1.20	3.00		ND	5.2	13	2.4	2.5	4/17/25 23:56	DFH
Propylene	ND	0.96	0.96		ND	1.7	1.7	2.4	2.5	4/17/25 23:56	DFH
Styrene	ND	1.20	3.00		ND	5.1	13	2.4	2.5	4/17/25 23:56	DFH
TBA	ND	3.00	3.00		ND	9.1	9.1	2.4	2.5	4/17/25 23:56	DFH
Tetrachloroethylene (PCE)	6.18	1.20	3.00		42	8.1	20	2.4	2.5	4/17/25 23:56	DFH
Tetrahydrofuran	ND	1.20	3.00		ND	3.5	8.8	2.4	2.5	4/17/25 23:56	DFH
Toluene	ND	1.20	3.00		ND	4.5	11	2.4	2.5	4/17/25 23:56	DFH
trans-1,2-Dichloroethylene	ND	1.20	3.00		ND	4.8	12	2.4	2.5	4/17/25 23:56	DFH
trans-1,3-Dichloropropene	ND	1.20	3.00		ND	5.4	14	2.4	2.5	4/17/25 23:56	DFH
Trichloroethylene	ND	1.20	1.20		ND	6.4	6.4	2.4	2.5	4/17/25 23:56	DFH
Trichlorofluoromethane	ND	3.00	3.00		ND	17	17	2.4	2.5	4/17/25 23:56	DFH
Vinyl acetate	ND	1.20	3.00		ND	4.2	11	2.4	2.5	4/17/25 23:56	DFH
Vinyl bromide	ND	1.20	3.00		ND	5.2	13	2.4	2.5	4/17/25 23:56	DFH
Vinyl chloride	ND	1.20	3.00		ND	3.1	7.7	2.4	2.5	4/17/25 23:56	DFH
Xylenes, Total	ND	3.60	9.00		ND	16	39	2.4	2.5	4/17/25 23:56	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	96.8	80-120	4/17/25 23:56

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-03

Project Location:

Sample ID: 25D1361-06
Sample Matrix: Air
Sampled: 4/8/2025 12:45
Sample Type: SG

Canister ID: 063-00793::49507
Canister Size: 6
Flow Controller ID: 063-00798::20115
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.8

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: Dup-01 Project Location:

Sample ID: 25D1361-07 Canister ID: 063-01022::49679 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 00:00 Flow Controller ID: 063-00808::20123 Receipt Vacuum(in Hg): 1.2

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	1810	450	450		2500	630	630	45	1	4/19/25 15:30	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	98.2	80-120	4/19/25 15:30

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	6.38	1.35	1.35		27	1	4/22/25 19:43	DKM
Carbon dioxide, as received	21.2	1.35	1.35		27	1	4/22/25 19:43	DKM
Oxygen (O2), as received	ND	1.35	1.35		27	1	4/22/25 19:43	DKM
Hydrogen (H2), as received	ND	0.54	0.54		27	1	4/22/25 19:43	DKM
Nitrogen (N2), as received	71.6	27.0	27.0		27	1	4/22/25 19:43	DKM
Carbon Monoxide, as received	ND	0.03	0.03		27	1	4/22/25 19:43	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/18/25 1:24	DFH
1,1,1,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 1:24	DFH
1,1,2,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 1:24	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.00	15.0		ND	46	110	12	2.5	4/18/25 1:24	DFH
1,1,2-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/18/25 1:24	DFH
1,1-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/18/25 1:24	DFH
1,1-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/18/25 1:24	DFH
1,2,4-Trimethylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 1:24	DFH
1,2-Dibromoethane (EDB)	ND	6.00	15.0		ND	46	120	12	2.5	4/18/25 1:24	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

ANALYTICAL RESULTS

Field Sample #: Dup-01
Sample ID: 25D1361-07
Sample Matrix: Air
Sampled: 4/8/2025 00:00
Sample Type: SG

Project Location:
Canister ID: 063-01022::49679
Canister Size: 6
Flow Controller ID: 063-00808::20123
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 1.2

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/18/25 1:24	DFH
1,2-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/18/25 1:24	DFH
1,2-Dichloropropane	ND	6.00	15.0		ND	28	69	12	2.5	4/18/25 1:24	DFH
1,2-Dichlorotetrafluoroethane	54.0	6.00	15.0		380	42	100	12	2.5	4/18/25 1:24	DFH
1,3,5-Trimethylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 1:24	DFH
1,3-Butadiene	ND	6.00	15.0		ND	13	33	12	2.5	4/18/25 1:24	DFH
1,3-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/18/25 1:24	DFH
1,4-Dichlorobenzene	9.60	6.00	15.0	J	58	36	90	12	2.5	4/18/25 1:24	DFH
1,4-Dioxane	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 1:24	DFH
2-Butanone (MEK)	ND	6.00	15.0		ND	18	44	12	2.5	4/18/25 1:24	DFH
2-Chlorotoluene	ND	6.00	15.0		ND	31	78	12	2.5	4/18/25 1:24	DFH
2-Hexanone (MBK)	ND	6.00	15.0		ND	25	61	12	2.5	4/18/25 1:24	DFH
4-Methyl-2-pentanone (MIBK)	ND	6.00	15.0		ND	69	170	12	2.5	4/18/25 1:24	DFH
Allyl chloride	ND	6.00	15.0		ND	19	47	12	2.5	4/18/25 1:24	DFH
Benzene	39.9	6.00	6.00		130	19	19	12	2.5	4/18/25 1:24	DFH
Benzyl Chloride	ND	6.00	15.0	C	ND	31	78	12	2.5	4/18/25 1:24	DFH
Bromoform	ND	6.00	15.0		ND	62	160	12	2.5	4/18/25 1:24	DFH
Bromomethane	ND	6.00	15.0		ND	23	58	12	2.5	4/18/25 1:24	DFH
Carbon Disulfide	ND	15.0	15.0		ND	47	47	12	2.5	4/18/25 1:24	DFH
Carbon Tetrachloride	ND	6.00	15.0		ND	38	94	12	2.5	4/18/25 1:24	DFH
Chlorobenzene	ND	6.00	15.0		ND	28	69	12	2.5	4/18/25 1:24	DFH
Chloroethane	ND	6.00	15.0		ND	16	40	12	2.5	4/18/25 1:24	DFH
Chloroform	ND	6.00	6.00		ND	29	29	12	2.5	4/18/25 1:24	DFH
Chloromethane	ND	6.00	15.0		ND	12	31	12	2.5	4/18/25 1:24	DFH
cis-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/18/25 1:24	DFH
cis-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/18/25 1:24	DFH
Cyclohexane	30.6	6.00	15.0		110	21	52	12	2.5	4/18/25 1:24	DFH
Dibromochloromethane	ND	6.00	15.0		ND	51	130	12	2.5	4/18/25 1:24	DFH
Dichlorodifluoromethane	46.2	15.0	15.0		230	74	74	12	2.5	4/18/25 1:24	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: Dup-01 Project Location:

Sample ID: 25D1361-07 Canister ID: 063-01022::49679 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 00:00 Flow Controller ID: 063-00808::20123 Receipt Vacuum(in Hg): 1.2

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 1:24	DFH
Ethylbenzene	ND	6.00	15.0		ND	26	65	12	2.5	4/18/25 1:24	DFH
Heptane	161	6.00	15.0		660	25	61	12	2.5	4/18/25 1:24	DFH
Hexachlorobutadiene	ND	6.00	15.0	C	ND	64	160	12	2.5	4/18/25 1:24	DFH
Hexane	99.3	6.00	15.0		350	21	53	12	2.5	4/18/25 1:24	DFH
Isopropylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 1:24	DFH
m+p-Xylenes	ND	12.0	30.0		ND	52	130	12	2.5	4/18/25 1:24	DFH
Methyl methacrylate	ND	6.00	15.0		ND	25	61	12	2.5	4/18/25 1:24	DFH
Methylene chloride	ND	15.0	30.0		ND	52	100	12	2.5	4/18/25 1:24	DFH
Methyl-t-butyl ether (MTBE)	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 1:24	DFH
Naphthalene	ND	6.00	6.00	C	ND	31	31	12	2.5	4/18/25 1:24	DFH
o-Xylene	ND	6.00	15.0		ND	26	65	12	2.5	4/18/25 1:24	DFH
Propylene	ND	4.80	4.80		ND	8.3	8.3	12	2.5	4/18/25 1:24	DFH
Styrene	ND	6.00	15.0		ND	26	64	12	2.5	4/18/25 1:24	DFH
TBA	ND	15.0	15.0		ND	45	45	12	2.5	4/18/25 1:24	DFH
Tetrachloroethylene (PCE)	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 1:24	DFH
Tetrahydrofuran	ND	6.00	15.0		ND	18	44	12	2.5	4/18/25 1:24	DFH
Toluene	ND	6.00	15.0		ND	23	57	12	2.5	4/18/25 1:24	DFH
trans-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/18/25 1:24	DFH
trans-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/18/25 1:24	DFH
Trichloroethylene	ND	6.00	6.00		ND	32	32	12	2.5	4/18/25 1:24	DFH
Trichlorofluoromethane	ND	15.0	15.0		ND	84	84	12	2.5	4/18/25 1:24	DFH
Vinyl acetate	ND	6.00	15.0		ND	21	53	12	2.5	4/18/25 1:24	DFH
Vinyl bromide	ND	6.00	15.0		ND	26	66	12	2.5	4/18/25 1:24	DFH
Vinyl chloride	9.90	6.00	15.0	J	25	15	38	12	2.5	4/18/25 1:24	DFH
Xylenes, Total	ND	18.0	45.0		ND	78	200	12	2.5	4/18/25 1:24	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	93.6	80-120	4/18/25 1:24

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: Dup-01

Project Location:

Sample ID: 25D1361-07
Sample Matrix: Air
Sampled: 4/8/2025 00:00
Sample Type: SG

Canister ID: 063-01022::49679
Canister Size: 6
Flow Controller ID: 063-00808::20123
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 1.2

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-01 Project Location:

Sample ID: 25D1361-08 Canister ID: 063-01029::49690 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 11:35 Flow Controller ID: 063-00927::20248 Receipt Vacuum(in Hg): 7.6

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	1830	450	450		2600	630	630	45	1	4/19/25 16:09	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	100	80-120	4/19/25 16:09

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	6.13	1.35	1.35		27	1	4/22/25 20:28	DKM
Carbon dioxide, as received	20.4	1.35	1.35		27	1	4/22/25 20:28	DKM
Oxygen (O2), as received	ND	1.35	1.35		27	1	4/22/25 20:28	DKM
Hydrogen (H2), as received	ND	0.54	0.54		27	1	4/22/25 20:28	DKM
Nitrogen (N2), as received	70.8	27.0	27.0		27	1	4/22/25 20:28	DKM
Carbon Monoxide, as received	ND	0.03	0.03		27	1	4/22/25 20:28	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/18/25 2:52	DFH
1,1,1,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 2:52	DFH
1,1,2,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 2:52	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.00	15.0		ND	46	110	12	2.5	4/18/25 2:52	DFH
1,1,2-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/18/25 2:52	DFH
1,1-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/18/25 2:52	DFH
1,1-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/18/25 2:52	DFH
1,2,4-Trimethylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 2:52	DFH
1,2-Dibromoethane (EDB)	ND	6.00	15.0		ND	46	120	12	2.5	4/18/25 2:52	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-01 Project Location:

Sample ID: 25D1361-08 Canister ID: 063-01029::49690 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 11:35 Flow Controller ID: 063-00927::20248 Receipt Vacuum(in Hg): 7.6

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/18/25 2:52	DFH
1,2-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/18/25 2:52	DFH
1,2-Dichloropropane	ND	6.00	15.0		ND	28	69	12	2.5	4/18/25 2:52	DFH
1,2-Dichlorotetrafluoroethane	56.1	6.00	15.0		390	42	100	12	2.5	4/18/25 2:52	DFH
1,3,5-Trimethylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 2:52	DFH
1,3-Butadiene	ND	6.00	15.0		ND	13	33	12	2.5	4/18/25 2:52	DFH
1,3-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/18/25 2:52	DFH
1,4-Dichlorobenzene	9.60	6.00	15.0	J	58	36	90	12	2.5	4/18/25 2:52	DFH
1,4-Dioxane	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 2:52	DFH
2-Butanone (MEK)	ND	6.00	15.0		ND	18	44	12	2.5	4/18/25 2:52	DFH
2-Chlorotoluene	ND	6.00	15.0		ND	31	78	12	2.5	4/18/25 2:52	DFH
2-Hexanone (MBK)	ND	6.00	15.0		ND	25	61	12	2.5	4/18/25 2:52	DFH
4-Methyl-2-pentanone (MIBK)	ND	6.00	15.0		ND	69	170	12	2.5	4/18/25 2:52	DFH
Allyl chloride	ND	6.00	15.0		ND	19	47	12	2.5	4/18/25 2:52	DFH
Benzene	40.8	6.00	6.00		130	19	19	12	2.5	4/18/25 2:52	DFH
Benzyl Chloride	ND	6.00	15.0	C	ND	31	78	12	2.5	4/18/25 2:52	DFH
Bromoform	ND	6.00	15.0		ND	62	160	12	2.5	4/18/25 2:52	DFH
Bromomethane	ND	6.00	15.0		ND	23	58	12	2.5	4/18/25 2:52	DFH
Carbon Disulfide	ND	15.0	15.0		ND	47	47	12	2.5	4/18/25 2:52	DFH
Carbon Tetrachloride	ND	6.00	15.0		ND	38	94	12	2.5	4/18/25 2:52	DFH
Chlorobenzene	ND	6.00	15.0		ND	28	69	12	2.5	4/18/25 2:52	DFH
Chloroethane	ND	6.00	15.0		ND	16	40	12	2.5	4/18/25 2:52	DFH
Chloroform	ND	6.00	6.00		ND	29	29	12	2.5	4/18/25 2:52	DFH
Chloromethane	ND	6.00	15.0		ND	12	31	12	2.5	4/18/25 2:52	DFH
cis-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/18/25 2:52	DFH
cis-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/18/25 2:52	DFH
Cyclohexane	30.6	6.00	15.0		110	21	52	12	2.5	4/18/25 2:52	DFH
Dibromochloromethane	ND	6.00	15.0		ND	51	130	12	2.5	4/18/25 2:52	DFH
Dichlorodifluoromethane	49.2	15.0	15.0		240	74	74	12	2.5	4/18/25 2:52	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-01
Project Location:

Sample ID: 25D1361-08
Sample Matrix: Air
Sampled: 4/8/2025 11:35
Sample Type: SG

Canister ID: 063-01029::49690
Canister Size: 6
Flow Controller ID: 063-00927::20248
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.6

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 2:52	DFH
Ethylbenzene	ND	6.00	15.0		ND	26	65	12	2.5	4/18/25 2:52	DFH
Heptane	162	6.00	15.0		670	25	61	12	2.5	4/18/25 2:52	DFH
Hexachlorobutadiene	ND	6.00	15.0	C	ND	64	160	12	2.5	4/18/25 2:52	DFH
Hexane	102	6.00	15.0		360	21	53	12	2.5	4/18/25 2:52	DFH
Isopropylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 2:52	DFH
m+p-Xylenes	ND	12.0	30.0		ND	52	130	12	2.5	4/18/25 2:52	DFH
Methyl methacrylate	ND	6.00	15.0		ND	25	61	12	2.5	4/18/25 2:52	DFH
Methylene chloride	ND	15.0	30.0		ND	52	100	12	2.5	4/18/25 2:52	DFH
Methyl-t-butyl ether (MTBE)	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 2:52	DFH
Naphthalene	ND	6.00	6.00	C	ND	31	31	12	2.5	4/18/25 2:52	DFH
o-Xylene	ND	6.00	15.0		ND	26	65	12	2.5	4/18/25 2:52	DFH
Propylene	ND	4.80	4.80		ND	8.3	8.3	12	2.5	4/18/25 2:52	DFH
Styrene	ND	6.00	15.0		ND	26	64	12	2.5	4/18/25 2:52	DFH
TBA	ND	15.0	15.0		ND	45	45	12	2.5	4/18/25 2:52	DFH
Tetrachloroethylene (PCE)	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 2:52	DFH
Tetrahydrofuran	ND	6.00	15.0		ND	18	44	12	2.5	4/18/25 2:52	DFH
Toluene	ND	6.00	15.0		ND	23	57	12	2.5	4/18/25 2:52	DFH
trans-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/18/25 2:52	DFH
trans-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/18/25 2:52	DFH
Trichloroethylene	ND	6.00	6.00		ND	32	32	12	2.5	4/18/25 2:52	DFH
Trichlorofluoromethane	ND	15.0	15.0		ND	84	84	12	2.5	4/18/25 2:52	DFH
Vinyl acetate	ND	6.00	15.0		ND	21	53	12	2.5	4/18/25 2:52	DFH
Vinyl bromide	ND	6.00	15.0		ND	26	66	12	2.5	4/18/25 2:52	DFH
Vinyl chloride	9.60	6.00	15.0	J	25	15	38	12	2.5	4/18/25 2:52	DFH
Xylenes, Total	ND	18.0	45.0		ND	78	200	12	2.5	4/18/25 2:52	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	96.2	80-120	4/18/25 2:52

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-01

Project Location:

Sample ID: 25D1361-08
Sample Matrix: Air
Sampled: 4/8/2025 11:35
Sample Type: SG

Canister ID: 063-01029::49690
Canister Size: 6
Flow Controller ID: 063-00927::20248
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.6

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-06 Project Location:

Sample ID: 25D1361-09 Canister ID: 063-00842::48098 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 3

Sampled: 4/8/2025 13:30 Flow Controller ID: 063-00409::10521 Receipt Vacuum(in Hg): 4.6

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	12200	4050	4050		17000	5600	5600	405	1	4/25/25 0:03	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	96.4	80-120	4/25/25 0:03

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	73.4	1.35	1.35		27	1	4/22/25 21:13	DKM
Carbon dioxide, as received	28.0	1.35	1.35		27	1	4/22/25 21:13	DKM
Oxygen (O2), as received	ND	1.35	1.35		27	1	4/22/25 21:13	DKM
Hydrogen (H2), as received	ND	0.54	0.54		27	1	4/22/25 21:13	DKM
Nitrogen (N2), as received	ND	27.0	27.0		27	1	4/22/25 21:13	DKM
Carbon Monoxide, as received	ND	0.03	0.03		27	1	4/22/25 21:13	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/18/25 4:19	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/18/25 4:19	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/18/25 4:19	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	4/18/25 4:19	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/18/25 4:19	DFH
1,1-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/18/25 4:19	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/18/25 4:19	DFH
1,2,4-Trimethylbenzene	70.2	36.0	90.0	J	350	180	440	72	2.5	4/18/25 4:19	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	4/18/25 4:19	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-06 Project Location:

Sample ID: 25D1361-09 Canister ID: 063-00842::48098 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 3

Sampled: 4/8/2025 13:30 Flow Controller ID: 063-00409::10521 Receipt Vacuum(in Hg): 4.6

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/18/25 4:19	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/18/25 4:19	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	4/18/25 4:19	DFH
1,2-Dichlorotetrafluoroethane	306	36.0	90.0		2100	250	630	72	2.5	4/18/25 4:19	DFH
1,3,5-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/18/25 4:19	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	4/18/25 4:19	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/18/25 4:19	DFH
1,4-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/18/25 4:19	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	4/18/25 4:19	DFH
2-Butanone (MEK)	52.2	36.0	90.0	J	150	110	270	72	2.5	4/18/25 4:19	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	4/18/25 4:19	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	4/18/25 4:19	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	4/18/25 4:19	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	4/18/25 4:19	DFH
Benzene	419	36.0	36.0		1300	120	120	72	2.5	4/18/25 4:19	DFH
Benzyl Chloride	ND	36.0	90.0	C	ND	190	470	72	2.5	4/18/25 4:19	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	4/18/25 4:19	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	4/18/25 4:19	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	4/18/25 4:19	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	4/18/25 4:19	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	4/18/25 4:19	DFH
Chloroethane	12800	324	810		34000	850	2100	648	2.5	4/25/25 10:10	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	4/18/25 4:19	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	4/18/25 4:19	DFH
cis-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/18/25 4:19	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/18/25 4:19	DFH
Cyclohexane	1240	36.0	90.0		4300	120	310	72	2.5	4/18/25 4:19	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	4/18/25 4:19	DFH
Dichlorodifluoromethane	265	90.0	90.0		1300	450	450	72	2.5	4/18/25 4:19	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGI-06
Sample ID: 25D1361-09
Sample Matrix: Air
Sampled: 4/8/2025 13:30
Sample Type: SG

Project Location:
Canister ID: 063-00842::48098
Canister Size: 6
Flow Controller ID: 063-00409::10521
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 3
Receipt Vacuum(in Hg): 4.6

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/18/25 4:19	DFH
Ethylbenzene	ND	36.0	90.0		ND	160	390	72	2.5	4/18/25 4:19	DFH
Heptane	2050	36.0	90.0		8400	150	370	72	2.5	4/18/25 4:19	DFH
Hexachlorobutadiene	ND	36.0	90.0	C	ND	380	960	72	2.5	4/18/25 4:19	DFH
Hexane	1710	36.0	90.0		6000	130	320	72	2.5	4/18/25 4:19	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/18/25 4:19	DFH
m+p-Xylenes	ND	72.0	180		ND	310	780	72	2.5	4/18/25 4:19	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	4/18/25 4:19	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	4/18/25 4:19	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	4/18/25 4:19	DFH
Naphthalene	ND	36.0	36.0	C	ND	190	190	72	2.5	4/18/25 4:19	DFH
o-Xylene	ND	36.0	90.0		ND	160	390	72	2.5	4/18/25 4:19	DFH
Propylene	191	28.8	28.8		330	50	50	72	2.5	4/18/25 4:19	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	4/18/25 4:19	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	4/18/25 4:19	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	4/18/25 4:19	DFH
Tetrahydrofuran	ND	36.0	90.0		ND	110	270	72	2.5	4/18/25 4:19	DFH
Toluene	ND	36.0	90.0		ND	140	340	72	2.5	4/18/25 4:19	DFH
trans-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/18/25 4:19	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/18/25 4:19	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	4/18/25 4:19	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	4/18/25 4:19	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/18/25 4:19	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	4/18/25 4:19	DFH
Vinyl chloride	ND	36.0	90.0		ND	92	230	72	2.5	4/18/25 4:19	DFH
Xylenes, Total	ND	108	270		ND	470	1200	72	2.5	4/18/25 4:19	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	95.6	80-120	4/25/25 10:10
4-Bromofluorobenzene (Surr)	97.0	80-120	4/18/25 4:19

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-06

Project Location:

Sample ID: 25D1361-09
Sample Matrix: Air
Sampled: 4/8/2025 13:30
Sample Type: SG

Canister ID: 063-00842::48098
Canister Size: 6
Flow Controller ID: 063-00409::10521
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 3
Receipt Vacuum(in Hg): 4.6

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-04 Project Location:

Sample ID: 25D1361-10 Canister ID: 063-00869::49289 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 13:15 Flow Controller ID: 063-00394::10525 Receipt Vacuum(in Hg): 7.2

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	495	150	150		690	210	210	15	1	4/19/25 11:28	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	97.2	80-120	4/19/25 11:28

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	37.0	0.45	0.45		9	1	4/22/25 21:58	DKM
Carbon dioxide, as received	13.0	0.45	0.45		9	1	4/22/25 21:58	DKM
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/22/25 21:58	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 21:58	DKM
Nitrogen (N2), as received	11.0	9.00	9.00		9	1	4/22/25 21:58	DKM
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 21:58	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/18/25 5:47	DFH
1,1,1,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 5:47	DFH
1,1,2,2-Tetrachloroethane	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 5:47	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	6.00	15.0		ND	46	110	12	2.5	4/18/25 5:47	DFH
1,1,2-Trichloroethane	ND	6.00	15.0		ND	33	82	12	2.5	4/18/25 5:47	DFH
1,1-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/18/25 5:47	DFH
1,1-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/18/25 5:47	DFH
1,2,4-Trimethylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 5:47	DFH
1,2-Dibromoethane (EDB)	ND	6.00	15.0		ND	46	120	12	2.5	4/18/25 5:47	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-04 Project Location:

Sample ID: 25D1361-10 Canister ID: 063-00869::49289 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 13:15 Flow Controller ID: 063-00394::10525 Receipt Vacuum(in Hg): 7.2

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/18/25 5:47	DFH
1,2-Dichloroethane	ND	6.00	15.0		ND	24	61	12	2.5	4/18/25 5:47	DFH
1,2-Dichloropropane	ND	6.00	15.0		ND	28	69	12	2.5	4/18/25 5:47	DFH
1,2-Dichlorotetrafluoroethane	203	6.00	15.0		1400	42	100	12	2.5	4/18/25 5:47	DFH
1,3,5-Trimethylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 5:47	DFH
1,3-Butadiene	ND	6.00	15.0		ND	13	33	12	2.5	4/18/25 5:47	DFH
1,3-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/18/25 5:47	DFH
1,4-Dichlorobenzene	ND	6.00	15.0		ND	36	90	12	2.5	4/18/25 5:47	DFH
1,4-Dioxane	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 5:47	DFH
2-Butanone (MEK)	ND	6.00	15.0		ND	18	44	12	2.5	4/18/25 5:47	DFH
2-Chlorotoluene	ND	6.00	15.0		ND	31	78	12	2.5	4/18/25 5:47	DFH
2-Hexanone (MBK)	ND	6.00	15.0		ND	25	61	12	2.5	4/18/25 5:47	DFH
4-Methyl-2-pentanone (MIBK)	ND	6.00	15.0		ND	69	170	12	2.5	4/18/25 5:47	DFH
Allyl chloride	ND	6.00	15.0		ND	19	47	12	2.5	4/18/25 5:47	DFH
Benzene	152	6.00	6.00		480	19	19	12	2.5	4/18/25 5:47	DFH
Benzyl Chloride	ND	6.00	15.0	C	ND	31	78	12	2.5	4/18/25 5:47	DFH
Bromoform	ND	6.00	15.0		ND	62	160	12	2.5	4/18/25 5:47	DFH
Bromomethane	ND	6.00	15.0		ND	23	58	12	2.5	4/18/25 5:47	DFH
Carbon Disulfide	ND	15.0	15.0		ND	47	47	12	2.5	4/18/25 5:47	DFH
Carbon Tetrachloride	ND	6.00	15.0		ND	38	94	12	2.5	4/18/25 5:47	DFH
Chlorobenzene	ND	6.00	15.0		ND	28	69	12	2.5	4/18/25 5:47	DFH
Chloroethane	12.6	6.00	15.0	J	33	16	40	12	2.5	4/18/25 5:47	DFH
Chloroform	ND	6.00	6.00		ND	29	29	12	2.5	4/18/25 5:47	DFH
Chloromethane	ND	6.00	15.0		ND	12	31	12	2.5	4/18/25 5:47	DFH
cis-1,2-Dichloroethylene	31.2	6.00	15.0		120	24	59	12	2.5	4/18/25 5:47	DFH
cis-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/18/25 5:47	DFH
Cyclohexane	362	6.00	15.0		1200	21	52	12	2.5	4/18/25 5:47	DFH
Dibromochloromethane	ND	6.00	15.0		ND	51	130	12	2.5	4/18/25 5:47	DFH
Dichlorodifluoromethane	24.0	15.0	15.0		120	74	74	12	2.5	4/18/25 5:47	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-04 Project Location:

Sample ID: 25D1361-10 Canister ID: 063-00869::49289 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 13:15 Flow Controller ID: 063-00394::10525 Receipt Vacuum(in Hg): 7.2

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 5:47	DFH
Ethylbenzene	154	6.00	15.0		670	26	65	12	2.5	4/18/25 5:47	DFH
Heptane	694	12.0	30.0		2800	49	120	24	2.5	4/18/25 12:23	DFH
Hexachlorobutadiene	ND	6.00	15.0	C	ND	64	160	12	2.5	4/18/25 5:47	DFH
Hexane	544	6.00	15.0		1900	21	53	12	2.5	4/18/25 5:47	DFH
Isopropylbenzene	ND	6.00	15.0		ND	29	74	12	2.5	4/18/25 5:47	DFH
m+p-Xylenes	182	12.0	30.0		790	52	130	12	2.5	4/18/25 5:47	DFH
Methyl methacrylate	ND	6.00	15.0		ND	25	61	12	2.5	4/18/25 5:47	DFH
Methylene chloride	ND	15.0	30.0		ND	52	100	12	2.5	4/18/25 5:47	DFH
Methyl-t-butyl ether (MTBE)	ND	6.00	15.0		ND	22	54	12	2.5	4/18/25 5:47	DFH
Naphthalene	ND	6.00	6.00	C	ND	31	31	12	2.5	4/18/25 5:47	DFH
o-Xylene	ND	6.00	15.0		ND	26	65	12	2.5	4/18/25 5:47	DFH
Propylene	ND	4.80	4.80		ND	8.3	8.3	12	2.5	4/18/25 5:47	DFH
Styrene	ND	6.00	15.0		ND	26	64	12	2.5	4/18/25 5:47	DFH
TBA	ND	15.0	15.0		ND	45	45	12	2.5	4/18/25 5:47	DFH
Tetrachloroethylene (PCE)	ND	6.00	15.0		ND	41	100	12	2.5	4/18/25 5:47	DFH
Tetrahydrofuran	ND	6.00	15.0		ND	18	44	12	2.5	4/18/25 5:47	DFH
Toluene	6.00	6.00	15.0	J	23	23	57	12	2.5	4/18/25 5:47	DFH
trans-1,2-Dichloroethylene	ND	6.00	15.0		ND	24	59	12	2.5	4/18/25 5:47	DFH
trans-1,3-Dichloropropene	ND	6.00	15.0		ND	27	68	12	2.5	4/18/25 5:47	DFH
Trichloroethylene	ND	6.00	6.00		ND	32	32	12	2.5	4/18/25 5:47	DFH
Trichlorofluoromethane	ND	15.0	15.0		ND	84	84	12	2.5	4/18/25 5:47	DFH
Vinyl acetate	ND	6.00	15.0		ND	21	53	12	2.5	4/18/25 5:47	DFH
Vinyl bromide	ND	6.00	15.0		ND	26	66	12	2.5	4/18/25 5:47	DFH
Vinyl chloride	18.6	6.00	15.0		48	15	38	12	2.5	4/18/25 5:47	DFH
Xylenes, Total	186	18.0	45.0		810	78	200	12	2.5	4/18/25 5:47	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	105	80-120	4/18/25 12:23
4-Bromofluorobenzene (Surr)	95.8	80-120	4/18/25 5:47

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-04

Project Location:

Sample ID: 25D1361-10
Sample Matrix: Air
Sampled: 4/8/2025 13:15
Sample Type: SG

Canister ID: 063-00869::49289
Canister Size: 6
Flow Controller ID: 063-00394::10525
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.2

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-05

Project Location:

Sample ID: 25D1361-11
Sample Matrix: Air
Sampled: 4/8/2025 14:15
Sample Type: SG

Canister ID: 063-00906::49670
Canister Size: 6
Flow Controller ID: 063-00407::14198
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.0

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	300	300		ND	420	420	30	1	4/19/25 12:49	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	96.5	80-120	4/19/25 12:49

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	42.8	0.45	0.45		9	1	4/22/25 22:43	DKM
Carbon dioxide, as received	21.9	0.45	0.45		9	1	4/22/25 22:43	DKM
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/22/25 22:43	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 22:43	DKM
Nitrogen (N2), as received	35.8	9.00	9.00		9	1	4/22/25 22:43	DKM
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 22:43	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	24.0	60.0		ND	130	330	48	2.5	4/18/25 7:16	DFH
1,1,1,2-Tetrachloroethane	ND	24.0	60.0		ND	160	410	48	2.5	4/18/25 7:16	DFH
1,1,2,2-Tetrachloroethane	ND	24.0	60.0		ND	160	410	48	2.5	4/18/25 7:16	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	24.0	60.0		ND	180	460	48	2.5	4/18/25 7:16	DFH
1,1,2-Trichloroethane	ND	24.0	60.0		ND	130	330	48	2.5	4/18/25 7:16	DFH
1,1-Dichloroethane	424	24.0	60.0		1700	97	240	48	2.5	4/18/25 7:16	DFH
1,1-Dichloroethylene	64.8	24.0	60.0		260	95	240	48	2.5	4/18/25 7:16	DFH
1,2,4-Trimethylbenzene	ND	24.0	60.0		ND	120	290	48	2.5	4/18/25 7:16	DFH
1,2-Dibromoethane (EDB)	ND	24.0	60.0		ND	180	460	48	2.5	4/18/25 7:16	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks

Project Number: 23050459

Client Site I.D.: Cliffdale LF

Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGP-05

Project Location:

Sample ID: 25D1361-11
Sample Matrix: Air
Sampled: 4/8/2025 14:15
Sample Type: SG

Canister ID: 063-00906::49670
Canister Size: 6
Flow Controller ID: 063-00407::14198
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.0

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	24.0	60.0		ND	140	360	48	2.5	4/18/25 7:16	DFH
1,2-Dichloroethane	ND	24.0	60.0		ND	97	240	48	2.5	4/18/25 7:16	DFH
1,2-Dichloropropane	ND	24.0	60.0		ND	110	280	48	2.5	4/18/25 7:16	DFH
1,2-Dichlorotetrafluoroethane	298	24.0	60.0		2100	170	420	48	2.5	4/18/25 7:16	DFH
1,3,5-Trimethylbenzene	ND	24.0	60.0		ND	120	290	48	2.5	4/18/25 7:16	DFH
1,3-Butadiene	ND	24.0	60.0		ND	53	130	48	2.5	4/18/25 7:16	DFH
1,3-Dichlorobenzene	ND	24.0	60.0		ND	140	360	48	2.5	4/18/25 7:16	DFH
1,4-Dichlorobenzene	ND	24.0	60.0		ND	140	360	48	2.5	4/18/25 7:16	DFH
1,4-Dioxane	ND	24.0	60.0		ND	86	220	48	2.5	4/18/25 7:16	DFH
2-Butanone (MEK)	ND	24.0	60.0		ND	71	180	48	2.5	4/18/25 7:16	DFH
2-Chlorotoluene	ND	24.0	60.0		ND	120	310	48	2.5	4/18/25 7:16	DFH
2-Hexanone (MBK)	ND	24.0	60.0		ND	98	250	48	2.5	4/18/25 7:16	DFH
4-Methyl-2-pentanone (MIBK)	ND	24.0	60.0		ND	280	690	48	2.5	4/18/25 7:16	DFH
Allyl chloride	ND	24.0	60.0		ND	75	190	48	2.5	4/18/25 7:16	DFH
Benzene	114	24.0	24.0		360	77	77	48	2.5	4/18/25 7:16	DFH
Benzyl Chloride	ND	24.0	60.0	C	ND	120	310	48	2.5	4/18/25 7:16	DFH
Bromoform	ND	24.0	60.0		ND	250	620	48	2.5	4/18/25 7:16	DFH
Bromomethane	ND	24.0	60.0		ND	93	230	48	2.5	4/18/25 7:16	DFH
Carbon Disulfide	ND	60.0	60.0		ND	190	190	48	2.5	4/18/25 7:16	DFH
Carbon Tetrachloride	ND	24.0	60.0		ND	150	380	48	2.5	4/18/25 7:16	DFH
Chlorobenzene	ND	24.0	60.0		ND	110	280	48	2.5	4/18/25 7:16	DFH
Chloroethane	217	24.0	60.0		570	63	160	48	2.5	4/18/25 7:16	DFH
Chloroform	ND	24.0	24.0		ND	120	120	48	2.5	4/18/25 7:16	DFH
Chloromethane	ND	24.0	60.0		ND	50	120	48	2.5	4/18/25 7:16	DFH
cis-1,2-Dichloroethylene	310	24.0	60.0		1200	95	240	48	2.5	4/18/25 7:16	DFH
cis-1,3-Dichloropropene	ND	24.0	60.0		ND	110	270	48	2.5	4/18/25 7:16	DFH
Cyclohexane	991	24.0	60.0		3400	83	210	48	2.5	4/18/25 7:16	DFH
Dibromochloromethane	ND	24.0	60.0		ND	200	510	48	2.5	4/18/25 7:16	DFH
Dichlorodifluoromethane	ND	60.0	60.0		ND	300	300	48	2.5	4/18/25 7:16	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-05 Project Location:

Sample ID: 25D1361-11 Canister ID: 063-00906::49670 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/8/2025 14:15 Flow Controller ID: 063-00407::14198 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	**Results**	**MDL**	**LOQ**	**Flag/Qual**	**Results**	**MDL**	**LOQ**	**Dilution**	**PF**	**Date/Time Analyzed**	**Analyst**
Ethyl acetate	ND	24.0	60.0		ND	86	220	48	2.5	4/18/25 7:16	DFH
Ethylbenzene	ND	24.0	60.0		ND	100	260	48	2.5	4/18/25 7:16	DFH
Heptane	1500	24.0	60.0		6100	98	250	48	2.5	4/18/25 7:16	DFH
Hexachlorobutadiene	ND	24.0	60.0	C	ND	260	640	48	2.5	4/18/25 7:16	DFH
Hexane	1250	24.0	60.0		4400	85	210	48	2.5	4/18/25 7:16	DFH
Isopropylbenzene	ND	24.0	60.0		ND	120	290	48	2.5	4/18/25 7:16	DFH
m+p-Xylenes	ND	48.0	120		ND	210	520	48	2.5	4/18/25 7:16	DFH
Methyl methacrylate	ND	24.0	60.0		ND	98	250	48	2.5	4/18/25 7:16	DFH
Methylene chloride	ND	60.0	120		ND	210	420	48	2.5	4/18/25 7:16	DFH
Methyl-t-butyl ether (MTBE)	ND	24.0	60.0		ND	87	220	48	2.5	4/18/25 7:16	DFH
Naphthalene	ND	24.0	24.0	C	ND	130	130	48	2.5	4/18/25 7:16	DFH
o-Xylene	ND	24.0	60.0		ND	100	260	48	2.5	4/18/25 7:16	DFH
Propylene	ND	19.2	19.2		ND	33	33	48	2.5	4/18/25 7:16	DFH
Styrene	ND	24.0	60.0		ND	100	260	48	2.5	4/18/25 7:16	DFH
TBA	ND	60.0	60.0		ND	180	180	48	2.5	4/18/25 7:16	DFH
Tetrachloroethylene (PCE)	ND	24.0	60.0		ND	160	410	48	2.5	4/18/25 7:16	DFH
Tetrahydrofuran	ND	24.0	60.0		ND	71	180	48	2.5	4/18/25 7:16	DFH
Toluene	ND	24.0	60.0		ND	90	230	48	2.5	4/18/25 7:16	DFH
trans-1,2-Dichloroethylene	37.2	24.0	60.0	J	150	95	240	48	2.5	4/18/25 7:16	DFH
trans-1,3-Dichloropropene	ND	24.0	60.0		ND	110	270	48	2.5	4/18/25 7:16	DFH
Trichloroethylene	49.2	24.0	24.0		260	130	130	48	2.5	4/18/25 7:16	DFH
Trichlorofluoromethane	ND	60.0	60.0		ND	340	340	48	2.5	4/18/25 7:16	DFH
Vinyl acetate	ND	24.0	60.0		ND	84	210	48	2.5	4/18/25 7:16	DFH
Vinyl bromide	ND	24.0	60.0		ND	100	260	48	2.5	4/18/25 7:16	DFH
Vinyl chloride	551	24.0	60.0		1400	61	150	48	2.5	4/18/25 7:16	DFH
Xylenes, Total	ND	72.0	180		ND	310	780	48	2.5	4/18/25 7:16	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	101	80-120	4/18/25 7:16

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-05

Project Location:

Sample ID: 25D1361-11
Sample Matrix: Air
Sampled: 4/8/2025 14:15
Sample Type: SG

Canister ID: 063-00906::49670
Canister Size: 6
Flow Controller ID: 063-00407::14198
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.0

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-07 Project Location:

Sample ID: 25D1361-12 Canister ID: 063-01075::50957 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 8

Sampled: 4/8/2025 14:00 Flow Controller ID: 063-00698::16525 Receipt Vacuum(in Hg): 9.2

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	27100	8100	8100		38000	11000	11000	810	1	4/25/25 12:11	DFH

Surrogate(s)	% Recovery	% Recovery Limits		
1,4-Difluorobenzene (Surr), as received	97.8	80-120	4/25/25 12:11	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	74.0	0.45	0.45		9	1	4/22/25 23:28	DKM
Carbon dioxide, as received	24.2	0.45	0.45		9	1	4/22/25 23:28	DKM
Oxygen (O2), as received	0.49	0.45	0.45		9	1	4/22/25 23:28	DKM
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/22/25 23:28	DKM
Nitrogen (N2), as received	ND	9.00	9.00		9	1	4/22/25 23:28	DKM
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/22/25 23:28	DKM

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/18/25 8:43	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/18/25 8:43	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/18/25 8:43	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	4/18/25 8:43	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/18/25 8:43	DFH
1,1-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/18/25 8:43	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/18/25 8:43	DFH
1,2,4-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/18/25 8:43	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	4/18/25 8:43	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-07

Project Location:

Sample ID: 25D1361-12
Sample Matrix: Air
Sampled: 4/8/2025 14:00
Sample Type: SG

Canister ID: 063-01075::50957
Canister Size: 6
Flow Controller ID: 063-00698::16525
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 8
Receipt Vacuum(in Hg): 9.2

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/18/25 8:43	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/18/25 8:43	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	4/18/25 8:43	DFH
1,2-Dichlorotetrafluoroethane	139	36.0	90.0		970	250	630	72	2.5	4/18/25 8:43	DFH
1,3,5-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/18/25 8:43	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	4/18/25 8:43	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/18/25 8:43	DFH
1,4-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/18/25 8:43	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	4/18/25 8:43	DFH
2-Butanone (MEK)	ND	36.0	90.0		ND	110	270	72	2.5	4/18/25 8:43	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	4/18/25 8:43	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	4/18/25 8:43	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	4/18/25 8:43	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	4/18/25 8:43	DFH
Benzene	839	36.0	36.0		2700	120	120	72	2.5	4/18/25 8:43	DFH
Benzyl Chloride	ND	36.0	90.0	C	ND	190	470	72	2.5	4/18/25 8:43	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	4/18/25 8:43	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	4/18/25 8:43	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	4/18/25 8:43	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	4/18/25 8:43	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	4/18/25 8:43	DFH
Chloroethane	81.0	36.0	90.0	J	210	95	240	72	2.5	4/18/25 8:43	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	4/18/25 8:43	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	4/18/25 8:43	DFH
cis-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/18/25 8:43	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/18/25 8:43	DFH
Cyclohexane	4050	324	810		14000	1100	2800	648	2.5	4/25/25 11:01	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	4/18/25 8:43	DFH
Dichlorodifluoromethane	ND	90.0	90.0		ND	450	450	72	2.5	4/18/25 8:43	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks

Project Number: 23050459

Client Site I.D.: Cliffdale LF

Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGP-07

Project Location:

Sample ID: 25D1361-12
Sample Matrix: Air
Sampled: 4/8/2025 14:00
Sample Type: SG

Canister ID: 063-01075::50957
Canister Size: 6
Flow Controller ID: 063-00698::16525
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 8
Receipt Vacuum(in Hg): 9.2

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/18/25 8:43	DFH
Ethylbenzene	346	36.0	90.0		1500	160	390	72	2.5	4/18/25 8:43	DFH
Heptane	12200	324	810		50000	1300	3300	648	2.5	4/25/25 11:01	DFH
Hexachlorobutadiene	ND	36.0	90.0	C	ND	380	960	72	2.5	4/18/25 8:43	DFH
Hexane	4730	324	810		17000	1100	2900	648	2.5	4/25/25 11:01	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/18/25 8:43	DFH
m+p-Xylenes	731	72.0	180		3200	310	780	72	2.5	4/18/25 8:43	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	4/18/25 8:43	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	4/18/25 8:43	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	4/18/25 8:43	DFH
Naphthalene	ND	36.0	36.0	C	ND	190	190	72	2.5	4/18/25 8:43	DFH
o-Xylene	ND	36.0	90.0		ND	160	390	72	2.5	4/18/25 8:43	DFH
Propylene	ND	28.8	28.8		ND	50	50	72	2.5	4/18/25 8:43	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	4/18/25 8:43	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	4/18/25 8:43	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	4/18/25 8:43	DFH
Tetrahydrofuran	ND	36.0	90.0		ND	110	270	72	2.5	4/18/25 8:43	DFH
Toluene	ND	36.0	90.0		ND	140	340	72	2.5	4/18/25 8:43	DFH
trans-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/18/25 8:43	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/18/25 8:43	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	4/18/25 8:43	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	4/18/25 8:43	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/18/25 8:43	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	4/18/25 8:43	DFH
Vinyl chloride	ND	36.0	90.0		ND	92	230	72	2.5	4/18/25 8:43	DFH
Xylenes, Total	731	108	270		3200	470	1200	72	2.5	4/18/25 8:43	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	96.0	80-120	4/25/25 11:01
4-Bromofluorobenzene (Surr)	101	80-120	4/18/25 8:43

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-07

Project Location:

Sample ID: 25D1361-12
Sample Matrix: Air
Sampled: 4/8/2025 14:00
Sample Type: SG

Canister ID: 063-01075::50957
Canister Size: 6
Flow Controller ID: 063-00698::16525
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 8
Receipt Vacuum(in Hg): 9.2

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-14 Project Location:

Sample ID: 25D1361-13 Canister ID: 063-00779::47533 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 14:30 Flow Controller ID: 063-00445::10524 Receipt Vacuum(in Hg): 5.8

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	450	450		ND	630	630	45	1	4/23/25 22:46	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	99.2	80-120	4/23/25 22:46

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	6.73	0.45	0.45		9	1	4/24/25 15:39	NSD
Carbon dioxide, as received	4.24	0.45	0.45		9	1	4/24/25 15:39	NSD
Oxygen (O2), as received	19.0	0.45	0.45		9	1	4/24/25 15:39	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/24/25 15:39	NSD
Nitrogen (N2), as received	70.3	18.0	18.0		18	1	4/28/25 13:08	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/24/25 15:39	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	3.00	7.50		ND	16	41	6	2.5	4/21/25 12:24	DFH
1,1,1,2-Tetrachloroethane	ND	3.00	7.50		ND	21	51	6	2.5	4/21/25 12:24	DFH
1,1,2,2-Tetrachloroethane	ND	3.00	7.50		ND	21	51	6	2.5	4/21/25 12:24	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.00	7.50		ND	23	57	6	2.5	4/21/25 12:24	DFH
1,1,2-Trichloroethane	ND	3.00	7.50		ND	16	41	6	2.5	4/21/25 12:24	DFH
1,1-Dichloroethane	ND	3.00	7.50		ND	12	30	6	2.5	4/21/25 12:24	DFH
1,1-Dichloroethylene	ND	3.00	7.50		ND	12	30	6	2.5	4/21/25 12:24	DFH
1,2,4-Trimethylbenzene	ND	3.00	7.50		ND	15	37	6	2.5	4/21/25 12:24	DFH
1,2-Dibromoethane (EDB)	ND	3.00	7.50		ND	23	58	6	2.5	4/21/25 12:24	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-14

Project Location:

Sample ID: 25D1361-13
Sample Matrix: Air
Sampled: 4/9/2025 14:30
Sample Type: SG

Canister ID: 063-00779::47533
Canister Size: 6
Flow Controller ID: 063-00445::10524
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.8

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	3.00	7.50		ND	18	45	6	2.5	4/21/25 12:24	DFH
1,2-Dichloroethane	ND	3.00	7.50		ND	12	30	6	2.5	4/21/25 12:24	DFH
1,2-Dichloropropane	ND	3.00	7.50		ND	14	35	6	2.5	4/21/25 12:24	DFH
1,2-Dichlorotetrafluoroethane	9.90	3.00	7.50		69	21	52	6	2.5	4/21/25 12:24	DFH
1,3,5-Trimethylbenzene	ND	3.00	7.50		ND	15	37	6	2.5	4/21/25 12:24	DFH
1,3-Butadiene	ND	3.00	7.50		ND	6.6	17	6	2.5	4/21/25 12:24	DFH
1,3-Dichlorobenzene	ND	3.00	7.50		ND	18	45	6	2.5	4/21/25 12:24	DFH
1,4-Dichlorobenzene	3.15	3.00	7.50	J	19	18	45	6	2.5	4/21/25 12:24	DFH
1,4-Dioxane	ND	3.00	7.50		ND	11	27	6	2.5	4/21/25 12:24	DFH
2-Butanone (MEK)	ND	3.00	7.50		ND	8.8	22	6	2.5	4/21/25 12:24	DFH
2-Chlorotoluene	ND	3.00	7.50		ND	16	39	6	2.5	4/21/25 12:24	DFH
2-Hexanone (MBK)	ND	3.00	7.50		ND	12	31	6	2.5	4/21/25 12:24	DFH
4-Methyl-2-pentanone (MIBK)	ND	3.00	7.50		ND	34	86	6	2.5	4/21/25 12:24	DFH
Allyl chloride	ND	3.00	7.50		ND	9.4	23	6	2.5	4/21/25 12:24	DFH
Benzene	29.7	3.00	3.00		95	9.6	9.6	6	2.5	4/21/25 12:24	DFH
Benzyl Chloride	ND	3.00	7.50		ND	16	39	6	2.5	4/21/25 12:24	DFH
Bromoform	ND	3.00	7.50		ND	31	78	6	2.5	4/21/25 12:24	DFH
Bromomethane	ND	3.00	7.50		ND	12	29	6	2.5	4/21/25 12:24	DFH
Carbon Disulfide	ND	7.50	7.50		ND	23	23	6	2.5	4/21/25 12:24	DFH
Carbon Tetrachloride	ND	3.00	7.50		ND	19	47	6	2.5	4/21/25 12:24	DFH
Chlorobenzene	9.15	3.00	7.50		42	14	35	6	2.5	4/21/25 12:24	DFH
Chloroethane	ND	3.00	7.50		ND	7.9	20	6	2.5	4/21/25 12:24	DFH
Chloroform	ND	3.00	3.00		ND	15	15	6	2.5	4/21/25 12:24	DFH
Chloromethane	ND	3.00	7.50		ND	6.2	15	6	2.5	4/21/25 12:24	DFH
cis-1,2-Dichloroethylene	ND	3.00	7.50		ND	12	30	6	2.5	4/21/25 12:24	DFH
cis-1,3-Dichloropropene	ND	3.00	7.50		ND	14	34	6	2.5	4/21/25 12:24	DFH
Cyclohexane	53.4	3.00	7.50		180	10	26	6	2.5	4/21/25 12:24	DFH
Dibromochloromethane	ND	3.00	7.50		ND	26	64	6	2.5	4/21/25 12:24	DFH
Dichlorodifluoromethane	34.4	7.50	7.50		170	37	37	6	2.5	4/21/25 12:24	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-14
Project Location:

Sample ID: 25D1361-13
Sample Matrix: Air
Sampled: 4/9/2025 14:30
Sample Type: SG

Canister ID: 063-00779::47533
Canister Size: 6
Flow Controller ID: 063-00445::10524
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.8

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	3.00	7.50		ND	11	27	6	2.5	4/21/25 12:24	DFH
Ethylbenzene	8.40	3.00	7.50		36	13	33	6	2.5	4/21/25 12:24	DFH
Heptane	135	3.00	7.50		550	12	31	6	2.5	4/21/25 12:24	DFH
Hexachlorobutadiene	ND	3.00	7.50		ND	32	80	6	2.5	4/21/25 12:24	DFH
Hexane	63.3	3.00	7.50		220	11	26	6	2.5	4/21/25 12:24	DFH
Isopropylbenzene	ND	3.00	7.50		ND	15	37	6	2.5	4/21/25 12:24	DFH
m+p-Xylenes	16.6	6.00	15.0		72	26	65	6	2.5	4/21/25 12:24	DFH
Methyl methacrylate	ND	3.00	7.50		ND	12	31	6	2.5	4/21/25 12:24	DFH
Methylene chloride	11.8	7.50	15.0	J	41	26	52	6	2.5	4/21/25 12:24	DFH
Methyl-t-butyl ether (MTBE)	ND	3.00	7.50		ND	11	27	6	2.5	4/21/25 12:24	DFH
Naphthalene	9.75	3.00	3.00		51	16	16	6	2.5	4/21/25 12:24	DFH
o-Xylene	ND	3.00	7.50		ND	13	33	6	2.5	4/21/25 12:24	DFH
Propylene	66.4	2.40	2.40		110	4.1	4.1	6	2.5	4/21/25 12:24	DFH
Styrene	ND	3.00	7.50		ND	13	32	6	2.5	4/21/25 12:24	DFH
TBA	ND	7.50	7.50		ND	23	23	6	2.5	4/21/25 12:24	DFH
Tetrachloroethylene (PCE)	ND	3.00	7.50		ND	20	51	6	2.5	4/21/25 12:24	DFH
Tetrahydrofuran	3.15	3.00	7.50	J	9.3	8.8	22	6	2.5	4/21/25 12:24	DFH
Toluene	ND	3.00	7.50		ND	11	28	6	2.5	4/21/25 12:24	DFH
trans-1,2-Dichloroethylene	ND	3.00	7.50		ND	12	30	6	2.5	4/21/25 12:24	DFH
trans-1,3-Dichloropropene	ND	3.00	7.50		ND	14	34	6	2.5	4/21/25 12:24	DFH
Trichloroethylene	ND	3.00	3.00		ND	16	16	6	2.5	4/21/25 12:24	DFH
Trichlorofluoromethane	ND	7.50	7.50		ND	42	42	6	2.5	4/21/25 12:24	DFH
Vinyl acetate	ND	3.00	7.50		ND	11	26	6	2.5	4/21/25 12:24	DFH
Vinyl bromide	ND	3.00	7.50		ND	13	33	6	2.5	4/21/25 12:24	DFH
Vinyl chloride	ND	3.00	7.50		ND	7.7	19	6	2.5	4/21/25 12:24	DFH
Xylenes, Total	16.6	9.00	22.5	J	72	39	98	6	2.5	4/21/25 12:24	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	101	80-120	4/21/25 12:24

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-14

Project Location:

Sample ID: 25D1361-13
Sample Matrix: Air
Sampled: 4/9/2025 14:30
Sample Type: SG

Canister ID: 063-00779::47533
Canister Size: 6
Flow Controller ID: 063-00445::10524
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.8

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-12 Project Location:

Sample ID: 25D1361-14 Canister ID: 063-00645::47671 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 13:05 Flow Controller ID: 063-00500::16058 Receipt Vacuum(in Hg): 5.2

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	26700	4050	4050		37000	5600	5600	405	1	4/25/25 13:30	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.6	80-120	4/25/25 13:30

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	73.0	0.45	0.45		9	1	4/24/25 16:24	NSD
Carbon dioxide, as received	28.6	0.45	0.45		9	1	4/24/25 16:24	NSD
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/24/25 16:24	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/24/25 16:24	NSD
Nitrogen (N2), as received	ND	9.00	9.00		9	1	4/24/25 16:24	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/24/25 16:24	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	12.0	30.0		ND	65	160	24	2.5	4/21/25 13:50	DFH
1,1,1,2-Tetrachloroethane	ND	12.0	30.0		ND	82	210	24	2.5	4/21/25 13:50	DFH
1,1,2,2-Tetrachloroethane	ND	12.0	30.0		ND	82	210	24	2.5	4/21/25 13:50	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	12.0	30.0		ND	92	230	24	2.5	4/21/25 13:50	DFH
1,1,2-Trichloroethane	ND	12.0	30.0		ND	65	160	24	2.5	4/21/25 13:50	DFH
1,1-Dichloroethane	ND	12.0	30.0		ND	49	120	24	2.5	4/21/25 13:50	DFH
1,1-Dichloroethylene	ND	12.0	30.0		ND	48	120	24	2.5	4/21/25 13:50	DFH
1,2,4-Trimethylbenzene	ND	12.0	30.0		ND	59	150	24	2.5	4/21/25 13:50	DFH
1,2-Dibromoethane (EDB)	ND	12.0	30.0		ND	92	230	24	2.5	4/21/25 13:50	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-12 Project Location:

Sample ID: 25D1361-14 Canister ID: 063-00645::47671 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 13:05 Flow Controller ID: 063-00500::16058 Receipt Vacuum(in Hg): 5.2

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	12.0	30.0		ND	72	180	24	2.5	4/21/25 13:50	DFH
1,2-Dichloroethane	ND	12.0	30.0		ND	49	120	24	2.5	4/21/25 13:50	DFH
1,2-Dichloropropane	ND	12.0	30.0		ND	55	140	24	2.5	4/21/25 13:50	DFH
1,2-Dichlorotetrafluoroethane	320	12.0	30.0		2200	84	210	24	2.5	4/21/25 13:50	DFH
1,3,5-Trimethylbenzene	ND	12.0	30.0		ND	59	150	24	2.5	4/21/25 13:50	DFH
1,3-Butadiene	ND	12.0	30.0		ND	27	66	24	2.5	4/21/25 13:50	DFH
1,3-Dichlorobenzene	ND	12.0	30.0		ND	72	180	24	2.5	4/21/25 13:50	DFH
1,4-Dichlorobenzene	ND	12.0	30.0		ND	72	180	24	2.5	4/21/25 13:50	DFH
1,4-Dioxane	ND	12.0	30.0		ND	43	110	24	2.5	4/21/25 13:50	DFH
2-Butanone (MEK)	ND	12.0	30.0		ND	35	88	24	2.5	4/21/25 13:50	DFH
2-Chlorotoluene	ND	12.0	30.0		ND	62	160	24	2.5	4/21/25 13:50	DFH
2-Hexanone (MBK)	ND	12.0	30.0		ND	49	120	24	2.5	4/21/25 13:50	DFH
4-Methyl-2-pentanone (MIBK)	ND	12.0	30.0		ND	140	340	24	2.5	4/21/25 13:50	DFH
Allyl chloride	ND	12.0	30.0		ND	38	94	24	2.5	4/21/25 13:50	DFH
Benzene	589	12.0	12.0		1900	38	38	24	2.5	4/21/25 13:50	DFH
Benzyl Chloride	ND	12.0	30.0		ND	62	160	24	2.5	4/21/25 13:50	DFH
Bromoform	ND	12.0	30.0		ND	120	310	24	2.5	4/21/25 13:50	DFH
Bromomethane	ND	12.0	30.0		ND	47	120	24	2.5	4/21/25 13:50	DFH
Carbon Disulfide	ND	30.0	30.0		ND	93	93	24	2.5	4/21/25 13:50	DFH
Carbon Tetrachloride	ND	12.0	30.0		ND	75	190	24	2.5	4/21/25 13:50	DFH
Chlorobenzene	91.2	12.0	30.0		420	55	140	24	2.5	4/21/25 13:50	DFH
Chloroethane	ND	12.0	30.0		ND	32	79	24	2.5	4/21/25 13:50	DFH
Chloroform	ND	12.0	12.0		ND	59	59	24	2.5	4/21/25 13:50	DFH
Chloromethane	ND	12.0	30.0		ND	25	62	24	2.5	4/21/25 13:50	DFH
cis-1,2-Dichloroethylene	ND	12.0	30.0		ND	48	120	24	2.5	4/21/25 13:50	DFH
cis-1,3-Dichloropropene	ND	12.0	30.0		ND	54	140	24	2.5	4/21/25 13:50	DFH
Cyclohexane	172	12.0	30.0		590	41	100	24	2.5	4/21/25 13:50	DFH
Dibromochloromethane	ND	12.0	30.0		ND	100	260	24	2.5	4/21/25 13:50	DFH
Dichlorodifluoromethane	ND	30.0	30.0		ND	150	150	24	2.5	4/21/25 13:50	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-12 Project Location:

Sample ID: 25D1361-14 Canister ID: 063-00645::47671 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 13:05 Flow Controller ID: 063-00500::16058 Receipt Vacuum(in Hg): 5.2

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	12.0	30.0		ND	43	110	24	2.5	4/21/25 13:50	DFH
Ethylbenzene	15.0	12.0	30.0	J	65	52	130	24	2.5	4/21/25 13:50	DFH
Heptane	376	12.0	30.0		1500	49	120	24	2.5	4/21/25 13:50	DFH
Hexachlorobutadiene	ND	12.0	30.0		ND	130	320	24	2.5	4/21/25 13:50	DFH
Hexane	430	12.0	30.0		1500	42	110	24	2.5	4/21/25 13:50	DFH
Isopropylbenzene	ND	12.0	30.0		ND	59	150	24	2.5	4/21/25 13:50	DFH
m+p-Xylenes	ND	24.0	60.0		ND	100	260	24	2.5	4/21/25 13:50	DFH
Methyl methacrylate	ND	12.0	30.0		ND	49	120	24	2.5	4/21/25 13:50	DFH
Methylene chloride	ND	30.0	60.0		ND	100	210	24	2.5	4/21/25 13:50	DFH
Methyl-t-butyl ether (MTBE)	ND	12.0	30.0		ND	43	110	24	2.5	4/21/25 13:50	DFH
Naphthalene	ND	12.0	12.0		ND	63	63	24	2.5	4/21/25 13:50	DFH
o-Xylene	ND	12.0	30.0		ND	52	130	24	2.5	4/21/25 13:50	DFH
Propylene	ND	9.60	9.60		ND	17	17	24	2.5	4/21/25 13:50	DFH
Styrene	ND	12.0	30.0		ND	51	130	24	2.5	4/21/25 13:50	DFH
TBA	ND	30.0	30.0		ND	91	91	24	2.5	4/21/25 13:50	DFH
Tetrachloroethylene (PCE)	ND	12.0	30.0		ND	81	200	24	2.5	4/21/25 13:50	DFH
Tetrahydrofuran	ND	12.0	30.0		ND	35	88	24	2.5	4/21/25 13:50	DFH
Toluene	ND	12.0	30.0		ND	45	110	24	2.5	4/21/25 13:50	DFH
trans-1,2-Dichloroethylene	ND	12.0	30.0		ND	48	120	24	2.5	4/21/25 13:50	DFH
trans-1,3-Dichloropropene	ND	12.0	30.0		ND	54	140	24	2.5	4/21/25 13:50	DFH
Trichloroethylene	ND	12.0	12.0		ND	64	64	24	2.5	4/21/25 13:50	DFH
Trichlorofluoromethane	ND	30.0	30.0		ND	170	170	24	2.5	4/21/25 13:50	DFH
Vinyl acetate	ND	12.0	30.0		ND	42	110	24	2.5	4/21/25 13:50	DFH
Vinyl bromide	ND	12.0	30.0		ND	52	130	24	2.5	4/21/25 13:50	DFH
Vinyl chloride	ND	12.0	30.0		ND	31	77	24	2.5	4/21/25 13:50	DFH
Xylenes, Total	ND	36.0	90.0		ND	160	390	24	2.5	4/21/25 13:50	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	105	80-120	4/21/25 13:50

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-12

Project Location:

Sample ID: 25D1361-14
Sample Matrix: Air
Sampled: 4/9/2025 13:05
Sample Type: SG

Canister ID: 063-00645::47671
Canister Size: 6
Flow Controller ID: 063-00500::16058
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.2

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Certificate of Analysis

Final Report

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-10

Project Location:

Sample ID: 25D1361-15
Sample Matrix: Air
Sampled: 4/9/2025 13:45
Sample Type: SG

Canister ID: 063-00933::49316
Canister Size: 6
Flow Controller ID: 063-00361::16689
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.2

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	4210	450	450		5900	630	630	45	1	4/24/25 2:46	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	91.5	80-120	4/24/25 2:46

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	64.7	0.45	0.45		9	1	4/24/25 17:09	NSD
Carbon dioxide, as received	37.6	0.45	0.45		9	1	4/24/25 17:09	NSD
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/24/25 17:09	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/24/25 17:09	NSD
Nitrogen (N2), as received	ND	9.00	9.00		9	1	4/24/25 17:09	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/24/25 17:09	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/21/25 15:17	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/21/25 15:17	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/21/25 15:17	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	4/21/25 15:17	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/21/25 15:17	DFH
1,1-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/21/25 15:17	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/21/25 15:17	DFH
1,2,4-Trimethylbenzene	117	36.0	90.0		580	180	440	72	2.5	4/21/25 15:17	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	4/21/25 15:17	DFH

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Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-10 Project Location:

Sample ID: 25D1361-15 Canister ID: 063-00933::49316 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 13:45 Flow Controller ID: 063-00361::16689 Receipt Vacuum(in Hg): 8.2

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/21/25 15:17	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/21/25 15:17	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	4/21/25 15:17	DFH
1,2-Dichlorotetrafluoroethane	137	36.0	90.0		960	250	630	72	2.5	4/21/25 15:17	DFH
1,3,5-Trimethylbenzene	63.0	36.0	90.0	J	310	180	440	72	2.5	4/21/25 15:17	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	4/21/25 15:17	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/21/25 15:17	DFH
1,4-Dichlorobenzene	41.4	36.0	90.0	J	250	220	540	72	2.5	4/21/25 15:17	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	4/21/25 15:17	DFH
2-Butanone (MEK)	ND	36.0	90.0		ND	110	270	72	2.5	4/21/25 15:17	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	4/21/25 15:17	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	4/21/25 15:17	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	4/21/25 15:17	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	4/21/25 15:17	DFH
Benzene	772	36.0	36.0		2500	120	120	72	2.5	4/21/25 15:17	DFH
Benzyl Chloride	ND	36.0	90.0		ND	190	470	72	2.5	4/21/25 15:17	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	4/21/25 15:17	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	4/21/25 15:17	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	4/21/25 15:17	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	4/21/25 15:17	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	4/21/25 15:17	DFH
Chloroethane	122	36.0	90.0		320	95	240	72	2.5	4/21/25 15:17	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	4/21/25 15:17	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	4/21/25 15:17	DFH
cis-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/21/25 15:17	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/21/25 15:17	DFH
Cyclohexane	2160	36.0	90.0		7400	120	310	72	2.5	4/21/25 15:17	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	4/21/25 15:17	DFH
Dichlorodifluoromethane	ND	90.0	90.0		ND	450	450	72	2.5	4/21/25 15:17	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGP-10
Sample ID: 25D1361-15
Sample Matrix: Air
Sampled: 4/9/2025 13:45
Sample Type: SG

Project Location:
Canister ID: 063-00933::49316
Canister Size: 6
Flow Controller ID: 063-00361::16689
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.2

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/21/25 15:17	DFH
Ethylbenzene	2400	36.0	90.0		10000	160	390	72	2.5	4/21/25 15:17	DFH
Heptane	5070	324	810		21000	1300	3300	648	2.5	4/25/25 12:13	DFH
Hexachlorobutadiene	ND	36.0	90.0		ND	380	960	72	2.5	4/21/25 15:17	DFH
Hexane	3610	324	810		13000	1100	2900	648	2.5	4/25/25 12:13	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/21/25 15:17	DFH
m+p-Xylenes	2970	72.0	180		13000	310	780	72	2.5	4/21/25 15:17	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	4/21/25 15:17	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	4/21/25 15:17	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	4/21/25 15:17	DFH
Naphthalene	ND	36.0	36.0		ND	190	190	72	2.5	4/21/25 15:17	DFH
o-Xylene	101	36.0	90.0		440	160	390	72	2.5	4/21/25 15:17	DFH
Propylene	ND	28.8	28.8		ND	50	50	72	2.5	4/21/25 15:17	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	4/21/25 15:17	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	4/21/25 15:17	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	4/21/25 15:17	DFH
Tetrahydrofuran	ND	36.0	90.0		ND	110	270	72	2.5	4/21/25 15:17	DFH
Toluene	45.0	36.0	90.0	J	170	140	340	72	2.5	4/21/25 15:17	DFH
trans-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/21/25 15:17	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/21/25 15:17	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	4/21/25 15:17	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	4/21/25 15:17	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/21/25 15:17	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	4/21/25 15:17	DFH
Vinyl chloride	ND	36.0	90.0		ND	92	230	72	2.5	4/21/25 15:17	DFH
Xylenes, Total	3070	108	270		13000	470	1200	72	2.5	4/21/25 15:17	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	101	80-120	4/21/25 15:17
4-Bromofluorobenzene (Surr)	93.0	80-120	4/25/25 12:13

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-10

Project Location:

Sample ID: 25D1361-15
Sample Matrix: Air
Sampled: 4/9/2025 13:45
Sample Type: SG

Canister ID: 063-00933::49316
Canister Size: 6
Flow Controller ID: 063-00361::16689
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.2

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-11 Project Location:

Sample ID: 25D1361-16 Canister ID: 063-00827::49501 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 12:20 Flow Controller ID: 063-00964::20083 Receipt Vacuum(in Hg): 9.4

Sample Type: SG Flow Controller Type: passive

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	450	450		ND	630	630	45	1	4/24/25 1:26	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	96.7	80-120	4/24/25 1:26

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	10.2	0.45	0.45		9	1	4/24/25 17:54	NSD
Carbon dioxide, as received	11.2	0.45	0.45		9	1	4/24/25 17:54	NSD
Oxygen (O2), as received	15.0	0.45	0.45		9	1	4/24/25 17:54	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/24/25 17:54	NSD
Nitrogen (N2), as received	67.2	18.0	18.0		18	1	4/25/25 21:50	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/24/25 17:54	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	12.0	30.0		ND	65	160	24	2.5	4/21/25 16:44	DFH
1,1,1,2-Tetrachloroethane	ND	12.0	30.0		ND	82	210	24	2.5	4/21/25 16:44	DFH
1,1,2,2-Tetrachloroethane	ND	12.0	30.0		ND	82	210	24	2.5	4/21/25 16:44	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	12.0	30.0		ND	92	230	24	2.5	4/21/25 16:44	DFH
1,1,2-Trichloroethane	ND	12.0	30.0		ND	65	160	24	2.5	4/21/25 16:44	DFH
1,1-Dichloroethane	28.8	12.0	30.0	J	120	49	120	24	2.5	4/21/25 16:44	DFH
1,1-Dichloroethylene	ND	12.0	30.0		ND	48	120	24	2.5	4/21/25 16:44	DFH
1,2,4-Trimethylbenzene	27.6	12.0	30.0	J	140	59	150	24	2.5	4/21/25 16:44	DFH
1,2-Dibromoethane (EDB)	ND	12.0	30.0		ND	92	230	24	2.5	4/21/25 16:44	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-11 Project Location:

Sample ID: 25D1361-16 Canister ID: 063-00827::49501 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 12:20 Flow Controller ID: 063-00964::20083 Receipt Vacuum(in Hg): 9.4

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	12.0	30.0		ND	72	180	24	2.5	4/21/25 16:44	DFH
1,2-Dichloroethane	ND	12.0	30.0		ND	49	120	24	2.5	4/21/25 16:44	DFH
1,2-Dichloropropane	ND	12.0	30.0		ND	55	140	24	2.5	4/21/25 16:44	DFH
1,2-Dichlorotetrafluoroethane	31.8	12.0	30.0		220	84	210	24	2.5	4/21/25 16:44	DFH
1,3,5-Trimethylbenzene	20.4	12.0	30.0	J	100	59	150	24	2.5	4/21/25 16:44	DFH
1,3-Butadiene	ND	12.0	30.0		ND	27	66	24	2.5	4/21/25 16:44	DFH
1,3-Dichlorobenzene	ND	12.0	30.0		ND	72	180	24	2.5	4/21/25 16:44	DFH
1,4-Dichlorobenzene	ND	12.0	30.0		ND	72	180	24	2.5	4/21/25 16:44	DFH
1,4-Dioxane	ND	12.0	30.0		ND	43	110	24	2.5	4/21/25 16:44	DFH
2-Butanone (MEK)	ND	12.0	30.0		ND	35	88	24	2.5	4/21/25 16:44	DFH
2-Chlorotoluene	ND	12.0	30.0		ND	62	160	24	2.5	4/21/25 16:44	DFH
2-Hexanone (MBK)	ND	12.0	30.0		ND	49	120	24	2.5	4/21/25 16:44	DFH
4-Methyl-2-pentanone (MIBK)	ND	12.0	30.0		ND	140	340	24	2.5	4/21/25 16:44	DFH
Allyl chloride	ND	12.0	30.0		ND	38	94	24	2.5	4/21/25 16:44	DFH
Benzene	181	12.0	12.0		580	38	38	24	2.5	4/21/25 16:44	DFH
Benzyl Chloride	ND	12.0	30.0		ND	62	160	24	2.5	4/21/25 16:44	DFH
Bromoform	ND	12.0	30.0		ND	120	310	24	2.5	4/21/25 16:44	DFH
Bromomethane	ND	12.0	30.0		ND	47	120	24	2.5	4/21/25 16:44	DFH
Carbon Disulfide	ND	30.0	30.0		ND	93	93	24	2.5	4/21/25 16:44	DFH
Carbon Tetrachloride	ND	12.0	30.0		ND	75	190	24	2.5	4/21/25 16:44	DFH
Chlorobenzene	ND	12.0	30.0		ND	55	140	24	2.5	4/21/25 16:44	DFH
Chloroethane	93.0	12.0	30.0		250	32	79	24	2.5	4/21/25 16:44	DFH
Chloroform	ND	12.0	12.0		ND	59	59	24	2.5	4/21/25 16:44	DFH
Chloromethane	ND	12.0	30.0		ND	25	62	24	2.5	4/21/25 16:44	DFH
cis-1,2-Dichloroethylene	16.2	12.0	30.0	J	64	48	120	24	2.5	4/21/25 16:44	DFH
cis-1,3-Dichloropropene	ND	12.0	30.0		ND	54	140	24	2.5	4/21/25 16:44	DFH
Cyclohexane	308	12.0	30.0		1100	41	100	24	2.5	4/21/25 16:44	DFH
Dibromochloromethane	ND	12.0	30.0		ND	100	260	24	2.5	4/21/25 16:44	DFH
Dichlorodifluoromethane	98.4	30.0	30.0		490	150	150	24	2.5	4/21/25 16:44	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-11 Project Location:

Sample ID: 25D1361-16 Canister ID: 063-00827::49501 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/9/2025 12:20 Flow Controller ID: 063-00964::20083 Receipt Vacuum(in Hg): 9.4

Sample Type: SG Flow Controller Type: passive

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	12.0	30.0		ND	43	110	24	2.5	4/21/25 16:44	DFH
Ethylbenzene	166	12.0	30.0		720	52	130	24	2.5	4/21/25 16:44	DFH
Heptane	880	12.0	30.0		3600	49	120	24	2.5	4/21/25 16:44	DFH
Hexachlorobutadiene	ND	12.0	30.0		ND	130	320	24	2.5	4/21/25 16:44	DFH
Hexane	326	12.0	30.0		1200	42	110	24	2.5	4/21/25 16:44	DFH
Isopropylbenzene	ND	12.0	30.0		ND	59	150	24	2.5	4/21/25 16:44	DFH
m+p-Xylenes	949	24.0	60.0		4100	100	260	24	2.5	4/21/25 16:44	DFH
Methyl methacrylate	ND	12.0	30.0		ND	49	120	24	2.5	4/21/25 16:44	DFH
Methylene chloride	ND	30.0	60.0		ND	100	210	24	2.5	4/21/25 16:44	DFH
Methyl-t-butyl ether (MTBE)	ND	12.0	30.0		ND	43	110	24	2.5	4/21/25 16:44	DFH
Naphthalene	ND	12.0	12.0		ND	63	63	24	2.5	4/21/25 16:44	DFH
o-Xylene	348	12.0	30.0		1500	52	130	24	2.5	4/21/25 16:44	DFH
Propylene	ND	9.60	9.60		ND	17	17	24	2.5	4/21/25 16:44	DFH
Styrene	ND	12.0	30.0		ND	51	130	24	2.5	4/21/25 16:44	DFH
TBA	ND	30.0	30.0		ND	91	91	24	2.5	4/21/25 16:44	DFH
Tetrachloroethylene (PCE)	ND	12.0	30.0		ND	81	200	24	2.5	4/21/25 16:44	DFH
Tetrahydrofuran	ND	12.0	30.0		ND	35	88	24	2.5	4/21/25 16:44	DFH
Toluene	ND	12.0	30.0		ND	45	110	24	2.5	4/21/25 16:44	DFH
trans-1,2-Dichloroethylene	13.2	12.0	30.0	J	52	48	120	24	2.5	4/21/25 16:44	DFH
trans-1,3-Dichloropropene	ND	12.0	30.0		ND	54	140	24	2.5	4/21/25 16:44	DFH
Trichloroethylene	ND	12.0	12.0		ND	64	64	24	2.5	4/21/25 16:44	DFH
Trichlorofluoromethane	ND	30.0	30.0		ND	170	170	24	2.5	4/21/25 16:44	DFH
Vinyl acetate	ND	12.0	30.0		ND	42	110	24	2.5	4/21/25 16:44	DFH
Vinyl bromide	ND	12.0	30.0		ND	52	130	24	2.5	4/21/25 16:44	DFH
Vinyl chloride	ND	12.0	30.0		ND	31	77	24	2.5	4/21/25 16:44	DFH
Xylenes, Total	1300	36.0	90.0		5600	160	390	24	2.5	4/21/25 16:44	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	100	80-120	4/21/25 16:44

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-11

Project Location:

Sample ID: 25D1361-16
Sample Matrix: Air
Sampled: 4/9/2025 12:20
Sample Type: SG

Canister ID: 063-00827::49501
Canister Size: 6
Flow Controller ID: 063-00964::20083
Flow Controller Type: passive

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 9.4

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Submitted To: Connor Hicks

Client Site I.D.: Cliffdale LF

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Project Number: 23050459

Purchase Order:

Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Sulfur Volatile Organic Compounds by GCMS			**Preparation Method:**	**No Prep VOC Air**	
25D1361-03	100 mL / 100 mL	EPA TO-15	BID1008	SID0863	AD50170
25D1361-04	100 mL / 100 mL	EPA TO-15	BID1008	SID0863	AD50170
25D1361-06	100 mL / 100 mL	EPA TO-15	BID1008	SID0863	AD50170
25D1361-07	100 mL / 100 mL	EPA TO-15	BID1008	SID0863	AD50170
25D1361-08	100 mL / 100 mL	EPA TO-15	BID1008	SID0863	AD50170
25D1361-10	100 mL / 100 mL	EPA TO-15	BID1008	SID0863	AD50170
25D1361-11	100 mL / 100 mL	EPA TO-15	BID1008	SID0863	AD50170
25D1361-13	100 mL / 100 mL	EPA TO-15	BID1008	SID1063	AD50170
25D1361-15	100 mL / 100 mL	EPA TO-15	BID1008	SID1063	AD50170
25D1361-16	100 mL / 100 mL	EPA TO-15	BID1008	SID1063	AD50170
25D1361-01	100 mL / 100 mL	EPA TO-15	BID1220	SID1176	AD50170
25D1361-02	100 mL / 100 mL	EPA TO-15	BID1220	SID1176	AD50170
25D1361-05	100 mL / 100 mL	EPA TO-15	BID1220	SID1176	AD50170
25D1361-09	100 mL / 100 mL	EPA TO-15	BID1220	SID1176	AD50170
25D1361-12	100 mL / 100 mL	EPA TO-15	BID1220	SID1176	AD50170
25D1361-14	100 mL / 100 mL	EPA TO-15	BID1220	SID1176	AD50170

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis			**Preparation Method:**	**No Prep VOC GC Air**	
25D1361-01	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-02	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-03	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-04	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-05	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-06	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-07	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-08	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-09	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-10	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-11	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-12	1.00 mL / 1.00 mL	EPA 3C	BID1278	SID1126	AD50190
25D1361-04RE1	1.00 mL / 1.00 mL	EPA 3C	BID1281	SID1245	AD50190
25D1361-06RE1	1.00 mL / 1.00 mL	EPA 3C	BID1281	SID1245	AD50190
25D1361-13	1.00 mL / 1.00 mL	EPA 3C	BID1451	SID1258	AD50190

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis			**Preparation Method:**	**No Prep VOC GC Air**	
25D1361-14	1.00 mL / 1.00 mL	EPA 3C	BID1451	SID1258	AD50190
25D1361-15	1.00 mL / 1.00 mL	EPA 3C	BID1451	SID1258	AD50190
25D1361-16	1.00 mL / 1.00 mL	EPA 3C	BID1451	SID1258	AD50190
25D1361-13RE1	1.00 mL / 1.00 mL	EPA 3C	BID1455	SID1265	AD50190
25D1361-16RE1	1.00 mL / 1.00 mL	EPA 3C	BID1455	SID1263	AD50190

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			**Preparation Method:**	**No Prep VOC Air**	
25D1361-09RE1	160 mL / 400 mL	EPA TO-15	BIC1225	SID0789	AB50266
25D1361-12RE1	160 mL / 400 mL	EPA TO-15	BIC1225	SID0789	AB50266
25D1361-15RE1	160 mL / 400 mL	EPA TO-15	BIC1225	SID0789	AB50266
25D1361-01	160 mL / 400 mL	EPA TO-15	BID0694	SID0742	AB50218
25D1361-02	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-03	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-04	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-05	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-05RE1	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-06	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-07	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-08	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-09	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-10	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-10RE1	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-11	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-12	160 mL / 400 mL	EPA TO-15	BID0919	SID0795	AB50218
25D1361-13	160 mL / 400 mL	EPA TO-15	BID0919	SID0917	AB50218
25D1361-14	160 mL / 400 mL	EPA TO-15	BID0919	SID0917	AB50218
25D1361-15	160 mL / 400 mL	EPA TO-15	BID0919	SID0917	AB50218
25D1361-16	160 mL / 400 mL	EPA TO-15	BID0919	SID0917	AB50218

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIC1225 - No Prep VOC Air										
LCS (BIC1225-BS1)				Prepared & Analyzed: 03/24/2025						
1,1,1-Trichloroethane	5.38		ppbv	5.00		108	70-130			
1,1,1,2-Tetrachloroethane	5.87		ppbv	5.00		117	70-130			
1,1,2,2-Tetrachloroethane	5.70		ppbv	5.00		114	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	5.54		ppbv	5.00		111	70-130			
1,1,2-Trichloroethane	5.40		ppbv	5.00		108	70-130			
1,1-Dichloroethane	5.31		ppbv	5.00		106	70-130			
1,1-Dichloroethylene	5.64		ppbv	5.00		113	70-130			
1,2,4-Trimethylbenzene	6.04		ppbv	5.00		121	70-130			
1,2-Dibromoethane (EDB)	5.79		ppbv	5.00		116	70-130			
1,2-Dichlorobenzene	5.70		ppbv	5.00		114	70-130			
1,2-Dichloroethane	5.15		ppbv	5.00		103	70-130			
1,2-Dichloropropane	5.31		ppbv	5.00		106	70-130			
1,2-Dichlorotetrafluoroethane	5.31		ppbv	5.00		106	70-130			
1,3,5-Trimethylbenzene	6.07		ppbv	5.00		121	70-130			
1,3-Butadiene	4.78		ppbv	5.00		95.6	70-130			
1,3-Dichlorobenzene	5.72		ppbv	5.00		114	70-130			
1,4-Dichlorobenzene	5.77		ppbv	5.00		115	70-130			
1,4-Dioxane	5.61		ppbv	5.00		112	70-130			
2-Butanone (MEK)	5.06		ppbv	5.00		101	70-130			
2-Chlorotoluene	6.09		ppbv	5.00		122	70-130			
2-Hexanone (MBK)	5.32		ppbv	5.00		106	70-130			
4-Methyl-2-pentanone (MIBK)	5.74		ppbv	5.00		115	70-130			
Allyl chloride	5.63		ppbv	5.00		113	70-130			
Benzene	5.49		ppbv	5.00		110	70-130			
Benzyl Chloride	5.33		ppbv	5.00		107	70-130			
Bromoform	6.01		ppbv	5.00		120	70-130			
Bromomethane	5.07		ppbv	5.00		101	70-130			
Carbon Disulfide	5.36		ppbv	5.00		107	70-130			
Carbon Tetrachloride	5.24		ppbv	5.00		105	70-130			
Chlorobenzene	5.68		ppbv	5.00		114	70-130			
Chloroethane	4.80		ppbv	5.00		96.0	70-130			

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIC1225 - No Prep VOC Air										
LCS (BIC1225-BS1)				Prepared & Analyzed: 03/24/2025						
Chloroform	5.34		ppbv	5.00		107	70-130			
Chloromethane	5.12		ppbv	5.00		102	70-130			
cis-1,2-Dichloroethylene	5.66		ppbv	5.00		113	70-130			
cis-1,3-Dichloropropene	5.60		ppbv	5.00		112	70-130			
Cyclohexane	5.76		ppbv	5.00		115	70-130			
Dibromochloromethane	5.50		ppbv	5.00		110	70-130			
Dichlorodifluoromethane	5.52		ppbv	5.00		110	70-130			
Ethyl acetate	5.76		ppbv	5.00		115	70-130			
Ethylbenzene	6.22		ppbv	5.00		124	70-130			
Heptane	5.30		ppbv	5.00		106	70-130			
Hexachlorobutadiene	5.37		ppbv	5.00		107	60-140			
Hexane	5.52		ppbv	5.00		110	70-130			
Isopropylbenzene	6.17		ppbv	5.00		123	70-130			
m+p-Xylenes	12.2		ppbv	10.0		122	70-130			
Methyl methacrylate	5.66		ppbv	5.00		113	70-130			
Methylene chloride	5.77		ppbv	5.00		115	70-130			
Methyl-t-butyl ether (MTBE)	5.74		ppbv	5.00		115	70-130			
Naphthalene	5.05		ppbv	5.00		101	60-140			
o-Xylene	6.07		ppbv	5.00		121	70-130			
Propylene	0.00		ppbv	5.00			70-130			L
Styrene	6.28		ppbv	5.00		126	70-130			
TBA	5.68		ppbv	5.00		114	70-130			
Tetrachloroethylene (PCE)	6.05		ppbv	5.00		121	70-130			
Tetrahydrofuran	5.42		ppbv	5.00		108	70-130			
Toluene	5.55		ppbv	5.00		111	70-130			
trans-1,2-Dichloroethylene	5.55		ppbv	5.00		111	70-130			
trans-1,3-Dichloropropene	5.47		ppbv	5.00		109	70-130			
Trichloroethylene	5.46		ppbv	5.00		109	70-130			
Trichlorofluoromethane	5.35		ppbv	5.00		107	70-130			
Vinyl acetate	4.83		ppbv	5.00		96.6	70-130			
Vinyl bromide	5.63		ppbv	5.00		113	70-130			
Vinyl chloride	5.13		ppbv	5.00		103	70-130			
Surr: 4-Bromofluorobenzene (Surr)	*5.30*		ppbv	*5.00*		*106*	*70-130*			

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Final Report

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIC1225 - No Prep VOC Air										
LCS Dup (BIC1225-BSD1)				Prepared & Analyzed: 03/24/2025						
1,1,1-Trichloroethane	5.40		ppbv	5.00		108	70-130	0.371	25	
1,1,1,2-Tetrachloroethane	5.83		ppbv	5.00		117	70-130	0.684	25	
1,1,2,2-Tetrachloroethane	5.65		ppbv	5.00		113	70-130	0.881	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.50		ppbv	5.00		110	70-130	0.725	25	
1,1,2-Trichloroethane	5.41		ppbv	5.00		108	70-130	0.185	25	
1,1-Dichloroethane	5.26		ppbv	5.00		105	70-130	0.946	25	
1,1-Dichloroethylene	5.58		ppbv	5.00		112	70-130	1.07	25	
1,2,4-Trimethylbenzene	5.97		ppbv	5.00		119	70-130	1.17	25	
1,2-Dibromoethane (EDB)	5.80		ppbv	5.00		116	70-130	0.173	25	
1,2-Dichlorobenzene	5.67		ppbv	5.00		113	70-130	0.528	25	
1,2-Dichloroethane	5.16		ppbv	5.00		103	70-130	0.194	25	
1,2-Dichloropropane	5.34		ppbv	5.00		107	70-130	0.563	25	
1,2-Dichlorotetrafluoroethane	5.22		ppbv	5.00		104	70-130	1.71	25	
1,3,5-Trimethylbenzene	6.00		ppbv	5.00		120	70-130	1.16	25	
1,3-Butadiene	4.66		ppbv	5.00		93.2	70-130	2.54	25	
1,3-Dichlorobenzene	5.70		ppbv	5.00		114	70-130	0.350	25	
1,4-Dichlorobenzene	5.71		ppbv	5.00		114	70-130	1.05	25	
1,4-Dioxane	5.57		ppbv	5.00		111	70-130	0.716	25	
2-Butanone (MEK)	5.01		ppbv	5.00		100	70-130	0.993	25	
2-Chlorotoluene	6.06		ppbv	5.00		121	70-130	0.494	25	
2-Hexanone (MBK)	5.32		ppbv	5.00		106	70-130	0.00	25	
4-Methyl-2-pentanone (MIBK)	5.68		ppbv	5.00		114	70-130	1.05	25	
Allyl chloride	5.58		ppbv	5.00		112	70-130	0.892	25	
Benzene	5.49		ppbv	5.00		110	70-130	0.00	25	
Benzyl Chloride	5.32		ppbv	5.00		106	70-130	0.188	25	
Bromoform	6.00		ppbv	5.00		120	70-130	0.167	25	
Bromomethane	4.98		ppbv	5.00		99.6	70-130	1.79	25	
Carbon Disulfide	5.31		ppbv	5.00		106	70-130	0.937	25	
Carbon Tetrachloride	5.26		ppbv	5.00		105	70-130	0.381	25	
Chlorobenzene	5.65		ppbv	5.00		113	70-130	0.530	25	
Chloroethane	4.83		ppbv	5.00		96.6	70-130	0.623	25	
Chloroform	5.32		ppbv	5.00		106	70-130	0.375	25	
Chloromethane	4.93		ppbv	5.00		98.6	70-130	3.78	25	

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIC1225 - No Prep VOC Air										
LCS Dup (BIC1225-BSD1)				Prepared & Analyzed: 03/24/2025						
cis-1,2-Dichloroethylene	5.62		ppbv	5.00		112	70-130	0.709	25	
cis-1,3-Dichloropropene	5.63		ppbv	5.00		113	70-130	0.534	25	
Cyclohexane	5.73		ppbv	5.00		115	70-130	0.522	25	
Dibromochloromethane	5.50		ppbv	5.00		110	70-130	0.00	25	
Dichlorodifluoromethane	5.99		ppbv	5.00		120	70-130	8.17	25	
Ethyl acetate	5.82		ppbv	5.00		116	70-130	1.04	25	
Ethylbenzene	6.16		ppbv	5.00		123	70-130	0.969	25	
Heptane	5.29		ppbv	5.00		106	70-130	0.189	25	
Hexachlorobutadiene	5.42		ppbv	5.00		108	60-140	0.927	25	
Hexane	5.45		ppbv	5.00		109	70-130	1.28	25	
Isopropylbenzene	6.12		ppbv	5.00		122	70-130	0.814	25	
m+p-Xylenes	12.1		ppbv	10.0		121	70-130	0.493	25	
Methyl methacrylate	5.64		ppbv	5.00		113	70-130	0.354	25	
Methylene chloride	5.74		ppbv	5.00		115	70-130	0.521	25	
Methyl-t-butyl ether (MTBE)	5.67		ppbv	5.00		113	70-130	1.23	25	
Naphthalene	5.28		ppbv	5.00		106	60-140	4.45	25	
o-Xylene	6.01		ppbv	5.00		120	70-130	0.993	25	
Propylene	0.00		ppbv	5.00			70-130		25	L
Styrene	6.27		ppbv	5.00		125	70-130	0.159	25	
TBA	5.64		ppbv	5.00		113	70-130	0.707	25	
Tetrachloroethylene (PCE)	5.96		ppbv	5.00		119	70-130	1.50	25	
Tetrahydrofuran	5.36		ppbv	5.00		107	70-130	1.11	25	
Toluene	5.54		ppbv	5.00		111	70-130	0.180	25	
trans-1,2-Dichloroethylene	5.54		ppbv	5.00		111	70-130	0.180	25	
trans-1,3-Dichloropropene	5.52		ppbv	5.00		110	70-130	0.910	25	
Trichloroethylene	5.48		ppbv	5.00		110	70-130	0.366	25	
Trichlorofluoromethane	5.24		ppbv	5.00		105	70-130	2.08	25	
Vinyl acetate	4.90		ppbv	5.00		98.0	70-130	1.44	25	
Vinyl bromide	5.54		ppbv	5.00		111	70-130	1.61	25	
Vinyl chloride	5.01		ppbv	5.00		100	70-130	2.37	25	
Surr: 4-Bromofluorobenzene (Surr)	*5.25*		ppbv	*5.00*		*105*	*70-130*			

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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0694 - No Prep VOC Air											
Blank (BID0694-BLK1)					Prepared & Analyzed: 04/14/2025						
1,1,1-Trichloroethane		<	0.50	ppbv							
1,1,1,2-Tetrachloroethane		<	0.50	ppbv							
1,1,2,2-Tetrachloroethane		<	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane		<	0.50	ppbv							
1,1,2-Trichloroethane		<	0.50	ppbv							
1,1-Dichloroethane		<	0.50	ppbv							
1,1-Dichloroethylene		<	0.50	ppbv							
1,2,4-Trimethylbenzene		<	0.50	ppbv							
1,2-Dibromoethane (EDB)		<	0.50	ppbv							
1,2-Dichlorobenzene		<	0.50	ppbv							
1,2-Dichloroethane		<	0.50	ppbv							
1,2-Dichloropropane		<	0.50	ppbv							
1,2-Dichlorotetrafluoroethane		<	0.50	ppbv							
1,3,5-Trimethylbenzene		<	0.50	ppbv							
1,3-Butadiene		<	0.50	ppbv							
1,3-Dichlorobenzene		<	0.50	ppbv							
1,4-Dichlorobenzene		<	0.50	ppbv							
1,4-Dioxane		<	0.50	ppbv							
2-Butanone (MEK)		<	0.50	ppbv							
2-Chlorotoluene		<	0.50	ppbv							
2-Hexanone (MBK)		<	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)		<	0.50	ppbv							
Allyl chloride		<	0.50	ppbv							
Benzene		<	0.20	ppbv							
Benzyl Chloride		<	0.50	ppbv							
Bromoform		<	0.50	ppbv							
Bromomethane		<	0.50	ppbv							
Carbon Disulfide		<	0.50	ppbv							
Carbon Tetrachloride		<	0.50	ppbv							
Chlorobenzene		<	0.50	ppbv							
Chloroethane		<	0.50	ppbv							
Chloroform		<	0.20	ppbv							
Chloromethane		<	0.50	ppbv							

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Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0694 - No Prep VOC Air											
Blank (BID0694-BLK1)					Prepared & Analyzed: 04/14/2025						
cis-1,2-Dichloroethylene		<	0.50	ppbv							
cis-1,3-Dichloropropene		<	0.50	ppbv							
Cyclohexane		<	0.50	ppbv							
Dibromochloromethane		<	0.50	ppbv							
Dichlorodifluoromethane		<	0.50	ppbv							
Ethyl acetate		<	0.50	ppbv							
Ethylbenzene		<	0.50	ppbv							
Heptane		<	0.50	ppbv							
Hexachlorobutadiene		<	0.50	ppbv							
Hexane		<	0.50	ppbv							
Isopropylbenzene		<	0.50	ppbv							
m+p-Xylenes		<	1.00	ppbv							
Methyl methacrylate		<	0.50	ppbv							
Methylene chloride		<	1.00	ppbv							
Methyl-t-butyl ether (MTBE)		<	0.50	ppbv							
Naphthalene		<	0.20	ppbv							
o-Xylene		<	0.50	ppbv							
Propylene		<	0.16	ppbv							
Styrene		<	0.50	ppbv							
TBA		<	0.50	ppbv							
Tetrachloroethylene (PCE)		<	0.50	ppbv							
Tetrahydrofuran		<	0.50	ppbv							
Toluene		<	0.50	ppbv							
trans-1,2-Dichloroethylene		<	0.50	ppbv							
trans-1,3-Dichloropropene		<	0.50	ppbv							
Trichloroethylene		<	0.20	ppbv							
Trichlorofluoromethane		<	0.50	ppbv							
Vinyl acetate		<	0.50	ppbv							
Vinyl bromide		<	0.50	ppbv							
Vinyl chloride		<	0.50	ppbv							
Xylenes, Total		<	1.50	ppbv							
Surr: 4-Bromofluorobenzene (Surr)	*4.47*			ppbv	*5.00*		*89.4*	*80-120*			

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0694 - No Prep VOC Air										
LCS (BID0694-BS1)				Prepared & Analyzed: 04/14/2025						
1,1,1-Trichloroethane	4.28		ppbv	5.00		85.6	70-130			
1,1,1,2-Tetrachloroethane	5.11		ppbv	5.00		102	70-130			
1,1,2,2-Tetrachloroethane	4.92		ppbv	5.00		98.4	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	4.14		ppbv	5.00		82.8	70-130			
1,1,2-Trichloroethane	4.22		ppbv	5.00		84.4	70-130			
1,1-Dichloroethane	4.28		ppbv	5.00		85.6	70-130			
1,1-Dichloroethylene	4.67		ppbv	5.00		93.4	70-130			
1,2,4-Trimethylbenzene	4.80		ppbv	5.00		96.0	70-130			
1,2-Dibromoethane (EDB)	4.74		ppbv	5.00		94.8	70-130			
1,2-Dichlorobenzene	4.43		ppbv	5.00		88.6	70-130			
1,2-Dichloroethane	4.05		ppbv	5.00		81.0	70-130			
1,2-Dichloropropane	4.27		ppbv	5.00		85.4	70-130			
1,2-Dichlorotetrafluoroethane	5.73		ppbv	5.00		115	70-130			
1,3,5-Trimethylbenzene	4.79		ppbv	5.00		95.8	70-130			
1,3-Butadiene	5.73		ppbv	5.00		115	70-130			
1,3-Dichlorobenzene	4.44		ppbv	5.00		88.8	70-130			
1,4-Dichlorobenzene	4.22		ppbv	5.00		84.4	70-130			
1,4-Dioxane	4.30		ppbv	5.00		86.0	70-130			
2-Butanone (MEK)	3.88		ppbv	5.00		77.6	70-130			
2-Chlorotoluene	4.84		ppbv	5.00		96.8	70-130			
2-Hexanone (MBK)	4.66		ppbv	5.00		93.2	70-130			
4-Methyl-2-pentanone (MIBK)	3.94		ppbv	5.00		78.8	70-130			
Allyl chloride	4.32		ppbv	5.00		86.4	70-130			
Benzene	4.36		ppbv	5.00		87.2	70-130			
Benzyl Chloride	4.17		ppbv	5.00		83.4	70-130			
Bromoform	4.81		ppbv	5.00		96.2	70-130			
Bromomethane	5.69		ppbv	5.00		114	70-130			
Carbon Disulfide	4.36		ppbv	5.00		87.2	70-130			
Carbon Tetrachloride	4.18		ppbv	5.00		83.6	70-130			
Chlorobenzene	4.87		ppbv	5.00		97.4	70-130			
Chloroethane	5.79		ppbv	5.00		116	70-130			
Chloroform	4.33		ppbv	5.00		86.6	70-130			
Chloromethane	5.82		ppbv	5.00		116	70-130			

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0694 - No Prep VOC Air										
LCS (BID0694-BS1)				Prepared & Analyzed: 04/14/2025						
cis-1,2-Dichloroethylene	4.27		ppbv	5.00		85.4	70-130			
cis-1,3-Dichloropropene	4.15		ppbv	5.00		83.0	70-130			
Cyclohexane	4.13		ppbv	5.00		82.6	70-130			
Dibromochloromethane	4.24		ppbv	5.00		84.8	70-130			
Dichlorodifluoromethane	5.77		ppbv	5.00		115	70-130			
Ethyl acetate	4.28		ppbv	5.00		85.6	70-130			
Ethylbenzene	4.98		ppbv	5.00		99.6	70-130			
Heptane	4.21		ppbv	5.00		84.2	70-130			
Hexachlorobutadiene	3.84		ppbv	5.00		76.8	60-140			
Hexane	4.45		ppbv	5.00		89.0	70-130			
Isopropylbenzene	4.79		ppbv	5.00		95.8	70-130			
m+p-Xylenes	9.68		ppbv	10.0		96.8	70-130			
Methyl methacrylate	4.15		ppbv	5.00		83.0	70-130			
Methylene chloride	4.64		ppbv	5.00		92.8	70-130			
Methyl-t-butyl ether (MTBE)	4.19		ppbv	5.00		83.8	70-130			
Naphthalene	3.22		ppbv	5.00		64.4	60-140			
o-Xylene	4.68		ppbv	5.00		93.6	70-130			
Propylene	4.67		ppbv	5.00		93.4	70-130			
Styrene	4.63		ppbv	5.00		92.6	70-130			
TBA	3.90		ppbv	5.00		78.0	70-130			
Tetrachloroethylene (PCE)	4.61		ppbv	5.00		92.2	70-130			
Tetrahydrofuran	4.17		ppbv	5.00		83.4	70-130			
Toluene	4.10		ppbv	5.00		82.0	70-130			
trans-1,2-Dichloroethylene	4.25		ppbv	5.00		85.0	70-130			
trans-1,3-Dichloropropene	4.03		ppbv	5.00		80.6	70-130			
Trichloroethylene	4.31		ppbv	5.00		86.2	70-130			
Trichlorofluoromethane	5.68		ppbv	5.00		114	70-130			
Vinyl acetate	3.88		ppbv	5.00		77.6	70-130			
Vinyl bromide	5.68		ppbv	5.00		114	70-130			
Vinyl chloride	5.90		ppbv	5.00		118	70-130			
Surr: 4-Bromofluorobenzene (Surr)	*5.16*		ppbv	*5.00*		*103*	*70-130*			

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Certificate of Analysis

Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0694 - No Prep VOC Air										
LCS Dup (BID0694-BSD1)				Prepared & Analyzed: 04/14/2025						
1,1,1-Trichloroethane	4.30		ppbv	5.00		86.0	70-130	0.466	25	
1,1,1,2-Tetrachloroethane	4.71		ppbv	5.00		94.2	70-130	8.15	25	
1,1,2,2-Tetrachloroethane	4.56		ppbv	5.00		91.2	70-130	7.59	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	4.22		ppbv	5.00		84.4	70-130	1.91	25	
1,1,2-Trichloroethane	4.27		ppbv	5.00		85.4	70-130	1.18	25	
1,1-Dichloroethane	4.29		ppbv	5.00		85.8	70-130	0.233	25	
1,1-Dichloroethylene	4.71		ppbv	5.00		94.2	70-130	0.853	25	
1,2,4-Trimethylbenzene	4.48		ppbv	5.00		89.6	70-130	6.90	25	
1,2-Dibromoethane (EDB)	4.44		ppbv	5.00		88.8	70-130	6.54	25	
1,2-Dichlorobenzene	4.14		ppbv	5.00		82.8	70-130	6.77	25	
1,2-Dichloroethane	4.06		ppbv	5.00		81.2	70-130	0.247	25	
1,2-Dichloropropane	4.26		ppbv	5.00		85.2	70-130	0.234	25	
1,2-Dichlorotetrafluoroethane	5.81		ppbv	5.00		116	70-130	1.39	25	
1,3,5-Trimethylbenzene	4.43		ppbv	5.00		88.6	70-130	7.81	25	
1,3-Butadiene	5.81		ppbv	5.00		116	70-130	1.39	25	
1,3-Dichlorobenzene	4.18		ppbv	5.00		83.6	70-130	6.03	25	
1,4-Dichlorobenzene	3.94		ppbv	5.00		78.8	70-130	6.86	25	
1,4-Dioxane	4.38		ppbv	5.00		87.6	70-130	1.84	25	
2-Butanone (MEK)	3.77		ppbv	5.00		75.4	70-130	2.88	25	
2-Chlorotoluene	4.48		ppbv	5.00		89.6	70-130	7.73	25	
2-Hexanone (MBK)	4.33		ppbv	5.00		86.6	70-130	7.34	25	
4-Methyl-2-pentanone (MIBK)	4.14		ppbv	5.00		82.8	70-130	4.95	25	
Allyl chloride	4.26		ppbv	5.00		85.2	70-130	1.40	25	
Benzene	4.39		ppbv	5.00		87.8	70-130	0.686	25	
Benzyl Chloride	3.87		ppbv	5.00		77.4	70-130	7.46	25	
Bromoform	4.51		ppbv	5.00		90.2	70-130	6.44	25	
Bromomethane	5.82		ppbv	5.00		116	70-130	2.26	25	
Carbon Disulfide	4.41		ppbv	5.00		88.2	70-130	1.14	25	
Carbon Tetrachloride	4.23		ppbv	5.00		84.6	70-130	1.19	25	
Chlorobenzene	4.50		ppbv	5.00		90.0	70-130	7.90	25	
Chloroethane	5.96		ppbv	5.00		119	70-130	2.89	25	
Chloroform	4.42		ppbv	5.00		88.4	70-130	2.06	25	
Chloromethane	5.89		ppbv	5.00		118	70-130	1.20	25	

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Certificate of Analysis

Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0694 - No Prep VOC Air										
LCS Dup (BID0694-BSD1)				Prepared & Analyzed: 04/14/2025						
cis-1,2-Dichloroethylene	4.29		ppbv	5.00		85.8	70-130	0.467	25	
cis-1,3-Dichloropropene	4.18		ppbv	5.00		83.6	70-130	0.720	25	
Cyclohexane	4.15		ppbv	5.00		83.0	70-130	0.483	25	
Dibromochloromethane	4.29		ppbv	5.00		85.8	70-130	1.17	25	
Dichlorodifluoromethane	5.75		ppbv	5.00		115	70-130	0.347	25	
Ethyl acetate	4.30		ppbv	5.00		86.0	70-130	0.466	25	
Ethylbenzene	4.57		ppbv	5.00		91.4	70-130	8.59	25	
Heptane	4.17		ppbv	5.00		83.4	70-130	0.955	25	
Hexachlorobutadiene	3.67		ppbv	5.00		73.4	60-140	4.53	25	
Hexane	4.42		ppbv	5.00		88.4	70-130	0.676	25	
Isopropylbenzene	4.43		ppbv	5.00		88.6	70-130	7.81	25	
m+p-Xylenes	9.01		ppbv	10.0		90.1	70-130	7.17	25	
Methyl methacrylate	4.17		ppbv	5.00		83.4	70-130	0.481	25	
Methylene chloride	4.74		ppbv	5.00		94.8	70-130	2.13	25	
Methyl-t-butyl ether (MTBE)	4.18		ppbv	5.00		83.6	70-130	0.239	25	
Naphthalene	3.07		ppbv	5.00		61.4	60-140	4.77	25	
o-Xylene	4.37		ppbv	5.00		87.4	70-130	6.85	25	
Propylene	4.62		ppbv	5.00		92.4	70-130	1.08	25	
Styrene	4.26		ppbv	5.00		85.2	70-130	8.32	25	
TBA	3.90		ppbv	5.00		78.0	70-130	0.00	25	
Tetrachloroethylene (PCE)	4.32		ppbv	5.00		86.4	70-130	6.49	25	
Tetrahydrofuran	4.15		ppbv	5.00		83.0	70-130	0.481	25	
Toluene	4.17		ppbv	5.00		83.4	70-130	1.69	25	
trans-1,2-Dichloroethylene	4.25		ppbv	5.00		85.0	70-130	0.00	25	
trans-1,3-Dichloropropene	4.14		ppbv	5.00		82.8	70-130	2.69	25	
Trichloroethylene	4.34		ppbv	5.00		86.8	70-130	0.694	25	
Trichlorofluoromethane	5.78		ppbv	5.00		116	70-130	1.75	25	
Vinyl acetate	3.87		ppbv	5.00		77.4	70-130	0.258	25	
Vinyl bromide	5.88		ppbv	5.00		118	70-130	3.46	25	
Vinyl chloride	6.00		ppbv	5.00		120	70-130	1.68	25	
Surr: 4-Bromofluorobenzene (Surr)	*4.72*		ppbv	*5.00*		*94.4*	*70-130*			

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Certificate of Analysis

Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0919 - No Prep VOC Air											
Blank (BID0919-BLK1)					Prepared & Analyzed: 04/17/2025						
1,1,1-Trichloroethane		<	0.50	ppbv							
1,1,1,2-Tetrachloroethane		<	0.50	ppbv							
1,1,2,2-Tetrachloroethane		<	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane		<	0.50	ppbv							
1,1,2-Trichloroethane		<	0.50	ppbv							
1,1-Dichloroethane		<	0.50	ppbv							
1,1-Dichloroethylene		<	0.50	ppbv							
1,2,4-Trimethylbenzene		<	0.50	ppbv							
1,2-Dibromoethane (EDB)		<	0.50	ppbv							
1,2-Dichlorobenzene		<	0.50	ppbv							
1,2-Dichloroethane		<	0.50	ppbv							
1,2-Dichloropropane		<	0.50	ppbv							
1,2-Dichlorotetrafluoroethane		<	0.50	ppbv							
1,3,5-Trimethylbenzene		<	0.50	ppbv							
1,3-Butadiene		<	0.50	ppbv							
1,3-Dichlorobenzene		<	0.50	ppbv							
1,4-Dichlorobenzene		<	0.50	ppbv							
1,4-Dioxane		<	0.50	ppbv							
2-Butanone (MEK)		<	0.50	ppbv							
2-Chlorotoluene		<	0.50	ppbv							
2-Hexanone (MBK)		<	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)		<	0.50	ppbv							
Allyl chloride		<	0.50	ppbv							
Benzene		<	0.20	ppbv							
Benzyl Chloride		<	0.50	ppbv							
Bromoform		<	0.50	ppbv							
Bromomethane		<	0.50	ppbv							
Carbon Disulfide		<	0.50	ppbv							
Carbon Tetrachloride		<	0.50	ppbv							
Chlorobenzene		<	0.50	ppbv							
Chloroethane		<	0.50	ppbv							
Chloroform		<	0.20	ppbv							
Chloromethane		<	0.50	ppbv							

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0919 - No Prep VOC Air											
Blank (BID0919-BLK1)					Prepared & Analyzed: 04/17/2025						
cis-1,2-Dichloroethylene		<	0.50	ppbv							
cis-1,3-Dichloropropene		<	0.50	ppbv							
Cyclohexane		<	0.50	ppbv							
Dibromochloromethane		<	0.50	ppbv							
Dichlorodifluoromethane		<	0.50	ppbv							
Ethyl acetate		<	0.50	ppbv							
Ethylbenzene		<	0.50	ppbv							
Heptane		<	0.50	ppbv							
Hexachlorobutadiene		<	0.50	ppbv							
Hexane		<	0.50	ppbv							
Isopropylbenzene		<	0.50	ppbv							
m+p-Xylenes		<	1.00	ppbv							
Methyl methacrylate		<	0.50	ppbv							
Methylene chloride		<	1.00	ppbv							
Methyl-t-butyl ether (MTBE)		<	0.50	ppbv							
Naphthalene		<	0.20	ppbv							
o-Xylene		<	0.50	ppbv							
Propylene		<	0.16	ppbv							
Styrene		<	0.50	ppbv							
TBA		<	0.50	ppbv							
Tetrachloroethylene (PCE)		<	0.50	ppbv							
Tetrahydrofuran		<	0.50	ppbv							
Toluene		<	0.50	ppbv							
trans-1,2-Dichloroethylene		<	0.50	ppbv							
trans-1,3-Dichloropropene		<	0.50	ppbv							
Trichloroethylene		<	0.20	ppbv							
Trichlorofluoromethane		<	0.50	ppbv							
Vinyl acetate		<	0.50	ppbv							
Vinyl bromide		<	0.50	ppbv							
Vinyl chloride		<	0.50	ppbv							
Xylenes, Total		<	1.50	ppbv							
Surr: 4-Bromofluorobenzene (Surr)	*4.64*			ppbv	*5.00*		*92.8*	*80-120*			

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0919 - No Prep VOC Air										
LCS (BID0919-BS1)				Prepared & Analyzed: 04/17/2025						
1,1,1-Trichloroethane	5.10		ppbv	5.00		102	70-130			
1,1,1,2-Tetrachloroethane	5.16		ppbv	5.00		103	70-130			
1,1,2,2-Tetrachloroethane	4.84		ppbv	5.00		96.8	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	5.22		ppbv	5.00		104	70-130			
1,1,2-Trichloroethane	5.08		ppbv	5.00		102	70-130			
1,1-Dichloroethane	5.49		ppbv	5.00		110	70-130			
1,1-Dichloroethylene	5.76		ppbv	5.00		115	70-130			
1,2,4-Trimethylbenzene	4.76		ppbv	5.00		95.2	70-130			
1,2-Dibromoethane (EDB)	4.70		ppbv	5.00		94.0	70-130			
1,2-Dichlorobenzene	4.31		ppbv	5.00		86.2	70-130			
1,2-Dichloroethane	5.14		ppbv	5.00		103	70-130			
1,2-Dichloropropane	5.31		ppbv	5.00		106	70-130			
1,2-Dichlorotetrafluoroethane	6.40		ppbv	5.00		128	70-130			
1,3,5-Trimethylbenzene	4.80		ppbv	5.00		96.0	70-130			
1,3-Butadiene	6.27		ppbv	5.00		125	70-130			
1,3-Dichlorobenzene	4.47		ppbv	5.00		89.4	70-130			
1,4-Dichlorobenzene	4.33		ppbv	5.00		86.6	70-130			
1,4-Dioxane	4.96		ppbv	5.00		99.2	70-130			
2-Butanone (MEK)	4.71		ppbv	5.00		94.2	70-130			
2-Chlorotoluene	4.74		ppbv	5.00		94.8	70-130			
2-Hexanone (MBK)	5.12		ppbv	5.00		102	70-130			
4-Methyl-2-pentanone (MIBK)	4.79		ppbv	5.00		95.8	70-130			
Allyl chloride	5.44		ppbv	5.00		109	70-130			
Benzene	5.37		ppbv	5.00		107	70-130			
Benzyl Chloride	4.39		ppbv	5.00		87.8	70-130			
Bromoform	4.80		ppbv	5.00		96.0	70-130			
Bromomethane	5.96		ppbv	5.00		119	70-130			
Carbon Disulfide	5.51		ppbv	5.00		110	70-130			
Carbon Tetrachloride	5.13		ppbv	5.00		103	70-130			
Chlorobenzene	5.00		ppbv	5.00		100	70-130			
Chloroethane	6.11		ppbv	5.00		122	70-130			
Chloroform	5.54		ppbv	5.00		111	70-130			
Chloromethane	6.50		ppbv	5.00		130	70-130			

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0919 - No Prep VOC Air										
LCS (BID0919-BS1)				Prepared & Analyzed: 04/17/2025						
cis-1,2-Dichloroethylene	5.20		ppbv	5.00		104	70-130			
cis-1,3-Dichloropropene	5.14		ppbv	5.00		103	70-130			
Cyclohexane	5.03		ppbv	5.00		101	70-130			
Dibromochloromethane	5.10		ppbv	5.00		102	70-130			
Dichlorodifluoromethane	6.19		ppbv	5.00		124	70-130			
Ethyl acetate	5.24		ppbv	5.00		105	70-130			
Ethylbenzene	5.01		ppbv	5.00		100	70-130			
Heptane	5.73		ppbv	5.00		115	70-130			
Hexachlorobutadiene	3.71		ppbv	5.00		74.2	60-140			
Hexane	5.96		ppbv	5.00		119	70-130			
Isopropylbenzene	4.78		ppbv	5.00		95.6	70-130			
m+p-Xylenes	9.76		ppbv	10.0		97.6	70-130			
Methyl methacrylate	5.14		ppbv	5.00		103	70-130			
Methylene chloride	5.82		ppbv	5.00		116	70-130			
Methyl-t-butyl ether (MTBE)	5.24		ppbv	5.00		105	70-130			
Naphthalene	3.73		ppbv	5.00		74.6	60-140			
o-Xylene	4.77		ppbv	5.00		95.4	70-130			
Propylene	6.46		ppbv	5.00		129	70-130			
Styrene	4.80		ppbv	5.00		96.0	70-130			
TBA	4.92		ppbv	5.00		98.4	70-130			
Tetrachloroethylene (PCE)	4.67		ppbv	5.00		93.4	70-130			
Tetrahydrofuran	5.50		ppbv	5.00		110	70-130			
Toluene	5.03		ppbv	5.00		101	70-130			
trans-1,2-Dichloroethylene	5.20		ppbv	5.00		104	70-130			
trans-1,3-Dichloropropene	5.19		ppbv	5.00		104	70-130			
Trichloroethylene	5.18		ppbv	5.00		104	70-130			
Trichlorofluoromethane	5.84		ppbv	5.00		117	70-130			
Vinyl acetate	5.62		ppbv	5.00		112	70-130			
Vinyl bromide	5.95		ppbv	5.00		119	70-130			
Vinyl chloride	6.36		ppbv	5.00		127	70-130			
Surr: 4-Bromofluorobenzene (Surr)	*4.80*		ppbv	*5.00*		*96.0*	*70-130*			

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Final Report

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0919 - No Prep VOC Air										
LCS Dup (BID0919-BSD1)				Prepared & Analyzed: 04/17/2025						
1,1,1-Trichloroethane	5.11		ppbv	5.00		102	70-130	0.196	25	
1,1,1,2-Tetrachloroethane	5.13		ppbv	5.00		103	70-130	0.583	25	
1,1,2,2-Tetrachloroethane	4.84		ppbv	5.00		96.8	70-130	0.00	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.20		ppbv	5.00		104	70-130	0.384	25	
1,1,2-Trichloroethane	5.04		ppbv	5.00		101	70-130	0.791	25	
1,1-Dichloroethane	5.52		ppbv	5.00		110	70-130	0.545	25	
1,1-Dichloroethylene	5.80		ppbv	5.00		116	70-130	0.692	25	
1,2,4-Trimethylbenzene	4.70		ppbv	5.00		94.0	70-130	1.27	25	
1,2-Dibromoethane (EDB)	4.72		ppbv	5.00		94.4	70-130	0.425	25	
1,2-Dichlorobenzene	4.30		ppbv	5.00		86.0	70-130	0.232	25	
1,2-Dichloroethane	5.14		ppbv	5.00		103	70-130	0.00	25	
1,2-Dichloropropane	5.30		ppbv	5.00		106	70-130	0.188	25	
1,2-Dichlorotetrafluoroethane	6.32		ppbv	5.00		126	70-130	1.26	25	
1,3,5-Trimethylbenzene	4.82		ppbv	5.00		96.4	70-130	0.416	25	
1,3-Butadiene	6.26		ppbv	5.00		125	70-130	0.160	25	
1,3-Dichlorobenzene	4.44		ppbv	5.00		88.8	70-130	0.673	25	
1,4-Dichlorobenzene	4.29		ppbv	5.00		85.8	70-130	0.928	25	
1,4-Dioxane	4.81		ppbv	5.00		96.2	70-130	3.07	25	
2-Butanone (MEK)	4.86		ppbv	5.00		97.2	70-130	3.13	25	
2-Chlorotoluene	4.69		ppbv	5.00		93.8	70-130	1.06	25	
2-Hexanone (MBK)	5.09		ppbv	5.00		102	70-130	0.588	25	
4-Methyl-2-pentanone (MIBK)	4.88		ppbv	5.00		97.6	70-130	1.86	25	
Allyl chloride	5.42		ppbv	5.00		108	70-130	0.368	25	
Benzene	5.36		ppbv	5.00		107	70-130	0.186	25	
Benzyl Chloride	4.31		ppbv	5.00		86.2	70-130	1.84	25	
Bromoform	4.75		ppbv	5.00		95.0	70-130	1.05	25	
Bromomethane	5.81		ppbv	5.00		116	70-130	2.55	25	
Carbon Disulfide	5.53		ppbv	5.00		111	70-130	0.362	25	
Carbon Tetrachloride	5.10		ppbv	5.00		102	70-130	0.587	25	
Chlorobenzene	4.98		ppbv	5.00		99.6	70-130	0.401	25	
Chloroethane	6.06		ppbv	5.00		121	70-130	0.822	25	
Chloroform	5.52		ppbv	5.00		110	70-130	0.362	25	
Chloromethane	6.46		ppbv	5.00		129	70-130	0.617	25	

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID0919 - No Prep VOC Air										
LCS Dup (BID0919-BSD1)				Prepared & Analyzed: 04/17/2025						
cis-1,2-Dichloroethylene	5.23		ppbv	5.00		105	70-130	0.575	25	
cis-1,3-Dichloropropene	5.18		ppbv	5.00		104	70-130	0.775	25	
Cyclohexane	5.07		ppbv	5.00		101	70-130	0.792	25	
Dibromochloromethane	5.03		ppbv	5.00		101	70-130	1.38	25	
Dichlorodifluoromethane	6.05		ppbv	5.00		121	70-130	2.29	25	
Ethyl acetate	5.36		ppbv	5.00		107	70-130	2.26	25	
Ethylbenzene	5.01		ppbv	5.00		100	70-130	0.00	25	
Heptane	5.71		ppbv	5.00		114	70-130	0.350	25	
Hexachlorobutadiene	3.65		ppbv	5.00		73.0	60-140	1.63	25	
Hexane	5.99		ppbv	5.00		120	70-130	0.502	25	
Isopropylbenzene	4.78		ppbv	5.00		95.6	70-130	0.00	25	
m+p-Xylenes	9.84		ppbv	10.0		98.4	70-130	0.816	25	
Methyl methacrylate	5.13		ppbv	5.00		103	70-130	0.195	25	
Methylene chloride	5.84		ppbv	5.00		117	70-130	0.343	25	
Methyl-t-butyl ether (MTBE)	5.27		ppbv	5.00		105	70-130	0.571	25	
Naphthalene	3.73		ppbv	5.00		74.6	60-140	0.00	25	
o-Xylene	4.81		ppbv	5.00		96.2	70-130	0.835	25	
Propylene	6.38		ppbv	5.00		128	70-130	1.25	25	
Styrene	4.75		ppbv	5.00		95.0	70-130	1.05	25	
TBA	4.80		ppbv	5.00		96.0	70-130	2.47	25	
Tetrachloroethylene (PCE)	4.69		ppbv	5.00		93.8	70-130	0.427	25	
Tetrahydrofuran	5.43		ppbv	5.00		109	70-130	1.28	25	
Toluene	5.05		ppbv	5.00		101	70-130	0.397	25	
trans-1,2-Dichloroethylene	5.14		ppbv	5.00		103	70-130	1.16	25	
trans-1,3-Dichloropropene	5.10		ppbv	5.00		102	70-130	1.75	25	
Trichloroethylene	5.18		ppbv	5.00		104	70-130	0.00	25	
Trichlorofluoromethane	5.79		ppbv	5.00		116	70-130	0.860	25	
Vinyl acetate	5.69		ppbv	5.00		114	70-130	1.24	25	
Vinyl bromide	5.89		ppbv	5.00		118	70-130	1.01	25	
Vinyl chloride	6.35		ppbv	5.00		127	70-130	0.157	25	
Surr: 4-Bromofluorobenzene (Surr)	*4.76*		ppbv	*5.00*		*95.2*	*70-130*			

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1278 - No Prep VOC GC Air										
Blank (BID1278-BLK1)					Prepared & Analyzed: 04/22/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Carbon Monoxide	<	0.001	Vol%							
Duplicate (BID1278-DUP1)				**Source: 25D1361-01**	Prepared & Analyzed: 04/22/2025					
Methane	34.0	0.45	Vol%		33.8			0.448	5	
Carbon dioxide	13.0	0.45	Vol%		13.0			0.0632	5	
Oxygen (O2)	11.6	0.45	Vol%		11.5			0.414	5	
Nitrogen (N2)	41.3	9.00	Vol%		41.1			0.371	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1278-DUP2)				**Source: 25D1361-02**	Prepared & Analyzed: 04/22/2025					
Methane	69.8	0.45	Vol%		69.9			0.106	5	
Carbon dioxide	26.5	0.45	Vol%		26.6			0.226	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1278-DUP3)				**Source: 25D1361-03**	Prepared & Analyzed: 04/22/2025					
Methane	30.7	0.45	Vol%		30.7			0.0190	5	
Carbon dioxide	15.4	0.45	Vol%		15.3			0.269	5	
Oxygen (O2)	9.96	0.45	Vol%		9.93			0.302	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	43.3	9.00	Vol%		43.3			0.178	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks

Project Number: 23050459

Client Site I.D.: Cliffdale LF

Purchase Order:

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1278 - No Prep VOC GC Air										
Duplicate (BID1278-DUP4)				**Source: 25D1361-04**	Prepared & Analyzed: 04/22/2025					
Methane	0.99	0.45	Vol%		1.02			2.78	5	
Carbon dioxide	12.0	0.45	Vol%		11.9			0.201	5	
Oxygen (O2)	7.09	0.45	Vol%		7.10			0.125	5	
Nitrogen (N2)	77.1	9.00	Vol%		77.0			0.0428	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1278-DUP5)				**Source: 25D1361-05**	Prepared & Analyzed: 04/22/2025					
Methane	22.1	0.45	Vol%		22.1			0.365	5	
Carbon dioxide	15.5	0.45	Vol%		15.5			0.215	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Nitrogen (N2)	13.7	9.00	Vol%		13.8			0.538	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1278-DUP6)				**Source: 25D1361-06**	Prepared & Analyzed: 04/22/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	16.0	0.45	Vol%		16.0			0.0255	5	
Oxygen (O2)	6.05	0.45	Vol%		6.06			0.130	5	
Nitrogen (N2)	86.1	9.00	Vol%		86.2			0.111	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1278-DUP7)				**Source: 25D1361-07**	Prepared & Analyzed: 04/22/2025					
Methane	6.34	1.35	Vol%		6.38			0.742	5	
Carbon dioxide	21.3	1.35	Vol%		21.2			0.362	5	
Oxygen (O2)	<	1.35	Vol%		<1.35			NA	5	
Hydrogen (H2)	<	0.54	Vol%		<0.54			NA	5	
Nitrogen (N2)	71.7	27.0	Vol%		71.6			0.0974	5	
Carbon Monoxide	<	0.03	Vol%		<0.03			NA	5	

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1278 - No Prep VOC GC Air										
Duplicate (BID1278-DUP8)			**Source: 25D1361-08**		Prepared & Analyzed: 04/22/2025					
Methane	6.08	1.35	Vol%		6.13			0.785	5	
Carbon dioxide	20.5	1.35	Vol%		20.4			0.411	5	
Oxygen (O2)	<	1.35	Vol%		<1.35			NA	5	
Hydrogen (H2)	<	0.54	Vol%		<0.54			NA	5	
Nitrogen (N2)	70.8	27.0	Vol%		70.8			0.0417	5	
Carbon Monoxide	<	0.03	Vol%		<0.03			NA	5	
Duplicate (BID1278-DUP9)			**Source: 25D1361-09**		Prepared & Analyzed: 04/22/2025					
Methane	73.5	1.35	Vol%		73.4			0.0395	5	
Carbon dioxide	27.9	1.35	Vol%		28.0			0.196	5	
Oxygen (O2)	<	1.35	Vol%		<1.35			NA	5	
Hydrogen (H2)	<	0.54	Vol%		<0.54			NA	5	
Nitrogen (N2)	<	27.0	Vol%		<27.0			NA	5	
Carbon Monoxide	<	0.03	Vol%		<0.03			NA	5	
Duplicate (BID1278-DUPA)			**Source: 25D1361-10**		Prepared & Analyzed: 04/22/2025					
Methane	37.0	0.45	Vol%		37.0			0.106	5	
Carbon dioxide	13.0	0.45	Vol%		13.0			0.000617	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Nitrogen (N2)	11.0	9.00	Vol%		11.0			0.643	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1278-DUPB)			**Source: 25D1361-11**		Prepared & Analyzed: 04/22/2025					
Methane	42.9	0.45	Vol%		42.8			0.234	5	
Carbon dioxide	21.9	0.45	Vol%		21.9			0.0622	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	35.9	9.00	Vol%		35.8			0.189	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1278 - No Prep VOC GC Air										
Duplicate (BID1278-DUPC)			**Source: 25D1361-12**		Prepared & Analyzed: 04/22/2025					
Methane	74.4	0.45	Vol%		74.0			0.555	5	
Carbon dioxide	24.2	0.45	Vol%		24.2			0.0767	5	
Oxygen (O2)	0.50	0.45	Vol%		0.49			1.38	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Batch BID1281 - No Prep VOC GC Air										
Blank (BID1281-BLK1)					Prepared & Analyzed: 04/23/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Carbon Monoxide	<	0.001	Vol%							
LCS (BID1281-BS1)					Prepared & Analyzed: 04/23/2025					
Methane	9910		ppmv	10000		99.1	80-120			
Carbon dioxide	9640		ppmv	10000		96.4	80-120			
Oxygen (O2)	1990		ppmv	2000		99.5	80-120			
Hydrogen (H2)	546		ppmv	500		109	80-120			
Nitrogen (N2)	4780		ppmv	5000		95.6	80-120			
Carbon Monoxide	508		ppmv	500		102	80-120			
Duplicate (BID1281-DUP1)			**Source: 25D1904-01**		Prepared & Analyzed: 04/23/2025					
Methane	20.0	0.45	Vol%		20.0			0.0169	5	
Carbon dioxide	27.3	0.45	Vol%		27.3			0.123	5	
Oxygen (O2)	2.48	0.45	Vol%		2.51			1.16	5	
Hydrogen (H2)	2.80	0.18	Vol%		2.74			2.04	5	
Nitrogen (N2)	40.7	9.00	Vol%		40.8			0.178	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 14, 2025 11:55
Date Issued: April 28, 2025 17:05

Submitted To: Connor Hicks

Project Number: 23050459

Client Site I.D.: Cliffdale LF

Purchase Order:

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1281 - No Prep VOC GC Air										
Duplicate (BID1281-DUP2)				**Source: 25D1846-01**	Prepared & Analyzed: 04/23/2025					
Methane	18.7	0.30	Vol%		18.7			0.0437	5	
Carbon dioxide	59.2	0.30	Vol%		59.3			0.144	5	
Oxygen (O2)	<	0.30	Vol%		<0.30			NA	5	
Nitrogen (N2)	<	6.00	Vol%		<6.00			NA	5	
Hydrogen (H2)	10.9	0.12	Vol%		11.2			2.36	5	
Carbon Monoxide	0.06	0.006	Vol%		0.06			0.00594	5	
Duplicate (BID1281-DUP3)				**Source: 25D1846-02**	Prepared & Analyzed: 04/23/2025					
Methane	19.0	0.30	Vol%		19.0			0.181	5	
Carbon dioxide	62.5	0.30	Vol%		62.2			0.376	5	
Oxygen (O2)	<	0.30	Vol%		<0.30			NA	5	
Hydrogen (H2)	10.6	0.12	Vol%		10.5			0.804	5	
Nitrogen (N2)	<	6.00	Vol%		<6.00			NA	5	
Carbon Monoxide	0.07	0.006	Vol%		0.07			0.560	5	
Duplicate (BID1281-DUP4)				**Source: 25D1846-03**	Prepared & Analyzed: 04/23/2025					
Methane	17.9	0.30	Vol%		17.9			0.134	5	
Carbon dioxide	65.1	0.30	Vol%		65.0			0.193	5	
Oxygen (O2)	<	0.30	Vol%		<0.30			NA	5	
Hydrogen (H2)	9.16	0.12	Vol%		9.18			0.204	5	
Nitrogen (N2)	<	6.00	Vol%		<6.00			NA	5	
Carbon Monoxide	0.07	0.006	Vol%		0.07			0.311	5	
Duplicate (BID1281-DUP5)				**Source: 25D1846-04**	Prepared & Analyzed: 04/23/2025					
Methane	22.9	0.30	Vol%		22.9			0.264	5	
Carbon dioxide	60.2	0.30	Vol%		60.3			0.161	5	
Oxygen (O2)	<	0.30	Vol%		<0.30			NA	5	
Hydrogen (H2)	6.87	0.12	Vol%		6.76			1.66	5	
Nitrogen (N2)	<	6.00	Vol%		<6.00			NA	5	
Carbon Monoxide	0.06	0.006	Vol%		0.06			2.53	5	

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Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1281 - No Prep VOC GC Air										
Duplicate (BID1281-DUP6)			**Source: 25D1846-05**		Prepared & Analyzed: 04/23/2025					
Methane	3.42	0.30	Vol%		3.42			0.0268	5	
Carbon dioxide	73.0	0.30	Vol%		73.2			0.326	5	
Oxygen (O2)	<	0.30	Vol%		<0.30			NA	5	
Nitrogen (N2)	<	6.00	Vol%		<6.00			NA	5	
Hydrogen (H2)	17.6	0.12	Vol%		17.5			0.742	5	
Carbon Monoxide	0.14	0.006	Vol%		0.14			0.550	5	
Duplicate (BID1281-DUP7)			**Source: 25D1846-06**		Prepared & Analyzed: 04/23/2025					
Methane	33.0	0.30	Vol%		33.0			0.0439	5	
Carbon dioxide	55.5	0.30	Vol%		55.4			0.208	5	
Oxygen (O2)	<	0.30	Vol%		<0.30			NA	5	
Hydrogen (H2)	5.65	0.12	Vol%		5.66			0.145	5	
Nitrogen (N2)	<	6.00	Vol%		<6.00			NA	5	
Carbon Monoxide	0.02	0.006	Vol%		0.01			4.75	5	
Duplicate (BID1281-DUP8)			**Source: 25D1846-07**		Prepared & Analyzed: 04/23/2025					
Methane	13.6	0.30	Vol%		13.6			0.117	5	
Carbon dioxide	60.0	0.30	Vol%		59.8			0.304	5	
Oxygen (O2)	<	0.30	Vol%		<0.30			NA	5	
Hydrogen (H2)	11.6	0.12	Vol%		11.8			1.78	5	
Nitrogen (N2)	<	6.00	Vol%		<6.00			NA	5	
Carbon Monoxide	0.09	0.006	Vol%		0.09			0.753	5	
Duplicate (BID1281-DUP9)			**Source: 25D1846-08**		Prepared & Analyzed: 04/23/2025					
Methane	29.5	0.30	Vol%		29.5			0.111	5	
Carbon dioxide	43.5	0.30	Vol%		43.5			0.0474	5	
Oxygen (O2)	<	0.30	Vol%		<0.30			NA	5	
Nitrogen (N2)	12.6	6.00	Vol%		12.6			0.0778	5	
Hydrogen (H2)	9.32	0.12	Vol%		9.45			1.41	5	
Carbon Monoxide	0.01	0.006	Vol%		0.01			0.486	5	

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1451 - No Prep VOC GC Air										
Blank (BID1451-BLK1)					Prepared & Analyzed: 04/24/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Carbon Monoxide	<	0.001	Vol%							
LCS (BID1451-BS1)					Prepared & Analyzed: 04/24/2025					
Methane	9940		ppmv	10000		99.4	80-120			
Carbon dioxide	9760		ppmv	10000		97.6	80-120			
Oxygen (O2)	1990		ppmv	2000		99.4	80-120			
Nitrogen (N2)	4800		ppmv	5000		96.0	80-120			
Hydrogen (H2)	596		ppmv	500		119	80-120			
Carbon Monoxide	512		ppmv	500		102	80-120			
Duplicate (BID1451-DUP1)				**Source: 25D1361-13**	Prepared & Analyzed: 04/24/2025					
Methane	6.77	0.45	Vol%		6.73			0.565	5	
Carbon dioxide	4.24	0.45	Vol%		4.24			0.112	5	
Oxygen (O2)	19.0	0.45	Vol%		19.0			0.152	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	69.4	9.00	Vol%		69.1			0.497	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1451-DUP2)				**Source: 25D1361-14**	Prepared & Analyzed: 04/24/2025					
Methane	73.0	0.45	Vol%		73.0			0.0908	5	
Carbon dioxide	28.6	0.45	Vol%		28.6			0.285	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Final Report

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1451 - No Prep VOC GC Air										
Duplicate (BID1451-DUP3)			**Source: 25D1361-15**		Prepared & Analyzed: 04/24/2025					
Methane	64.8	0.45	Vol%		64.7			0.0430	5	
Carbon dioxide	37.6	0.45	Vol%		37.6			0.0803	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1451-DUP4)			**Source: 25D1361-16**		Prepared & Analyzed: 04/24/2025					
Methane	10.2	0.45	Vol%		10.2			0.0300	5	
Carbon dioxide	11.3	0.45	Vol%		11.2			0.295	5	
Oxygen (O2)	15.0	0.45	Vol%		15.0			0.0977	5	
Nitrogen (N2)	66.5	9.00	Vol%		66.3			0.232	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Batch BID1455 - No Prep VOC GC Air										
Blank (BID1455-BLK1)					Prepared & Analyzed: 04/25/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Carbon Monoxide	<	0.001	Vol%							
LCS (BID1455-BS1)					Prepared & Analyzed: 04/25/2025					
Methane	9880		ppmv	10000		98.8	80-120			
Carbon dioxide	9670		ppmv	10000		96.7	80-120			
Oxygen (O2)	2010		ppmv	2000		100	80-120			
Nitrogen (N2)	4780		ppmv	5000		95.6	80-120			
Hydrogen (H2)	570		ppmv	500		114	80-120			
Carbon Monoxide	511		ppmv	500		102	80-120			

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1455 - No Prep VOC GC Air										
Duplicate (BID1455-DUP1)				**Source: 25D1905-01**	Prepared & Analyzed: 04/25/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	0.79	0.45	Vol%		0.79			0.121	5	
Oxygen (O2)	20.1	0.45	Vol%		20.1			0.158	5	
Nitrogen (N2)	73.8	9.00	Vol%		73.6			0.164	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1455-DUP2)				**Source: 25D1905-02**	Prepared & Analyzed: 04/25/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	0.79	0.45	Vol%		0.79			0.395	5	
Oxygen (O2)	20.1	0.45	Vol%		20.1			0.177	5	
Nitrogen (N2)	74.7	9.00	Vol%		74.6			0.154	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1455-DUP3)				**Source: 25D1905-03**	Prepared & Analyzed: 04/25/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	<	0.45	Vol%		<0.45			NA	5	
Oxygen (O2)	21.0	0.45	Vol%		20.9			0.176	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	74.7	9.00	Vol%		74.5			0.243	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1455-DUP4)				**Source: 25D1905-05**	Prepared & Analyzed: 04/25/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	<	0.45	Vol%		<0.45			NA	5	
Oxygen (O2)	20.6	0.45	Vol%		20.6			0.164	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	73.5	9.00	Vol%		73.6			0.144	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1455 - No Prep VOC GC Air										
Duplicate (BID1455-DUP5)				**Source: 25D1905-06**	Prepared & Analyzed: 04/25/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	<	0.45	Vol%		<0.45			NA	5	
Oxygen (O2)	20.9	0.45	Vol%		21.0			0.0670	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	74.2	9.00	Vol%		74.0			0.222	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1455-DUP6)				**Source: 25D1905-07**	Prepared & Analyzed: 04/25/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	3.89	0.45	Vol%		3.92			0.669	5	
Oxygen (O2)	13.4	0.45	Vol%		13.4			0.225	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	77.2	9.00	Vol%		77.2			0.0589	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BID1455-DUP7)				**Source: 25D1905-08**	Prepared & Analyzed: 04/25/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	<	0.45	Vol%		<0.45			NA	5	
Oxygen (O2)	20.7	0.45	Vol%		20.6			0.158	5	
Nitrogen (N2)	74.3	9.00	Vol%		74.3			0.0251	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Sulfur Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1008 - No Prep VOC Air										
Blank (BID1008-BLK1)					Prepared & Analyzed: 04/18/2025					
Hydrogen Sulfide	<	10.0	ppbv							
Surr: 1,4-Difluorobenzene (Surr)	*20.0*		ppbv	*20.0*		*100*	*80-120*			
LCS (BID1008-BS1)					Prepared & Analyzed: 04/18/2025					
Carbon Disulfide	22.6		ppbv	20.4		111	70-130			
Hydrogen Sulfide	13.0		ppbv	18.4		70.7	70-130			
1-Propanethiol	15.1		ppbv	20.2		74.6	70-130			
2-Propanethiol	13.0		ppbv	20.4		63.8	70-130			L
Carbonyl sulfide	18.7		ppbv	20.4		91.5	70-130			
Dimethyl sulfide	21.7		ppbv	19.6		111	70-130			
Ethyl mercaptan	13.2		ppbv	19.8		66.7	70-130			L
Methyl mercaptan	17.4		ppbv	20.2		85.9	70-130			
Surr: 1,4-Difluorobenzene (Surr)	*21.6*		ppbv	*20.0*		*108*	*70-130*			
LCS Dup (BID1008-BSD1)					Prepared & Analyzed: 04/18/2025					
Carbon Disulfide	21.7		ppbv	20.4		107	70-130	4.06	25	
Hydrogen Sulfide	13.0		ppbv	18.4		70.4	70-130	0.462	25	
1-Propanethiol	14.6		ppbv	20.2		72.4	70-130	2.96	25	
2-Propanethiol	13.2		ppbv	20.4		64.5	70-130	1.07	25	L
Carbonyl sulfide	18.2		ppbv	20.4		89.1	70-130	2.71	25	
Dimethyl sulfide	20.4		ppbv	19.6		104	70-130	6.07	25	
Ethyl mercaptan	8.82		ppbv	19.8		44.5	70-130	39.8	25	L, P
Methyl mercaptan	17.0		ppbv	20.2		83.9	70-130	2.33	25	
Surr: 1,4-Difluorobenzene (Surr)	*20.4*		ppbv	*20.0*		*102*	*70-130*			
Batch BID1220 - No Prep VOC Air										
Blank (BID1220-BLK1)					Prepared & Analyzed: 04/24/2025					
Hydrogen Sulfide	<	10.0	ppbv							
Surr: 1,4-Difluorobenzene (Surr)	*19.3*		ppbv	*20.0*		*96.6*	*80-120*			

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Sulfur Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1220 - No Prep VOC Air										
LCS (BID1220-BS1)				Prepared & Analyzed: 04/24/2025						
Carbon Disulfide	23.9		ppbv	20.4		117	70-130			
Hydrogen Sulfide	25.5		ppbv	18.4		138	70-130			L
1-Propanethiol	24.3		ppbv	20.2		120	70-130			
2-Propanethiol	23.0		ppbv	20.4		113	70-130			
Carbonyl sulfide	22.2		ppbv	20.4		109	70-130			
Dimethyl sulfide	22.8		ppbv	19.6		116	70-130			
Ethyl mercaptan	19.6		ppbv	19.8		99.1	70-130			
Methyl mercaptan	21.1		ppbv	20.2		104	70-130			
Surr: 1,4-Difluorobenzene (Surr)	*20.0*		ppbv	*20.0*		*100*	*70-130*			
LCS Dup (BID1220-BSD1)				Prepared & Analyzed: 04/24/2025						
Carbon Disulfide	23.5		ppbv	20.4		115	70-130	1.69	25	
Hydrogen Sulfide	24.8		ppbv	18.4		135	70-130	2.46	25	L
1-Propanethiol	24.7		ppbv	20.2		122	70-130	1.92	25	
2-Propanethiol	22.5		ppbv	20.4		110	70-130	2.59	25	
Carbonyl sulfide	22.3		ppbv	20.4		110	70-130	0.494	25	
Dimethyl sulfide	22.6		ppbv	19.6		115	70-130	0.529	25	
Ethyl mercaptan	19.8		ppbv	19.8		100	70-130	0.964	25	
Methyl mercaptan	21.0		ppbv	20.2		104	70-130	0.380	25	
Surr: 1,4-Difluorobenzene (Surr)	*20.0*		ppbv	*20.0*		*99.9*	*70-130*			

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Certified Analytes included in this Report

Analyte	Certifications
EPA 3C in Air	
Methane	VELAP
Oxygen (O2)	VELAP
Nitrogen (N2)	VELAP
EPA TO-15 in Air	
1,1,1-Trichloroethane	VELAP
1,1,1,2-Tetrachloroethane	VELAP
1,1,2,2-Tetrachloroethane	VELAP
1,1,2-Trichloro-1,2,2-trifluoroethane	VELAP
1,1,2-Trichloroethane	VELAP
1,1-Dichloroethane	VELAP
1,1-Dichloroethylene	VELAP
1,2,4-Trimethylbenzene	VELAP
1,2-Dibromoethane (EDB)	VELAP
1,2-Dichlorobenzene	VELAP
1,2-Dichloroethane	VELAP
1,2-Dichloropropane	VELAP
1,2-Dichlorotetrafluoroethane	VELAP
1,3,5-Trimethylbenzene	VELAP
1,3-Butadiene	VELAP
1,3-Dichlorobenzene	VELAP
1,4-Dichlorobenzene	VELAP
1,4-Dioxane	VELAP
2-Butanone (MEK)	VELAP
2-Chlorotoluene	VELAP
2-Hexanone (MBK)	VELAP
4-Methyl-2-pentanone (MIBK)	VELAP
Allyl chloride	VELAP
Benzene	VELAP
Benzyl Chloride	VELAP
Bromoform	VELAP
Bromomethane	VELAP
Carbon Disulfide	VELAP
Carbon Tetrachloride	VELAP
Chlorobenzene	VELAP
Chloroethane	VELAP
Chloroform	VELAP
Chloromethane	VELAP
cis-1,2-Dichloroethylene	VELAP
cis-1,3-Dichloropropene	VELAP
Cyclohexane	VELAP
Dibromochloromethane	VELAP
Dichlorodifluoromethane	VELAP
Ethyl acetate	VELAP
Ethylbenzene	VELAP
Heptane	VELAP
Hexachlorobutadiene	VELAP
Hexane	VELAP
Isopropylbenzene	VELAP
m+p-Xylenes	VELAP
Methyl methacrylate	VELAP
Methylene chloride	VELAP
Methyl-t-butyl ether (MTBE)	VELAP
Naphthalene	VELAP
o-Xylene	VELAP
Propylene	VELAP
Styrene	VELAP
TBA	VELAP
Tetrachloroethylene (PCE)	VELAP
Tetrahydrofuran	VELAP
Toluene	VELAP
trans-1,2-Dichloroethylene	VELAP
trans-1,3-Dichloropropene	VELAP
Trichloroethylene	VELAP
Trichlorofluoromethane	VELAP
Vinyl acetate	VELAP
Vinyl bromide	VELAP
Vinyl chloride	VELAP
Xylenes, Total	VELAP

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Code	Description	Laboratory ID	Expires
DURSC-NCDEQ	NCDEQ Durham Service Center	703	12/31/2025
DURSC-NCDHHS	NCDHHS Durham Service Center	37918	07/31/2025
MdDOE	Maryland DE Drinking Water	341	12/31/2025
NCDEQ	North Carolina DEQ	495	12/31/2025
NCDHHS	North Carolina Department of Health and Human	51714	07/31/2025
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2025
SCDHEC	South Carolina Dept of Health and Environmental	93016	06/14/2025
TXCEQ	Texas Comm on Environmental Quality #T10470	T104704576	05/31/2025
VELAP	NELAP-Virginia Certificate #13307	460021	06/14/2025
WVDEP	West Virginia DEP Cert ID: WV-C25-00053	350	11/30/2025

Qualifiers and Definitions

C	Continuing calibration verification response for this analyte is outside specifications.
J	The reported result is an estimated value.
L	LCS recovery is outside of established acceptance limits
P	Duplicate analysis does not meet the acceptance criteria for precision
RPD	Relative Percent Difference
Qual	Qualifers
-RE	Denotes sample was re-analyzed
PF	Preparation Factor
MDL	Method Detection Limit
LOQ	Limit of Quantitation
ppbv	parts per billion by volume
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.

All EPA method 3C results are reported as normalized values when the sum total of all evaluated constituents is outside ± 10% of the absolute.

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale CF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 23050459
PHONE #:	INVOICE PHONE #:	P.O. #:
FAX #: EMAIL: connorhicks@smeinc.com		Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO — PWS I.D. #:
SAMPLER NAME (PRINT): Connor Hicks — SAMPLER SIGNATURE:		**Turn Around Time:** Circle (10) 5 Days or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other Soc

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	Duplicate-02	14092	3Hr	36965	6	BC250318	30	0.8"	4/9/25	X	30	40	4/9/25	X	3	55	SG	x	x	x
2)	SGP-08	16061	3Hr	43909	6	BC250321	30	5.0"	4/9/25	915	30	40	4/9/25	1210	5	55	SG	x	x	x
3)	SGP-09	17210	3Hr	49320	6	BC250318	30	3.8"	4/9/25	945	30	40	4/9/25	1205	4	55	SG	x	x	x
4)	SGP-13	20127	3Hr	49326	6	BC250321	30	6.4"	4/9/25	625	30	45	4/9/25	1135	5	55	SG	x	x	x

RELINQUISHED: DATE / TIME 4/11/25 1700	RECEIVED: BUO 4-11-25 1638	QC Data Package	LAB USE ONLY: 58x 3-Hour flow controllers
~~RELINQUISHED:~~ ~~DATE / TIME~~ 4/14/25 11:55	~~RECEIVED:~~ ~~DATE / TIME~~ 4/14/25 1155	Level I ☐ Level II ☐	
RELINQUISHED: DATE / TIME	RECEIVED: DATE / TIME		

310 Observed Temp °C: 19.0

no ice Correction Factor °C: 0.0

no seal Corrected Temp °C: 19.0

25D1361

S&ME - NC **25D1361**

Cliffdale LF RI-10-12

Recd: 04/14/2025 Due: 04/28/2025

v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 23050459
PHONE #: 919 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO — PWS I.D. #:
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: (10) 5 Days or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGP-02	16688	3Hr	46768	6	BC250327	30	6.8"	4/8/25	920	29	55	4/8/25	1200	5	55	SG	x	x	x
2)	SGP-03	20115	3Hr	49507	6	BC250327	30	7.8"	4/8/25	1000	30	55	4/8/25	1205	5	55	SG	x	x	x
3)	DUP-01	20123	3Hr	49679	6	BC250327	30	1.2"	4/8/25	X	29	X	4/8/25	X	5	X	SG	x	x	x
4)	SGP-01	20248	3Hr	49690	6	BC250327	30	7.6"	4/8/25	850	30		4/8/25	1155	5	55	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
	4/8/25 1700	BUO	4.11.25 1638
~~RELINQUISHED:~~	~~DATE / TIME~~	~~RECEIVED:~~	~~DATE / TIME~~
Scott Orbell	4/11/25 1155		4/14/25 1155
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
Level I ☐
Level II ☐
Level III: ☐

LAB USE ONLY: 58x 3-Hour flow controllers

310
Observed Temp °C: 19.0
no ice
Correction Factor °C: 0.0
no xcal
Corrected Temp °C: 19.0

25D1361

S&ME - NC 25D1361
Cliffdale LF RI-10-12
Recd: 04/14/2025 Due: 04/28/2025
v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 23050459
PHONE #: 919 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES (NO)
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: (10) **5 Days** or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGI-06	10521	3Hr	48098	6	BC250318	30	4.6"	4/8/25	1110	30	55	4/8/25	1330	3	55	SG	x	x	x
2)	SGP-04	10525	3Hr	49289	6	BC250324	30	7.2"	4/8/25	1030	29	55	4/8/25	1315	5	55	SG	x	x	x
3)	~~SGP-03~~ SGP-05	14198	3Hr	49670	6	BC250318	30	6.0"	4/8/25	1140	30	55	4/8/25	1415	5	55	SG	x	x	x
4)	SGP-07	16525	3Hr	50957	6	BC250324	30	9.2"	4/8/25	1100	30	55	4/8/25	1400	8	55	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	QC Data Package
	4/8/25 1700	BVO 4.11.25	1638	Level I ☐
Dustin Oneal	4/11/25 11:55	Jennifer Allen 4/11/25	11:55	Level II ☐
				Level III ☐
				Level IV ☐

LAB USE ONLY: 58x 3-Hour flow controllers

310
Observed Temp °C: 19.0
no ice
Correction Factor °C: 0.0
no sea
Corrected Temp °C: 19.0

S&ME - NC **25D1361**
Cliffdale LF RI-10-12
Recd: 04/14/2025 Due: 04/28/2025
v13032500

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: S&ME	INVOICE TO: Same	~~PROJECT NAME/Quote #:~~
CONTACT: Connor Hicks	INVOICE CONTACT:	SITE NAME: Cliffdale Lf
ADDRESS: 3201 Spring Forest Rd, Raleigh NC	INVOICE ADDRESS:	PROJECT NUMBER: 23050459
PHONE #: 914 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES (NO) PWS I.D. #:
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: (10) 5 Days or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGP-14	10524	3Hr	47533	6	BC250328	30	5.8"	4/9/25	1130	28	50	4/9/25	1430	5	60	SG	x	x	x
2)	SGI-12	16058	3Hr	47671	6	BC250328	30	5.2"	4/9/25	1025	30	45	4/9/25	1305	5	60	SG	x	x	x
3)	SGP-10	16689	3Hr	49316	6	BC250328	30	8.2"	4/9/25	1100	26		4/9/25	1345	5	60	SG	x	x	x
4)	SGP-11	20083	3Hr	49501	6	BC250328	30	9.4"	4/9/25	1040	25		4/9/25	1220	5	60	SG	x	x	x

RELINQUISHED: DATE / TIME 4/9/25 1700	RECEIVED: BVO DATE / TIME 4.11.25 1638	QC Data Package	LAB USE ONLY: 58x 3-Hour flow controllers
RELINQUISHED: Scott Orvel DATE / TIME 4/14/25 11:55	RECEIVED: DATE / TIME 4/14/25 ~~1255~~ 1155	Level I ☐ Level II ☐ Level III ☐ Level IV ☐	S&ME - NC 25D13
RELINQUISHED: DATE / TIME	RECEIVED: DATE / TIME		Cliffdale LF RI-10-12

310
Observed Temp °C: 19.0
no ice
Correction Factor °C: 0.0
no2eq1
Corrected Temp °C: 19.0

Recd: 04/14/2025 Due: 04/28/20

v13032

063-25C-0020.xls

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1361

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 14, 2025 11:55 April 28, 2025 17:05
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Sample Conditions Checklist

Samples Received at:	**19.00°C**
How were samples received?	Walk In
Were Custody Seals used?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, EPA524, and RSK-175.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis. In addition, field parameters are always received outside holding time and will be marked accordingly.	Yes

Work Order Comments

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh	Date Received:	April 18, 2025 8:00
	3201 Spring Forest Road	Date Issued:	May 9, 2025 17:01
	Raleigh, NC 27616	Project Number:	23050459
Submitted To:	Connor Hicks	Purchase Order:	
Client Site I.D.:	Cliffdale LF		

Enclosed are the results of analyses for samples received by the laboratory on 04/18/2025 08:00. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

Keith Sprouse

Laboratory Manager

End Notes:

The test results listed in this report relate only to the samples submitted to the laboratory and as received by the Laboratory.

Unless otherwise noted, the test results for solid materials are calculated on a wet weight basis. Analyses for pH, dissolved oxygen, temperature, residual chlorine and sulfite that are performed in the laboratory do not meet NELAC requirements due to extremely short holding times. These analyses should be performed in the field. The results of field analyses performed by the Sampler included in the Certificate of Analysis are done so at the client's request and are not included in the laboratory's fields of certification nor have they been audited for adherence to a reference method or procedure.

The signature on the final report certifies that these results conform to all applicable NELAC standards unless otherwise specified. For a complete list of the Laboratory's NELAC certified parameters please contact customer service.

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TNI Accredited
VELAP ID 460021

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Submitted To: Connor Hicks

Client Site I.D.: Cliffdale LF

Date Received: April 18, 2025 8:00

Date Issued: May 9, 2025 17:01

Project Number: 23050459

Purchase Order:

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SGP-37	25D1774-01	Air	04/14/2025 14:10	04/18/2025 08:00
SGP-39	25D1774-02	Air	04/15/2025 14:00	04/18/2025 08:00
SGP-36	25D1774-03	Air	04/14/2025 13:12	04/18/2025 08:00
SGP-35	25D1774-04	Air	04/14/2025 12:45	04/18/2025 08:00
SGP-22	25D1774-05	Air	04/11/2025 14:00	04/18/2025 08:00
SGP-30	25D1774-06	Air	04/14/2025 12:15	04/18/2025 08:00
SGP-23	25D1774-07	Air	04/11/2025 13:40	04/18/2025 08:00
SGP-21	25D1774-08	Air	04/11/2025 15:00	04/18/2025 08:00
SGI-40	25D1774-09	Air	04/15/2025 14:10	04/18/2025 08:00
DUP-06	25D1774-10	Air	04/15/2025 00:00	04/18/2025 08:00
SGI-42	25D1774-11	Air	04/15/2025 14:40	04/18/2025 08:00
SGI-44	25D1774-12	Air	04/15/2025 14:40	04/18/2025 08:00
SGP-47	25D1774-13	Air	04/15/2025 15:00	04/18/2025 08:00
SGP-48	25D1774-14	Air	04/15/2025 16:00	04/18/2025 08:00
SGI-46	25D1774-15	Air	04/15/2025 15:20	04/18/2025 08:00
SGP-29	25D1774-16	Air	04/10/2025 14:00	04/18/2025 08:00
SGP-27	25D1774-17	Air	04/10/2025 12:45	04/18/2025 08:00
SGI-26	25D1774-18	Air	04/10/2025 13:00	04/18/2025 08:00
SGP-28	25D1774-19	Air	04/10/2025 13:20	04/18/2025 08:00
SGI-18	25D1774-20	Air	04/10/2025 12:30	04/18/2025 08:00
DUPLICATE-03	25D1774-21	Air	04/10/2025 00:00	04/18/2025 08:00
SGP-19	25D1774-23	Air	04/10/2025 12:00	04/18/2025 08:00

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh	Date Received:	April 18, 2025 8:00
	3201 Spring Forest Road	Date Issued:	May 9, 2025 17:01
	Raleigh, NC 27616	Project Number:	23050459
Submitted To:	Connor Hicks	Purchase Order:	

Client Site I.D.: Cliffdale LF

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DUPLICATE-04	25D1774-24	Air	04/11/2025 00:00	04/18/2025 08:00
SGP-20	25D1774-25	Air	04/11/2025 12:30	04/18/2025 08:00
SGI-25	25D1774-26	Air	04/11/2025 12:30	04/18/2025 08:00
SGP-24	25D1774-27	Air	04/11/2025 13:00	04/18/2025 08:00
SGP-33	25D1774-28	Air	04/14/2025 12:22	04/18/2025 08:00
SGP-31	25D1774-29	Air	04/14/2025 12:25	04/18/2025 08:00
SGP-34	25D1774-30	Air	04/14/2025 12:30	04/18/2025 08:00
DUP-05	25D1774-31	Air	04/14/2025 12:25	04/18/2025 08:00

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-37 Project Location:

Sample ID: 25D1774-01 Canister ID: 063-00260::41718 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 6

Sampled: 4/14/2025 14:10 Flow Controller ID: 063-00453::13288 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	1850	1800	1800		2600	2500	2500	180	1	5/6/25 14:28	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	97.2	80-120	5/6/25 14:28

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	59.5	0.45	0.45		9	1	4/30/25 15:44	MJRL
Carbon dioxide, as received	34.4	0.45	0.45		9	1	4/30/25 15:44	MJRL
Oxygen (O2), as received	0.50	0.45	0.45		9	1	4/30/25 15:44	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 15:44	MJRL
Nitrogen (N2), as received	9.07	9.00	9.00		9	1	4/30/25 15:44	MJRL
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 15:44	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	4/28/25 10:25	DFH
1,1,1,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	4/28/25 10:25	DFH
1,1,2,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	4/28/25 10:25	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	18.0	45.0		ND	140	340	36	2.5	4/28/25 10:25	DFH
1,1,2-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	4/28/25 10:25	DFH
1,1-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	4/28/25 10:25	DFH
1,1-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/28/25 10:25	DFH
1,2,4-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/28/25 10:25	DFH
1,2-Dibromoethane (EDB)	ND	18.0	45.0		ND	140	350	36	2.5	4/28/25 10:25	DFH

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Final Report

Laboratory Order ID 25D1774

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-37 Project Location:

Sample ID: 25D1774-01 Canister ID: 063-00260::41718 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 6

Sampled: 4/14/2025 14:10 Flow Controller ID: 063-00453::13288 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/28/25 10:25	DFH
1,2-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	4/28/25 10:25	DFH
1,2-Dichloropropane	ND	18.0	45.0		ND	83	210	36	2.5	4/28/25 10:25	DFH
1,2-Dichlorotetrafluoroethane	298	18.0	45.0		2100	130	310	36	2.5	4/28/25 10:25	DFH
1,3,5-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/28/25 10:25	DFH
1,3-Butadiene	ND	18.0	45.0		ND	40	100	36	2.5	4/28/25 10:25	DFH
1,3-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/28/25 10:25	DFH
1,4-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/28/25 10:25	DFH
1,4-Dioxane	ND	18.0	45.0		ND	65	160	36	2.5	4/28/25 10:25	DFH
2-Butanone (MEK)	ND	18.0	45.0		ND	53	130	36	2.5	4/28/25 10:25	DFH
2-Chlorotoluene	ND	18.0	45.0		ND	93	230	36	2.5	4/28/25 10:25	DFH
2-Hexanone (MBK)	ND	18.0	45.0		ND	74	180	36	2.5	4/28/25 10:25	DFH
4-Methyl-2-pentanone (MIBK)	ND	18.0	45.0		ND	210	520	36	2.5	4/28/25 10:25	DFH
Allyl chloride	ND	18.0	45.0		ND	56	140	36	2.5	4/28/25 10:25	DFH
Benzene	78.3	18.0	18.0		250	58	58	36	2.5	4/28/25 10:25	DFH
Benzyl Chloride	ND	18.0	45.0		ND	93	230	36	2.5	4/28/25 10:25	DFH
Bromoform	ND	18.0	45.0		ND	190	470	36	2.5	4/28/25 10:25	DFH
Bromomethane	ND	18.0	45.0		ND	70	170	36	2.5	4/28/25 10:25	DFH
Carbon Disulfide	ND	45.0	45.0		ND	140	140	36	2.5	4/28/25 10:25	DFH
Carbon Tetrachloride	ND	18.0	45.0		ND	110	280	36	2.5	4/28/25 10:25	DFH
Chlorobenzene	ND	18.0	45.0		ND	83	210	36	2.5	4/28/25 10:25	DFH
Chloroethane	ND	18.0	45.0		ND	47	120	36	2.5	4/28/25 10:25	DFH
Chloroform	ND	18.0	18.0		ND	88	88	36	2.5	4/28/25 10:25	DFH
Chloromethane	ND	18.0	45.0		ND	37	93	36	2.5	4/28/25 10:25	DFH
cis-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/28/25 10:25	DFH
cis-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	4/28/25 10:25	DFH
Cyclohexane	553	18.0	45.0		1900	62	150	36	2.5	4/28/25 10:25	DFH
Dibromochloromethane	ND	18.0	45.0		ND	150	380	36	2.5	4/28/25 10:25	DFH
Dichlorodifluoromethane	436	45.0	45.0		2200	220	220	36	2.5	4/28/25 10:25	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-37 Project Location:

Sample ID: 25D1774-01 Canister ID: 063-00260::41718 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 6

Sampled: 4/14/2025 14:10 Flow Controller ID: 063-00453::13288 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	18.0	45.0		ND	65	160	36	2.5	4/28/25 10:25	DFH
Ethylbenzene	ND	18.0	45.0		ND	78	200	36	2.5	4/28/25 10:25	DFH
Heptane	328	18.0	45.0		1300	74	180	36	2.5	4/28/25 10:25	DFH
Hexachlorobutadiene	ND	18.0	45.0		ND	190	480	36	2.5	4/28/25 10:25	DFH
Hexane	680	18.0	45.0		2400	63	160	36	2.5	4/28/25 10:25	DFH
Isopropylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/28/25 10:25	DFH
m+p-Xylenes	39.6	36.0	90.0	J	170	160	390	36	2.5	4/28/25 10:25	DFH
Methyl methacrylate	ND	18.0	45.0		ND	74	180	36	2.5	4/28/25 10:25	DFH
Methylene chloride	ND	45.0	90.0		ND	160	310	36	2.5	4/28/25 10:25	DFH
Methyl-t-butyl ether (MTBE)	ND	18.0	45.0		ND	65	160	36	2.5	4/28/25 10:25	DFH
Naphthalene	ND	18.0	18.0		ND	94	94	36	2.5	4/28/25 10:25	DFH
o-Xylene	ND	18.0	45.0		ND	78	200	36	2.5	4/28/25 10:25	DFH
Propylene	ND	14.4	14.4		ND	25	25	36	2.5	4/28/25 10:25	DFH
Styrene	ND	18.0	45.0		ND	77	190	36	2.5	4/28/25 10:25	DFH
TBA	ND	45.0	45.0		ND	140	140	36	2.5	4/28/25 10:25	DFH
Tetrachloroethylene (PCE)	ND	18.0	45.0		ND	120	310	36	2.5	4/28/25 10:25	DFH
Tetrahydrofuran	ND	18.0	45.0		ND	53	130	36	2.5	4/28/25 10:25	DFH
Toluene	246	18.0	45.0		930	68	170	36	2.5	4/28/25 10:25	DFH
trans-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/28/25 10:25	DFH
trans-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	4/28/25 10:25	DFH
Trichloroethylene	ND	18.0	18.0		ND	97	97	36	2.5	4/28/25 10:25	DFH
Trichlorofluoromethane	ND	45.0	45.0		ND	250	250	36	2.5	4/28/25 10:25	DFH
Vinyl acetate	ND	18.0	45.0		ND	63	160	36	2.5	4/28/25 10:25	DFH
Vinyl bromide	ND	18.0	45.0		ND	79	200	36	2.5	4/28/25 10:25	DFH
Vinyl chloride	ND	18.0	45.0		ND	46	120	36	2.5	4/28/25 10:25	DFH
Xylenes, Total	ND	54.0	135		ND	230	590	36	2.5	4/28/25 10:25	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	107	80-120	4/28/25 10:25

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-37

Project Location:

Sample ID: 25D1774-01
Sample Matrix: Air
Sampled: 4/14/2025 14:10
Sample Type: SG

Canister ID: 063-00260::41718
Canister Size: 6
Flow Controller ID: 063-00453::13288
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 6
Receipt Vacuum(in Hg): 7.4

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-39 Project Location:

Sample ID: 25D1774-02 Canister ID: 063-00414::44632 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 14:00 Flow Controller ID: 063-00353::16661 Receipt Vacuum(in Hg): 9.2

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	68.8	60.0	60.0		96	84	84	6	1	5/7/25 9:43	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.5	80-120	5/7/25 9:43

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	4/30/25 16:29	MJRL
Carbon dioxide, as received	9.64	0.45	0.45		9	1	4/30/25 16:29	MJRL
Oxygen (O2), as received	9.24	0.45	0.45		9	1	4/30/25 16:29	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 16:29	MJRL
Nitrogen (N2), as received	78.5	18.0	18.0		18	1	5/5/25 20:44	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 16:29	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.80	4.50		ND	9.8	25	3.6	2.5	4/28/25 11:58	DFH
1,1,1,2-Tetrachloroethane	ND	1.80	4.50		ND	12	31	3.6	2.5	4/28/25 11:58	DFH
1,1,2,2-Tetrachloroethane	ND	1.80	4.50		ND	12	31	3.6	2.5	4/28/25 11:58	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.80	4.50		ND	14	34	3.6	2.5	4/28/25 11:58	DFH
1,1,2-Trichloroethane	ND	1.80	4.50		ND	9.8	25	3.6	2.5	4/28/25 11:58	DFH
1,1-Dichloroethane	ND	1.80	4.50		ND	7.3	18	3.6	2.5	4/28/25 11:58	DFH
1,1-Dichloroethylene	ND	1.80	4.50		ND	7.1	18	3.6	2.5	4/28/25 11:58	DFH
1,2,4-Trimethylbenzene	ND	1.80	4.50		ND	8.8	22	3.6	2.5	4/28/25 11:58	DFH
1,2-Dibromoethane (EDB)	ND	1.80	4.50		ND	14	35	3.6	2.5	4/28/25 11:58	DFH

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-39 Project Location:

Sample ID: 25D1774-02 Canister ID: 063-00414::44632 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 14:00 Flow Controller ID: 063-00353::16661 Receipt Vacuum(in Hg): 9.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.80	4.50		ND	11	27	3.6	2.5	4/28/25 11:58	DFH
1,2-Dichloroethane	ND	1.80	4.50		ND	7.3	18	3.6	2.5	4/28/25 11:58	DFH
1,2-Dichloropropane	ND	1.80	4.50		ND	8.3	21	3.6	2.5	4/28/25 11:58	DFH
1,2-Dichlorotetrafluoroethane	23.8	1.80	4.50		170	13	31	3.6	2.5	4/28/25 11:58	DFH
1,3,5-Trimethylbenzene	ND	1.80	4.50		ND	8.8	22	3.6	2.5	4/28/25 11:58	DFH
1,3-Butadiene	ND	1.80	4.50		ND	4.0	10.0	3.6	2.5	4/28/25 11:58	DFH
1,3-Dichlorobenzene	ND	1.80	4.50		ND	11	27	3.6	2.5	4/28/25 11:58	DFH
1,4-Dichlorobenzene	ND	1.80	4.50		ND	11	27	3.6	2.5	4/28/25 11:58	DFH
1,4-Dioxane	ND	1.80	4.50		ND	6.5	16	3.6	2.5	4/28/25 11:58	DFH
2-Butanone (MEK)	2.52	1.80	4.50	J	7.4	5.3	13	3.6	2.5	4/28/25 11:58	DFH
2-Chlorotoluene	ND	1.80	4.50		ND	9.3	23	3.6	2.5	4/28/25 11:58	DFH
2-Hexanone (MBK)	ND	1.80	4.50		ND	7.4	18	3.6	2.5	4/28/25 11:58	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.80	4.50		ND	21	52	3.6	2.5	4/28/25 11:58	DFH
Allyl chloride	ND	1.80	4.50		ND	5.6	14	3.6	2.5	4/28/25 11:58	DFH
Benzene	ND	1.80	1.80		ND	5.8	5.8	3.6	2.5	4/28/25 11:58	DFH
Benzyl Chloride	ND	1.80	4.50		ND	9.3	23	3.6	2.5	4/28/25 11:58	DFH
Bromoform	ND	1.80	4.50		ND	19	47	3.6	2.5	4/28/25 11:58	DFH
Bromomethane	ND	1.80	4.50		ND	7.0	17	3.6	2.5	4/28/25 11:58	DFH
Carbon Disulfide	6.93	4.50	4.50		22	14	14	3.6	2.5	4/28/25 11:58	DFH
Carbon Tetrachloride	ND	1.80	4.50		ND	11	28	3.6	2.5	4/28/25 11:58	DFH
Chlorobenzene	ND	1.80	4.50		ND	8.3	21	3.6	2.5	4/28/25 11:58	DFH
Chloroethane	ND	1.80	4.50		ND	4.7	12	3.6	2.5	4/28/25 11:58	DFH
Chloroform	ND	1.80	1.80		ND	8.8	8.8	3.6	2.5	4/28/25 11:58	DFH
Chloromethane	ND	1.80	4.50		ND	3.7	9.3	3.6	2.5	4/28/25 11:58	DFH
cis-1,2-Dichloroethylene	ND	1.80	4.50		ND	7.1	18	3.6	2.5	4/28/25 11:58	DFH
cis-1,3-Dichloropropene	ND	1.80	4.50		ND	8.2	20	3.6	2.5	4/28/25 11:58	DFH
Cyclohexane	2.52	1.80	4.50	J	8.7	6.2	15	3.6	2.5	4/28/25 11:58	DFH
Dibromochloromethane	ND	1.80	4.50		ND	15	38	3.6	2.5	4/28/25 11:58	DFH
Dichlorodifluoromethane	88.6	4.50	4.50		440	22	22	3.6	2.5	4/28/25 11:58	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-39

Project Location:

Sample ID: 25D1774-02
Sample Matrix: Air
Sampled: 4/15/2025 14:00
Sample Type: SG

Canister ID: 063-00414::44632
Canister Size: 6
Flow Controller ID: 063-00353::16661
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 9.2

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.80	4.50		ND	6.5	16	3.6	2.5	4/28/25 11:58	DFH
Ethylbenzene	ND	1.80	4.50		ND	7.8	20	3.6	2.5	4/28/25 11:58	DFH
Heptane	2.16	1.80	4.50	J	8.9	7.4	18	3.6	2.5	4/28/25 11:58	DFH
Hexachlorobutadiene	ND	1.80	4.50		ND	19	48	3.6	2.5	4/28/25 11:58	DFH
Hexane	7.29	1.80	4.50		26	6.3	16	3.6	2.5	4/28/25 11:58	DFH
Isopropylbenzene	ND	1.80	4.50		ND	8.8	22	3.6	2.5	4/28/25 11:58	DFH
m+p-Xylenes	ND	3.60	9.00		ND	16	39	3.6	2.5	4/28/25 11:58	DFH
Methyl methacrylate	ND	1.80	4.50		ND	7.4	18	3.6	2.5	4/28/25 11:58	DFH
Methylene chloride	ND	4.50	9.00		ND	16	31	3.6	2.5	4/28/25 11:58	DFH
Methyl-t-butyl ether (MTBE)	ND	1.80	4.50		ND	6.5	16	3.6	2.5	4/28/25 11:58	DFH
Naphthalene	2.70	1.80	1.80		14	9.4	9.4	3.6	2.5	4/28/25 11:58	DFH
o-Xylene	ND	1.80	4.50		ND	7.8	20	3.6	2.5	4/28/25 11:58	DFH
Propylene	ND	1.44	1.44		ND	2.5	2.5	3.6	2.5	4/28/25 11:58	DFH
Styrene	ND	1.80	4.50		ND	7.7	19	3.6	2.5	4/28/25 11:58	DFH
TBA	ND	4.50	4.50		ND	14	14	3.6	2.5	4/28/25 11:58	DFH
Tetrachloroethylene (PCE)	ND	1.80	4.50		ND	12	31	3.6	2.5	4/28/25 11:58	DFH
Tetrahydrofuran	ND	1.80	4.50		ND	5.3	13	3.6	2.5	4/28/25 11:58	DFH
Toluene	ND	1.80	4.50		ND	6.8	17	3.6	2.5	4/28/25 11:58	DFH
trans-1,2-Dichloroethylene	ND	1.80	4.50		ND	7.1	18	3.6	2.5	4/28/25 11:58	DFH
trans-1,3-Dichloropropene	ND	1.80	4.50		ND	8.2	20	3.6	2.5	4/28/25 11:58	DFH
Trichloroethylene	ND	1.80	1.80		ND	9.7	9.7	3.6	2.5	4/28/25 11:58	DFH
Trichlorofluoromethane	ND	4.50	4.50		ND	25	25	3.6	2.5	4/28/25 11:58	DFH
Vinyl acetate	ND	1.80	4.50		ND	6.3	16	3.6	2.5	4/28/25 11:58	DFH
Vinyl bromide	ND	1.80	4.50		ND	7.9	20	3.6	2.5	4/28/25 11:58	DFH
Vinyl chloride	ND	1.80	4.50		ND	4.6	12	3.6	2.5	4/28/25 11:58	DFH
Xylenes, Total	ND	5.40	13.5		ND	23	59	3.6	2.5	4/28/25 11:58	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	100	80-120	4/28/25 11:58

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-39

Project Location:

Sample ID: 25D1774-02
Sample Matrix: Air
Sampled: 4/15/2025 14:00
Sample Type: SG

Canister ID: 063-00414::44632
Canister Size: 6
Flow Controller ID: 063-00353::16661
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 9.2

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-36 Project Location:

Sample ID: 25D1774-03 Canister ID: 063-00777::47526 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/14/2025 13:12 Flow Controller ID: 063-00914::H20098 Receipt Vacuum(in Hg): 7.6

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	1800	1800		ND	2500	2500	180	1	5/6/25 15:08	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.8	80-120	5/6/25 15:08

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	62.7	0.45	0.45		9	1	4/30/25 17:15	NSD
Carbon dioxide, as received	38.0	0.45	0.45		9	1	4/30/25 17:15	NSD
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/30/25 17:15	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 17:15	NSD
Nitrogen (N2), as received	ND	9.00	9.00		9	1	4/30/25 17:15	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 17:15	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/28/25 12:41	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/28/25 12:41	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/28/25 12:41	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	4/28/25 12:41	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/28/25 12:41	DFH
1,1-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/28/25 12:41	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/28/25 12:41	DFH
1,2,4-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/28/25 12:41	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	4/28/25 12:41	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 18, 2025 8:00
Date Issued: May 9, 2025 17:01

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGP-36
Sample ID: 25D1774-03
Sample Matrix: Air
Sampled: 4/14/2025 13:12
Sample Type: SG

Project Location:
Canister ID: 063-00777::47526
Canister Size: 6
Flow Controller ID: 063-00914::H20098
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.6

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/28/25 12:41	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/28/25 12:41	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	4/28/25 12:41	DFH
1,2-Dichlorotetrafluoroethane	166	36.0	90.0		1200	250	630	72	2.5	4/28/25 12:41	DFH
1,3,5-Trimethylbenzene	43.2	36.0	90.0	J	210	180	440	72	2.5	4/28/25 12:41	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	4/28/25 12:41	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/28/25 12:41	DFH
1,4-Dichlorobenzene	37.8	36.0	90.0	J	230	220	540	72	2.5	4/28/25 12:41	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 12:41	DFH
2-Butanone (MEK)	ND	36.0	90.0		ND	110	270	72	2.5	4/28/25 12:41	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	4/28/25 12:41	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	4/28/25 12:41	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	4/28/25 12:41	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	4/28/25 12:41	DFH
Benzene	655	36.0	36.0		2100	120	120	72	2.5	4/28/25 12:41	DFH
Benzyl Chloride	ND	36.0	90.0		ND	190	470	72	2.5	4/28/25 12:41	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	4/28/25 12:41	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	4/28/25 12:41	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	4/28/25 12:41	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	4/28/25 12:41	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	4/28/25 12:41	DFH
Chloroethane	81.0	36.0	90.0	J	210	95	240	72	2.5	4/28/25 12:41	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	4/28/25 12:41	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	4/28/25 12:41	DFH
cis-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/28/25 12:41	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/28/25 12:41	DFH
Cyclohexane	983	36.0	90.0		3400	120	310	72	2.5	4/28/25 12:41	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	4/28/25 12:41	DFH
Dichlorodifluoromethane	248	90.0	90.0		1200	450	450	72	2.5	4/28/25 12:41	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-36 Project Location:

Sample ID: 25D1774-03 Canister ID: 063-00777::47526 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/14/2025 13:12 Flow Controller ID: 063-00914::H20098 Receipt Vacuum(in Hg): 7.6

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 12:41	DFH
Ethylbenzene	75.6	36.0	90.0	J	330	160	390	72	2.5	4/28/25 12:41	DFH
Heptane	3590	36.0	90.0		15000	150	370	72	2.5	4/28/25 12:41	DFH
Hexachlorobutadiene	ND	36.0	90.0		ND	380	960	72	2.5	4/28/25 12:41	DFH
Hexane	1270	36.0	90.0		4500	130	320	72	2.5	4/28/25 12:41	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/28/25 12:41	DFH
m+p-Xylenes	ND	72.0	180		ND	310	780	72	2.5	4/28/25 12:41	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	4/28/25 12:41	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	4/28/25 12:41	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 12:41	DFH
Naphthalene	ND	36.0	36.0		ND	190	190	72	2.5	4/28/25 12:41	DFH
o-Xylene	ND	36.0	90.0		ND	160	390	72	2.5	4/28/25 12:41	DFH
Propylene	1860	28.8	28.8		3200	50	50	72	2.5	4/28/25 12:41	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	4/28/25 12:41	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	4/28/25 12:41	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	4/28/25 12:41	DFH
Tetrahydrofuran	73.8	36.0	90.0	J	220	110	270	72	2.5	4/28/25 12:41	DFH
Toluene	ND	36.0	90.0		ND	140	340	72	2.5	4/28/25 12:41	DFH
trans-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/28/25 12:41	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/28/25 12:41	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	4/28/25 12:41	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	4/28/25 12:41	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 12:41	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	4/28/25 12:41	DFH
Vinyl chloride	93.6	36.0	90.0		240	92	230	72	2.5	4/28/25 12:41	DFH
Xylenes, Total	ND	108	270		ND	470	1200	72	2.5	4/28/25 12:41	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	103	80-120	4/28/25 12:41

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-36

Project Location:

Sample ID: 25D1774-03
Sample Matrix: Air
Sampled: 4/14/2025 13:12
Sample Type: SG

Canister ID: 063-00777::47526
Canister Size: 6
Flow Controller ID: 063-00914::H20098
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.6

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-35 Project Location:

Sample ID: 25D1774-04 Canister ID: 063-00868::49325 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 4

Sampled: 4/14/2025 12:45 Flow Controller ID: 063-00923::20255 Receipt Vacuum(in Hg): 2.4

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	1800	1800		ND	2500	2500	180	1	5/6/25 15:47	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	96.2	80-120	5/6/25 15:47

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	55.9	0.45	0.45		9	1	4/30/25 18:00	MJRL
Carbon dioxide, as received	30.8	0.45	0.45		9	1	4/30/25 18:00	MJRL
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/30/25 18:00	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 18:00	MJRL
Nitrogen (N2), as received	14.1	9.00	9.00		9	1	4/30/25 18:00	MJRL
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 18:00	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/28/25 13:23	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/28/25 13:23	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/28/25 13:23	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	4/28/25 13:23	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/28/25 13:23	DFH
1,1-Dichloroethane	218	36.0	90.0		880	150	360	72	2.5	4/28/25 13:23	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/28/25 13:23	DFH
1,2,4-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/28/25 13:23	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	4/28/25 13:23	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-35 Project Location:

Sample ID: 25D1774-04 Canister ID: 063-00868::49325 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 4

Sampled: 4/14/2025 12:45 Flow Controller ID: 063-00923::20255 Receipt Vacuum(in Hg): 2.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/28/25 13:23	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/28/25 13:23	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	4/28/25 13:23	DFH
1,2-Dichlorotetrafluoroethane	171	36.0	90.0		1200	250	630	72	2.5	4/28/25 13:23	DFH
1,3,5-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/28/25 13:23	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	4/28/25 13:23	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/28/25 13:23	DFH
1,4-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/28/25 13:23	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 13:23	DFH
2-Butanone (MEK)	ND	36.0	90.0		ND	110	270	72	2.5	4/28/25 13:23	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	4/28/25 13:23	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	4/28/25 13:23	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	4/28/25 13:23	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	4/28/25 13:23	DFH
Benzene	36.0	36.0	36.0		120	120	120	72	2.5	4/28/25 13:23	DFH
Benzyl Chloride	ND	36.0	90.0		ND	190	470	72	2.5	4/28/25 13:23	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	4/28/25 13:23	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	4/28/25 13:23	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	4/28/25 13:23	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	4/28/25 13:23	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	4/28/25 13:23	DFH
Chloroethane	322	36.0	90.0		850	95	240	72	2.5	4/28/25 13:23	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	4/28/25 13:23	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	4/28/25 13:23	DFH
cis-1,2-Dichloroethylene	50.4	36.0	90.0	J	200	140	360	72	2.5	4/28/25 13:23	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/28/25 13:23	DFH
Cyclohexane	895	36.0	90.0		3100	120	310	72	2.5	4/28/25 13:23	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	4/28/25 13:23	DFH
Dichlorodifluoromethane	232	90.0	90.0		1100	450	450	72	2.5	4/28/25 13:23	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-35 Project Location:

Sample ID: 25D1774-04 Canister ID: 063-00868::49325 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 4

Sampled: 4/14/2025 12:45 Flow Controller ID: 063-00923::20255 Receipt Vacuum(in Hg): 2.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 13:23	DFH
Ethylbenzene	ND	36.0	90.0		ND	160	390	72	2.5	4/28/25 13:23	DFH
Heptane	2900	36.0	90.0		12000	150	370	72	2.5	4/28/25 13:23	DFH
Hexachlorobutadiene	ND	36.0	90.0		ND	380	960	72	2.5	4/28/25 13:23	DFH
Hexane	1080	36.0	90.0		3800	130	320	72	2.5	4/28/25 13:23	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/28/25 13:23	DFH
m+p-Xylenes	ND	72.0	180		ND	310	780	72	2.5	4/28/25 13:23	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	4/28/25 13:23	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	4/28/25 13:23	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 13:23	DFH
Naphthalene	ND	36.0	36.0		ND	190	190	72	2.5	4/28/25 13:23	DFH
o-Xylene	ND	36.0	90.0		ND	160	390	72	2.5	4/28/25 13:23	DFH
Propylene	1570	28.8	28.8		2700	50	50	72	2.5	4/28/25 13:23	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	4/28/25 13:23	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	4/28/25 13:23	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	4/28/25 13:23	DFH
Tetrahydrofuran	ND	36.0	90.0		ND	110	270	72	2.5	4/28/25 13:23	DFH
Toluene	ND	36.0	90.0		ND	140	340	72	2.5	4/28/25 13:23	DFH
trans-1,2-Dichloroethylene	70.2	36.0	90.0	J	280	140	360	72	2.5	4/28/25 13:23	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/28/25 13:23	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	4/28/25 13:23	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	4/28/25 13:23	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 13:23	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	4/28/25 13:23	DFH
Vinyl chloride	194	36.0	90.0		500	92	230	72	2.5	4/28/25 13:23	DFH
Xylenes, Total	ND	108	270		ND	470	1200	72	2.5	4/28/25 13:23	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	104	80-120	4/28/25 13:23

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Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-35

Project Location:

Sample ID: 25D1774-04
Sample Matrix: Air
Sampled: 4/14/2025 12:45
Sample Type: SG

Canister ID: 063-00868::49325
Canister Size: 6
Flow Controller ID: 063-00923::20255
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 4
Receipt Vacuum(in Hg): 2.4

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-22 Project Location:

Sample ID: 25D1774-05 Canister ID: 063-00231::38753 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 14:00 Flow Controller ID: 063-00531::14091 Receipt Vacuum(in Hg): 5.4

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	303	180	180		420	250	250	18	1	5/7/25 11:10	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	91.4	80-120	5/7/25 11:10

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	62.0	0.45	0.45		9	1	4/30/25 18:45	MJRL
Carbon dioxide, as received	38.0	0.45	0.45		9	1	4/30/25 18:45	MJRL
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/30/25 18:45	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 18:45	MJRL
Nitrogen (N2), as received	ND	9.00	9.00		9	1	4/30/25 18:45	MJRL
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 18:45	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/28/25 14:07	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/28/25 14:07	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/28/25 14:07	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	4/28/25 14:07	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/28/25 14:07	DFH
1,1-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/28/25 14:07	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/28/25 14:07	DFH
1,2,4-Trimethylbenzene	46.8	36.0	90.0	J	230	180	440	72	2.5	4/28/25 14:07	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	4/28/25 14:07	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-22 Project Location:

Sample ID: 25D1774-05 Canister ID: 063-00231::38753 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 14:00 Flow Controller ID: 063-00531::14091 Receipt Vacuum(in Hg): 5.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/28/25 14:07	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/28/25 14:07	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	4/28/25 14:07	DFH
1,2-Dichlorotetrafluoroethane	106	36.0	90.0		740	250	630	72	2.5	4/28/25 14:07	DFH
1,3,5-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/28/25 14:07	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	4/28/25 14:07	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/28/25 14:07	DFH
1,4-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/28/25 14:07	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 14:07	DFH
2-Butanone (MEK)	ND	36.0	90.0		ND	110	270	72	2.5	4/28/25 14:07	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	4/28/25 14:07	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	4/28/25 14:07	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	4/28/25 14:07	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	4/28/25 14:07	DFH
Benzene	832	36.0	36.0		2700	120	120	72	2.5	4/28/25 14:07	DFH
Benzyl Chloride	ND	36.0	90.0		ND	190	470	72	2.5	4/28/25 14:07	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	4/28/25 14:07	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	4/28/25 14:07	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	4/28/25 14:07	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	4/28/25 14:07	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	4/28/25 14:07	DFH
Chloroethane	54.0	36.0	90.0	J	140	95	240	72	2.5	4/28/25 14:07	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	4/28/25 14:07	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	4/28/25 14:07	DFH
cis-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/28/25 14:07	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/28/25 14:07	DFH
Cyclohexane	898	36.0	90.0		3100	120	310	72	2.5	4/28/25 14:07	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	4/28/25 14:07	DFH
Dichlorodifluoromethane	ND	90.0	90.0		ND	450	450	72	2.5	4/28/25 14:07	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-22 Project Location:

Sample ID: 25D1774-05 Canister ID: 063-00231::38753 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 14:00 Flow Controller ID: 063-00531::14091 Receipt Vacuum(in Hg): 5.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 14:07	DFH
Ethylbenzene	936	36.0	90.0		4100	160	390	72	2.5	4/28/25 14:07	DFH
Heptane	3170	36.0	90.0		13000	150	370	72	2.5	4/28/25 14:07	DFH
Hexachlorobutadiene	ND	36.0	90.0		ND	380	960	72	2.5	4/28/25 14:07	DFH
Hexane	900	36.0	90.0		3200	130	320	72	2.5	4/28/25 14:07	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/28/25 14:07	DFH
m+p-Xylenes	1120	72.0	180		4800	310	780	72	2.5	4/28/25 14:07	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	4/28/25 14:07	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	4/28/25 14:07	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 14:07	DFH
Naphthalene	ND	36.0	36.0		ND	190	190	72	2.5	4/28/25 14:07	DFH
o-Xylene	173	36.0	90.0		750	160	390	72	2.5	4/28/25 14:07	DFH
Propylene	ND	28.8	28.8		ND	50	50	72	2.5	4/28/25 14:07	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	4/28/25 14:07	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	4/28/25 14:07	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	4/28/25 14:07	DFH
Tetrahydrofuran	ND	36.0	90.0		ND	110	270	72	2.5	4/28/25 14:07	DFH
Toluene	554	36.0	90.0		2100	140	340	72	2.5	4/28/25 14:07	DFH
trans-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/28/25 14:07	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/28/25 14:07	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	4/28/25 14:07	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	4/28/25 14:07	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/28/25 14:07	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	4/28/25 14:07	DFH
Vinyl chloride	270	36.0	90.0		690	92	230	72	2.5	4/28/25 14:07	DFH
Xylenes, Total	1290	108	270		5600	470	1200	72	2.5	4/28/25 14:07	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	99.4	80-120	4/28/25 14:07

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-22

Project Location:

Sample ID: 25D1774-05
Sample Matrix: Air
Sampled: 4/11/2025 14:00
Sample Type: SG

Canister ID: 063-00231::38753
Canister Size: 6
Flow Controller ID: 063-00531::14091
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.4

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-30 Project Location:

Sample ID: 25D1774-06 Canister ID: 063-00579::46897 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/14/2025 12:15 Flow Controller ID: 063-00493::17207 Receipt Vacuum(in Hg): 6.2

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	60.0	60.0		ND	84	84	6	1	5/7/25 10:27	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	100	80-120	5/7/25 10:27

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	4/30/25 19:31	MJRL
Carbon dioxide, as received	0.87	0.45	0.45		9	1	4/30/25 19:31	MJRL
Oxygen (O2), as received	20.7	0.45	0.45		9	1	4/30/25 19:31	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 19:31	MJRL
Nitrogen (N2), as received	76.0	18.0	18.0		18	1	5/5/25 20:59	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 19:31	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/28/25 16:25	DFH
1,1,1,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/28/25 16:25	DFH
1,1,2,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/28/25 16:25	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.50	3.75		ND	11	29	3	2.5	4/28/25 16:25	DFH
1,1,2-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/28/25 16:25	DFH
1,1-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/28/25 16:25	DFH
1,1-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/28/25 16:25	DFH
1,2,4-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/28/25 16:25	DFH
1,2-Dibromoethane (EDB)	ND	1.50	3.75		ND	12	29	3	2.5	4/28/25 16:25	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-30

Project Location:

Sample ID: 25D1774-06
Sample Matrix: Air
Sampled: 4/14/2025 12:15
Sample Type: SG

Canister ID: 063-00579::46897
Canister Size: 6
Flow Controller ID: 063-00493::17207
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.2

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/28/25 16:25	DFH
1,2-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/28/25 16:25	DFH
1,2-Dichloropropane	ND	1.50	3.75		ND	6.9	17	3	2.5	4/28/25 16:25	DFH
1,2-Dichlorotetrafluoroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/28/25 16:25	DFH
1,3,5-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/28/25 16:25	DFH
1,3-Butadiene	ND	1.50	3.75		ND	3.3	8.3	3	2.5	4/28/25 16:25	DFH
1,3-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/28/25 16:25	DFH
1,4-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/28/25 16:25	DFH
1,4-Dioxane	ND	1.50	3.75		ND	5.4	14	3	2.5	4/28/25 16:25	DFH
2-Butanone (MEK)	ND	1.50	3.75		ND	4.4	11	3	2.5	4/28/25 16:25	DFH
2-Chlorotoluene	ND	1.50	3.75		ND	7.8	19	3	2.5	4/28/25 16:25	DFH
2-Hexanone (MBK)	ND	1.50	3.75		ND	6.1	15	3	2.5	4/28/25 16:25	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.50	3.75		ND	17	43	3	2.5	4/28/25 16:25	DFH
Allyl chloride	ND	1.50	3.75		ND	4.7	12	3	2.5	4/28/25 16:25	DFH
Benzene	ND	1.50	1.50		ND	4.8	4.8	3	2.5	4/28/25 16:25	DFH
Benzyl Chloride	ND	1.50	3.75		ND	7.8	19	3	2.5	4/28/25 16:25	DFH
Bromoform	ND	1.50	3.75		ND	16	39	3	2.5	4/28/25 16:25	DFH
Bromomethane	ND	1.50	3.75		ND	5.8	15	3	2.5	4/28/25 16:25	DFH
Carbon Disulfide	ND	3.75	3.75		ND	12	12	3	2.5	4/28/25 16:25	DFH
Carbon Tetrachloride	ND	1.50	3.75		ND	9.4	24	3	2.5	4/28/25 16:25	DFH
Chlorobenzene	ND	1.50	3.75		ND	6.9	17	3	2.5	4/28/25 16:25	DFH
Chloroethane	ND	1.50	3.75		ND	4.0	9.9	3	2.5	4/28/25 16:25	DFH
Chloroform	ND	1.50	1.50		ND	7.3	7.3	3	2.5	4/28/25 16:25	DFH
Chloromethane	ND	1.50	3.75		ND	3.1	7.7	3	2.5	4/28/25 16:25	DFH
cis-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/28/25 16:25	DFH
cis-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/28/25 16:25	DFH
Cyclohexane	ND	1.50	3.75		ND	5.2	13	3	2.5	4/28/25 16:25	DFH
Dibromochloromethane	ND	1.50	3.75		ND	13	32	3	2.5	4/28/25 16:25	DFH
Dichlorodifluoromethane	ND	3.75	3.75		ND	19	19	3	2.5	4/28/25 16:25	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-30
Project Location:

Sample ID: 25D1774-06
Sample Matrix: Air
Sampled: 4/14/2025 12:15
Sample Type: SG

Canister ID: 063-00579::46897
Canister Size: 6
Flow Controller ID: 063-00493::17207
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.2

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.50	3.75		ND	5.4	14	3	2.5	4/28/25 16:25	DFH
Ethylbenzene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/28/25 16:25	DFH
Heptane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/28/25 16:25	DFH
Hexachlorobutadiene	ND	1.50	3.75		ND	16	40	3	2.5	4/28/25 16:25	DFH
Hexane	ND	1.50	3.75		ND	5.3	13	3	2.5	4/28/25 16:25	DFH
Isopropylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/28/25 16:25	DFH
m+p-Xylenes	ND	3.00	7.50		ND	13	33	3	2.5	4/28/25 16:25	DFH
Methyl methacrylate	ND	1.50	3.75		ND	6.1	15	3	2.5	4/28/25 16:25	DFH
Methylene chloride	ND	3.75	7.50		ND	13	26	3	2.5	4/28/25 16:25	DFH
Methyl-t-butyl ether (MTBE)	ND	1.50	3.75		ND	5.4	14	3	2.5	4/28/25 16:25	DFH
Naphthalene	1.58	1.50	1.50		8.3	7.9	7.9	3	2.5	4/28/25 16:25	DFH
o-Xylene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/28/25 16:25	DFH
Propylene	ND	1.20	1.20		ND	2.1	2.1	3	2.5	4/28/25 16:25	DFH
Styrene	ND	1.50	3.75		ND	6.4	16	3	2.5	4/28/25 16:25	DFH
TBA	ND	3.75	3.75		ND	11	11	3	2.5	4/28/25 16:25	DFH
Tetrachloroethylene (PCE)	ND	1.50	3.75		ND	10	25	3	2.5	4/28/25 16:25	DFH
Tetrahydrofuran	ND	1.50	3.75		ND	4.4	11	3	2.5	4/28/25 16:25	DFH
Toluene	ND	1.50	3.75		ND	5.7	14	3	2.5	4/28/25 16:25	DFH
trans-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/28/25 16:25	DFH
trans-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/28/25 16:25	DFH
Trichloroethylene	ND	1.50	1.50		ND	8.1	8.1	3	2.5	4/28/25 16:25	DFH
Trichlorofluoromethane	ND	3.75	3.75		ND	21	21	3	2.5	4/28/25 16:25	DFH
Vinyl acetate	ND	1.50	3.75		ND	5.3	13	3	2.5	4/28/25 16:25	DFH
Vinyl bromide	ND	1.50	3.75		ND	6.6	16	3	2.5	4/28/25 16:25	DFH
Vinyl chloride	ND	1.50	3.75		ND	3.8	9.6	3	2.5	4/28/25 16:25	DFH
Xylenes, Total	ND	4.50	11.2		ND	20	49	3	2.5	4/28/25 16:25	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	96.4	80-120	4/28/25 16:25

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-30

Project Location:

Sample ID: 25D1774-06
Sample Matrix: Air
Sampled: 4/14/2025 12:15
Sample Type: SG

Canister ID: 063-00579::46897
Canister Size: 6
Flow Controller ID: 063-00493::17207
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.2

ENTHALPY ANALYTICAL

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Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-23 Project Location:

Sample ID: 25D1774-07 Canister ID: 063-00783::48094 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 13:40 Flow Controller ID: 063-00917::20060 Receipt Vacuum(in Hg): 5.8

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	4910	900	900		6900	1300	1300	90	1	5/6/25 17:48	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	97.8	80-120	5/6/25 17:48

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	65.6	0.45	0.45		9	1	4/30/25 20:16	MJRL
Carbon dioxide, as received	35.5	0.45	0.45		9	1	4/30/25 20:16	MJRL
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/30/25 20:16	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 20:16	MJRL
Nitrogen (N2), as received	ND	9.00	9.00		9	1	4/30/25 20:16	MJRL
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 20:16	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	4/28/25 17:08	DFH
1,1,1,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	4/28/25 17:08	DFH
1,1,2,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	4/28/25 17:08	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	18.0	45.0		ND	140	340	36	2.5	4/28/25 17:08	DFH
1,1,2-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	4/28/25 17:08	DFH
1,1-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	4/28/25 17:08	DFH
1,1-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/28/25 17:08	DFH
1,2,4-Trimethylbenzene	125	18.0	45.0		610	88	220	36	2.5	4/28/25 17:08	DFH
1,2-Dibromoethane (EDB)	ND	18.0	45.0		ND	140	350	36	2.5	4/28/25 17:08	DFH

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Certificate of Analysis

Final Report

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-23 Project Location:

Sample ID: 25D1774-07 Canister ID: 063-00783::48094 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 13:40 Flow Controller ID: 063-00917::20060 Receipt Vacuum(in Hg): 5.8

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/28/25 17:08	DFH
1,2-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	4/28/25 17:08	DFH
1,2-Dichloropropane	ND	18.0	45.0		ND	83	210	36	2.5	4/28/25 17:08	DFH
1,2-Dichlorotetrafluoroethane	216	18.0	45.0		1500	130	310	36	2.5	4/28/25 17:08	DFH
1,3,5-Trimethylbenzene	76.5	18.0	45.0		380	88	220	36	2.5	4/28/25 17:08	DFH
1,3-Butadiene	ND	18.0	45.0		ND	40	100	36	2.5	4/28/25 17:08	DFH
1,3-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/28/25 17:08	DFH
1,4-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/28/25 17:08	DFH
1,4-Dioxane	ND	18.0	45.0		ND	65	160	36	2.5	4/28/25 17:08	DFH
2-Butanone (MEK)	ND	18.0	45.0		ND	53	130	36	2.5	4/28/25 17:08	DFH
2-Chlorotoluene	ND	18.0	45.0		ND	93	230	36	2.5	4/28/25 17:08	DFH
2-Hexanone (MBK)	ND	18.0	45.0		ND	74	180	36	2.5	4/28/25 17:08	DFH
4-Methyl-2-pentanone (MIBK)	ND	18.0	45.0		ND	210	520	36	2.5	4/28/25 17:08	DFH
Allyl chloride	ND	18.0	45.0		ND	56	140	36	2.5	4/28/25 17:08	DFH
Benzene	301	18.0	18.0		960	58	58	36	2.5	4/28/25 17:08	DFH
Benzyl Chloride	ND	18.0	45.0		ND	93	230	36	2.5	4/28/25 17:08	DFH
Bromoform	ND	18.0	45.0		ND	190	470	36	2.5	4/28/25 17:08	DFH
Bromomethane	ND	18.0	45.0		ND	70	170	36	2.5	4/28/25 17:08	DFH
Carbon Disulfide	ND	45.0	45.0		ND	140	140	36	2.5	4/28/25 17:08	DFH
Carbon Tetrachloride	ND	18.0	45.0		ND	110	280	36	2.5	4/28/25 17:08	DFH
Chlorobenzene	ND	18.0	45.0		ND	83	210	36	2.5	4/28/25 17:08	DFH
Chloroethane	39.6	18.0	45.0	J	100	47	120	36	2.5	4/28/25 17:08	DFH
Chloroform	ND	18.0	18.0		ND	88	88	36	2.5	4/28/25 17:08	DFH
Chloromethane	ND	18.0	45.0		ND	37	93	36	2.5	4/28/25 17:08	DFH
cis-1,2-Dichloroethylene	47.7	18.0	45.0		190	71	180	36	2.5	4/28/25 17:08	DFH
cis-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	4/28/25 17:08	DFH
Cyclohexane	239	18.0	45.0		820	62	150	36	2.5	4/28/25 17:08	DFH
Dibromochloromethane	ND	18.0	45.0		ND	150	380	36	2.5	4/28/25 17:08	DFH
Dichlorodifluoromethane	880	45.0	45.0		4400	220	220	36	2.5	4/28/25 17:08	DFH

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Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-23 Project Location:

Sample ID: 25D1774-07 Canister ID: 063-00783::48094 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 13:40 Flow Controller ID: 063-00917::20060 Receipt Vacuum(in Hg): 5.8

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	18.0	45.0		ND	65	160	36	2.5	4/28/25 17:08	DFH
Ethylbenzene	1790	18.0	45.0		7800	78	200	36	2.5	4/28/25 17:08	DFH
Heptane	779	18.0	45.0		3200	74	180	36	2.5	4/28/25 17:08	DFH
Hexachlorobutadiene	ND	18.0	45.0		ND	190	480	36	2.5	4/28/25 17:08	DFH
Hexane	403	18.0	45.0		1400	63	160	36	2.5	4/28/25 17:08	DFH
Isopropylbenzene	18.0	18.0	45.0	J	88	88	220	36	2.5	4/28/25 17:08	DFH
m+p-Xylenes	2470	36.0	90.0		11000	160	390	36	2.5	4/28/25 17:08	DFH
Methyl methacrylate	ND	18.0	45.0		ND	74	180	36	2.5	4/28/25 17:08	DFH
Methylene chloride	ND	45.0	90.0		ND	160	310	36	2.5	4/28/25 17:08	DFH
Methyl-t-butyl ether (MTBE)	ND	18.0	45.0		ND	65	160	36	2.5	4/28/25 17:08	DFH
Naphthalene	ND	18.0	18.0		ND	94	94	36	2.5	4/28/25 17:08	DFH
o-Xylene	128	18.0	45.0		550	78	200	36	2.5	4/28/25 17:08	DFH
Propylene	1390	14.4	14.4		2400	25	25	36	2.5	4/28/25 17:08	DFH
Styrene	ND	18.0	45.0		ND	77	190	36	2.5	4/28/25 17:08	DFH
TBA	ND	45.0	45.0		ND	140	140	36	2.5	4/28/25 17:08	DFH
Tetrachloroethylene (PCE)	19.8	18.0	45.0	J	130	120	310	36	2.5	4/28/25 17:08	DFH
Tetrahydrofuran	96.3	18.0	45.0		280	53	130	36	2.5	4/28/25 17:08	DFH
Toluene	121	18.0	45.0		450	68	170	36	2.5	4/28/25 17:08	DFH
trans-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/28/25 17:08	DFH
trans-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	4/28/25 17:08	DFH
Trichloroethylene	ND	18.0	18.0		ND	97	97	36	2.5	4/28/25 17:08	DFH
Trichlorofluoromethane	172	45.0	45.0		970	250	250	36	2.5	4/28/25 17:08	DFH
Vinyl acetate	ND	18.0	45.0		ND	63	160	36	2.5	4/28/25 17:08	DFH
Vinyl bromide	ND	18.0	45.0		ND	79	200	36	2.5	4/28/25 17:08	DFH
Vinyl chloride	230	18.0	45.0		590	46	120	36	2.5	4/28/25 17:08	DFH
Xylenes, Total	2600	54.0	135		11000	230	590	36	2.5	4/28/25 17:08	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	107	80-120	4/28/25 17:08

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-23

Project Location:

Sample ID: 25D1774-07
Sample Matrix: Air
Sampled: 4/11/2025 13:40
Sample Type: SG

Canister ID: 063-00783::48094
Canister Size: 6
Flow Controller ID: 063-00917::20060
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.8

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-21 Project Location:

Sample ID: 25D1774-08 Canister ID: 063-00867::49327 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 15:00 Flow Controller ID: 063-00805::20122 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	180	180		ND	250	250	18	1	5/7/25 11:51	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	90.6	80-120	5/7/25 11:51

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	16.8	0.45	0.45		9	1	4/30/25 21:01	MJRL
Carbon dioxide, as received	22.9	0.45	0.45		9	1	4/30/25 21:01	MJRL
Oxygen (O2), as received	ND	0.45	0.45		9	1	4/30/25 21:01	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 21:01	MJRL
Nitrogen (N2), as received	58.9	18.0	18.0		18	1	5/5/25 21:29	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 21:01	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/29/25 10:17	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/29/25 10:17	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	4/29/25 10:17	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	4/29/25 10:17	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	4/29/25 10:17	DFH
1,1-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/29/25 10:17	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/29/25 10:17	DFH
1,2,4-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/29/25 10:17	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	4/29/25 10:17	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-21 Project Location:

Sample ID: 25D1774-08 Canister ID: 063-00867::49327 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 15:00 Flow Controller ID: 063-00805::20122 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/29/25 10:17	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	4/29/25 10:17	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	4/29/25 10:17	DFH
1,2-Dichlorotetrafluoroethane	ND	36.0	90.0		ND	250	630	72	2.5	4/29/25 10:17	DFH
1,3,5-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/29/25 10:17	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	4/29/25 10:17	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/29/25 10:17	DFH
1,4-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	4/29/25 10:17	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	4/29/25 10:17	DFH
2-Butanone (MEK)	ND	36.0	90.0		ND	110	270	72	2.5	4/29/25 10:17	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	4/29/25 10:17	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	4/29/25 10:17	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	4/29/25 10:17	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	4/29/25 10:17	DFH
Benzene	254	36.0	36.0		810	120	120	72	2.5	4/29/25 10:17	DFH
Benzyl Chloride	ND	36.0	90.0		ND	190	470	72	2.5	4/29/25 10:17	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	4/29/25 10:17	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	4/29/25 10:17	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	4/29/25 10:17	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	4/29/25 10:17	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	4/29/25 10:17	DFH
Chloroethane	ND	36.0	90.0		ND	95	240	72	2.5	4/29/25 10:17	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	4/29/25 10:17	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	4/29/25 10:17	DFH
cis-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/29/25 10:17	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/29/25 10:17	DFH
Cyclohexane	896	36.0	90.0		3100	120	310	72	2.5	4/29/25 10:17	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	4/29/25 10:17	DFH
Dichlorodifluoromethane	ND	90.0	90.0		ND	450	450	72	2.5	4/29/25 10:17	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-21 Project Location:

Sample ID: 25D1774-08 Canister ID: 063-00867::49327 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 15:00 Flow Controller ID: 063-00805::20122 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/29/25 10:17	DFH
Ethylbenzene	ND	36.0	90.0		ND	160	390	72	2.5	4/29/25 10:17	DFH
Heptane	2000	36.0	90.0		8200	150	370	72	2.5	4/29/25 10:17	DFH
Hexachlorobutadiene	ND	36.0	90.0		ND	380	960	72	2.5	4/29/25 10:17	DFH
Hexane	909	36.0	90.0		3200	130	320	72	2.5	4/29/25 10:17	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	4/29/25 10:17	DFH
m+p-Xylenes	ND	72.0	180		ND	310	780	72	2.5	4/29/25 10:17	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	4/29/25 10:17	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	4/29/25 10:17	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	4/29/25 10:17	DFH
Naphthalene	ND	36.0	36.0		ND	190	190	72	2.5	4/29/25 10:17	DFH
o-Xylene	ND	36.0	90.0		ND	160	390	72	2.5	4/29/25 10:17	DFH
Propylene	167	28.8	28.8		290	50	50	72	2.5	4/29/25 10:17	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	4/29/25 10:17	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	4/29/25 10:17	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	4/29/25 10:17	DFH
Tetrahydrofuran	ND	36.0	90.0		ND	110	270	72	2.5	4/29/25 10:17	DFH
Toluene	ND	36.0	90.0		ND	140	340	72	2.5	4/29/25 10:17	DFH
trans-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	4/29/25 10:17	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	4/29/25 10:17	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	4/29/25 10:17	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	4/29/25 10:17	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	4/29/25 10:17	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	4/29/25 10:17	DFH
Vinyl chloride	ND	36.0	90.0		ND	92	230	72	2.5	4/29/25 10:17	DFH
Xylenes, Total	ND	108	270		ND	470	1200	72	2.5	4/29/25 10:17	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	99.0	80-120	4/29/25 10:17

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-21

Project Location:

Sample ID: 25D1774-08
Sample Matrix: Air
Sampled: 4/11/2025 15:00
Sample Type: SG

Canister ID: 063-00867::49327
Canister Size: 6
Flow Controller ID: 063-00805::20122
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.0

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Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-40 Project Location:

Sample ID: 25D1774-09 Canister ID: 063-00833::49511 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 4

Sampled: 4/15/2025 14:10 Flow Controller ID: 063-00442::16524 Receipt Vacuum(in Hg): 5.2

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	91.0	60.0	60.0		130	84	84	6	1	5/7/25 12:36	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	98.9	80-120	5/7/25 12:36

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	4/30/25 21:46	MJRL
Carbon dioxide, as received	1.44	0.45	0.45		9	1	4/30/25 21:46	MJRL
Oxygen (O2), as received	20.3	0.45	0.45		9	1	4/30/25 21:46	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 21:46	MJRL
Nitrogen (N2), as received	71.7	18.0	18.0		18	1	5/5/25 21:44	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 21:46	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 8:48	DFH
1,1,1,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 8:48	DFH
1,1,2,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 8:48	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.50	3.75		ND	11	29	3	2.5	4/29/25 8:48	DFH
1,1,2-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 8:48	DFH
1,1-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 8:48	DFH
1,1-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 8:48	DFH
1,2,4-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 8:48	DFH
1,2-Dibromoethane (EDB)	ND	1.50	3.75		ND	12	29	3	2.5	4/29/25 8:48	DFH

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Final Report

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-40 Project Location:

Sample ID: 25D1774-09 Canister ID: 063-00833::49511 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 4

Sampled: 4/15/2025 14:10 Flow Controller ID: 063-00442::16524 Receipt Vacuum(in Hg): 5.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 8:48	DFH
1,2-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 8:48	DFH
1,2-Dichloropropane	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 8:48	DFH
1,2-Dichlorotetrafluoroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 8:48	DFH
1,3,5-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 8:48	DFH
1,3-Butadiene	ND	1.50	3.75		ND	3.3	8.3	3	2.5	4/29/25 8:48	DFH
1,3-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 8:48	DFH
1,4-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 8:48	DFH
1,4-Dioxane	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 8:48	DFH
2-Butanone (MEK)	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 8:48	DFH
2-Chlorotoluene	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 8:48	DFH
2-Hexanone (MBK)	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 8:48	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.50	3.75		ND	17	43	3	2.5	4/29/25 8:48	DFH
Allyl chloride	ND	1.50	3.75		ND	4.7	12	3	2.5	4/29/25 8:48	DFH
Benzene	ND	1.50	1.50		ND	4.8	4.8	3	2.5	4/29/25 8:48	DFH
Benzyl Chloride	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 8:48	DFH
Bromoform	ND	1.50	3.75		ND	16	39	3	2.5	4/29/25 8:48	DFH
Bromomethane	ND	1.50	3.75		ND	5.8	15	3	2.5	4/29/25 8:48	DFH
Carbon Disulfide	ND	3.75	3.75		ND	12	12	3	2.5	4/29/25 8:48	DFH
Carbon Tetrachloride	ND	1.50	3.75		ND	9.4	24	3	2.5	4/29/25 8:48	DFH
Chlorobenzene	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 8:48	DFH
Chloroethane	ND	1.50	3.75		ND	4.0	9.9	3	2.5	4/29/25 8:48	DFH
Chloroform	ND	1.50	1.50		ND	7.3	7.3	3	2.5	4/29/25 8:48	DFH
Chloromethane	ND	1.50	3.75		ND	3.1	7.7	3	2.5	4/29/25 8:48	DFH
cis-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 8:48	DFH
cis-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 8:48	DFH
Cyclohexane	ND	1.50	3.75		ND	5.2	13	3	2.5	4/29/25 8:48	DFH
Dibromochloromethane	ND	1.50	3.75		ND	13	32	3	2.5	4/29/25 8:48	DFH
Dichlorodifluoromethane	ND	3.75	3.75		ND	19	19	3	2.5	4/29/25 8:48	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 18, 2025 8:00
Date Issued: May 9, 2025 17:01

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGI-40
Sample ID: 25D1774-09
Sample Matrix: Air
Sampled: 4/15/2025 14:10
Sample Type: SG

Project Location:
Canister ID: 063-00833::49511
Canister Size: 6
Flow Controller ID: 063-00442::16524
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 4
Receipt Vacuum(in Hg): 5.2

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 8:48	DFH
Ethylbenzene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 8:48	DFH
Heptane	1.58	1.50	3.75	J	6.5	6.1	15	3	2.5	4/29/25 8:48	DFH
Hexachlorobutadiene	ND	1.50	3.75		ND	16	40	3	2.5	4/29/25 8:48	DFH
Hexane	ND	1.50	3.75		ND	5.3	13	3	2.5	4/29/25 8:48	DFH
Isopropylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 8:48	DFH
m+p-Xylenes	ND	3.00	7.50		ND	13	33	3	2.5	4/29/25 8:48	DFH
Methyl methacrylate	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 8:48	DFH
Methylene chloride	ND	3.75	7.50		ND	13	26	3	2.5	4/29/25 8:48	DFH
Methyl-t-butyl ether (MTBE)	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 8:48	DFH
Naphthalene	ND	1.50	1.50		ND	7.9	7.9	3	2.5	4/29/25 8:48	DFH
o-Xylene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 8:48	DFH
Propylene	ND	1.20	1.20		ND	2.1	2.1	3	2.5	4/29/25 8:48	DFH
Styrene	ND	1.50	3.75		ND	6.4	16	3	2.5	4/29/25 8:48	DFH
TBA	ND	3.75	3.75		ND	11	11	3	2.5	4/29/25 8:48	DFH
Tetrachloroethylene (PCE)	ND	1.50	3.75		ND	10	25	3	2.5	4/29/25 8:48	DFH
Tetrahydrofuran	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 8:48	DFH
Toluene	ND	1.50	3.75		ND	5.7	14	3	2.5	4/29/25 8:48	DFH
trans-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 8:48	DFH
trans-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 8:48	DFH
Trichloroethylene	ND	1.50	1.50		ND	8.1	8.1	3	2.5	4/29/25 8:48	DFH
Trichlorofluoromethane	ND	3.75	3.75		ND	21	21	3	2.5	4/29/25 8:48	DFH
Vinyl acetate	ND	1.50	3.75		ND	5.3	13	3	2.5	4/29/25 8:48	DFH
Vinyl bromide	ND	1.50	3.75		ND	6.6	16	3	2.5	4/29/25 8:48	DFH
Vinyl chloride	ND	1.50	3.75		ND	3.8	9.6	3	2.5	4/29/25 8:48	DFH
Xylenes, Total	ND	4.50	11.2		ND	20	49	3	2.5	4/29/25 8:48	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	95.6	80-120	4/29/25 8:48

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-40

Project Location:

Sample ID: 25D1774-09
Sample Matrix: Air
Sampled: 4/15/2025 14:10
Sample Type: SG

Canister ID: 063-00833::49511
Canister Size: 6
Flow Controller ID: 063-00442::16524
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 4
Receipt Vacuum(in Hg): 5.2

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUP-06 Project Location:

Sample ID: 25D1774-10 Canister ID: 063-00836::49519 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 00:00 Flow Controller ID: 063-00920::20071 Receipt Vacuum(in Hg): 11.8

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	90.0	90.0		ND	130	130	9	1	5/6/25 18:31	DFH

Surrogate(s)	% Recovery	% Recovery Limits		
1,4-Difluorobenzene (Surr), as received	100	80-120	5/6/25 18:31	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.90	0.90		18	1	5/1/25 18:47	NSD
Carbon dioxide, as received	5.62	0.90	0.90		18	1	5/1/25 18:47	NSD
Oxygen (O2), as received	14.9	0.90	0.90		18	1	5/1/25 18:47	NSD
Hydrogen (H2), as received	ND	0.36	0.36		18	1	5/1/25 18:47	NSD
Nitrogen (N2), as received	78.3	18.0	18.0		18	1	5/1/25 18:47	NSD
Carbon Monoxide, as received	ND	0.02	0.02		18	1	5/1/25 18:47	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	3.60	9.00		ND	20	49	7.2	2.5	4/29/25 9:34	DFH
1,1,1,2-Tetrachloroethane	ND	3.60	9.00		ND	25	62	7.2	2.5	4/29/25 9:34	DFH
1,1,2,2-Tetrachloroethane	ND	3.60	9.00		ND	25	62	7.2	2.5	4/29/25 9:34	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.60	9.00		ND	28	69	7.2	2.5	4/29/25 9:34	DFH
1,1,2-Trichloroethane	ND	3.60	9.00		ND	20	49	7.2	2.5	4/29/25 9:34	DFH
1,1-Dichloroethane	ND	3.60	9.00		ND	15	36	7.2	2.5	4/29/25 9:34	DFH
1,1-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 9:34	DFH
1,2,4-Trimethylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 9:34	DFH
1,2-Dibromoethane (EDB)	ND	3.60	9.00		ND	28	69	7.2	2.5	4/29/25 9:34	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUP-06 Project Location:

Sample ID: 25D1774-10 Canister ID: 063-00836::49519 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 00:00 Flow Controller ID: 063-00920::20071 Receipt Vacuum(in Hg): 11.8

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 9:34	DFH
1,2-Dichloroethane	ND	3.60	9.00		ND	15	36	7.2	2.5	4/29/25 9:34	DFH
1,2-Dichloropropane	ND	3.60	9.00		ND	17	42	7.2	2.5	4/29/25 9:34	DFH
1,2-Dichlorotetrafluoroethane	13.7	3.60	9.00		96	25	63	7.2	2.5	4/29/25 9:34	DFH
1,3,5-Trimethylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 9:34	DFH
1,3-Butadiene	ND	3.60	9.00		ND	8.0	20	7.2	2.5	4/29/25 9:34	DFH
1,3-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 9:34	DFH
1,4-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 9:34	DFH
1,4-Dioxane	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 9:34	DFH
2-Butanone (MEK)	ND	3.60	9.00		ND	11	27	7.2	2.5	4/29/25 9:34	DFH
2-Chlorotoluene	ND	3.60	9.00		ND	19	47	7.2	2.5	4/29/25 9:34	DFH
2-Hexanone (MBK)	ND	3.60	9.00		ND	15	37	7.2	2.5	4/29/25 9:34	DFH
4-Methyl-2-pentanone (MIBK)	ND	3.60	9.00		ND	41	100	7.2	2.5	4/29/25 9:34	DFH
Allyl chloride	ND	3.60	9.00		ND	11	28	7.2	2.5	4/29/25 9:34	DFH
Benzene	ND	3.60	3.60		ND	12	12	7.2	2.5	4/29/25 9:34	DFH
Benzyl Chloride	ND	3.60	9.00		ND	19	47	7.2	2.5	4/29/25 9:34	DFH
Bromoform	ND	3.60	9.00		ND	37	93	7.2	2.5	4/29/25 9:34	DFH
Bromomethane	ND	3.60	9.00		ND	14	35	7.2	2.5	4/29/25 9:34	DFH
Carbon Disulfide	ND	9.00	9.00		ND	28	28	7.2	2.5	4/29/25 9:34	DFH
Carbon Tetrachloride	ND	3.60	9.00		ND	23	57	7.2	2.5	4/29/25 9:34	DFH
Chlorobenzene	ND	3.60	9.00		ND	17	41	7.2	2.5	4/29/25 9:34	DFH
Chloroethane	ND	3.60	9.00		ND	9.5	24	7.2	2.5	4/29/25 9:34	DFH
Chloroform	ND	3.60	3.60		ND	18	18	7.2	2.5	4/29/25 9:34	DFH
Chloromethane	ND	3.60	9.00		ND	7.4	19	7.2	2.5	4/29/25 9:34	DFH
cis-1,2-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 9:34	DFH
cis-1,3-Dichloropropene	ND	3.60	9.00		ND	16	41	7.2	2.5	4/29/25 9:34	DFH
Cyclohexane	5.76	3.60	9.00	J	20	12	31	7.2	2.5	4/29/25 9:34	DFH
Dibromochloromethane	ND	3.60	9.00		ND	31	77	7.2	2.5	4/29/25 9:34	DFH
Dichlorodifluoromethane	53.3	9.00	9.00		260	45	45	7.2	2.5	4/29/25 9:34	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUP-06 Project Location:

Sample ID: 25D1774-10 Canister ID: 063-00836::49519 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 00:00 Flow Controller ID: 063-00920::20071 Receipt Vacuum(in Hg): 11.8

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 9:34	DFH
Ethylbenzene	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 9:34	DFH
Heptane	10.6	3.60	9.00		44	15	37	7.2	2.5	4/29/25 9:34	DFH
Hexachlorobutadiene	ND	3.60	9.00		ND	38	96	7.2	2.5	4/29/25 9:34	DFH
Hexane	9.36	3.60	9.00		33	13	32	7.2	2.5	4/29/25 9:34	DFH
Isopropylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 9:34	DFH
m+p-Xylenes	ND	7.20	18.0		ND	31	78	7.2	2.5	4/29/25 9:34	DFH
Methyl methacrylate	ND	3.60	9.00		ND	15	37	7.2	2.5	4/29/25 9:34	DFH
Methylene chloride	ND	9.00	18.0		ND	31	63	7.2	2.5	4/29/25 9:34	DFH
Methyl-t-butyl ether (MTBE)	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 9:34	DFH
Naphthalene	ND	3.60	3.60		ND	19	19	7.2	2.5	4/29/25 9:34	DFH
o-Xylene	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 9:34	DFH
Propylene	ND	2.88	2.88		ND	5.0	5.0	7.2	2.5	4/29/25 9:34	DFH
Styrene	ND	3.60	9.00		ND	15	38	7.2	2.5	4/29/25 9:34	DFH
TBA	ND	9.00	9.00		ND	27	27	7.2	2.5	4/29/25 9:34	DFH
Tetrachloroethylene (PCE)	ND	3.60	9.00		ND	24	61	7.2	2.5	4/29/25 9:34	DFH
Tetrahydrofuran	ND	3.60	9.00		ND	11	27	7.2	2.5	4/29/25 9:34	DFH
Toluene	6.84	3.60	9.00	J	26	14	34	7.2	2.5	4/29/25 9:34	DFH
trans-1,2-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 9:34	DFH
trans-1,3-Dichloropropene	ND	3.60	9.00		ND	16	41	7.2	2.5	4/29/25 9:34	DFH
Trichloroethylene	ND	3.60	3.60		ND	19	19	7.2	2.5	4/29/25 9:34	DFH
Trichlorofluoromethane	ND	9.00	9.00		ND	51	51	7.2	2.5	4/29/25 9:34	DFH
Vinyl acetate	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 9:34	DFH
Vinyl bromide	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 9:34	DFH
Vinyl chloride	ND	3.60	9.00		ND	9.2	23	7.2	2.5	4/29/25 9:34	DFH
Xylenes, Total	ND	10.8	27.0		ND	47	120	7.2	2.5	4/29/25 9:34	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	94.6	80-120	4/29/25 9:34

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUP-06

Project Location:

Sample ID: 25D1774-10
Sample Matrix: Air
Sampled: 4/15/2025 00:00
Sample Type: SG

Canister ID: 063-00836::49519
Canister Size: 6
Flow Controller ID: 063-00920::20071
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 11.8

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-42 Project Location:

Sample ID: 25D1774-11 Canister ID: 063-00993::50712 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 14:40 Flow Controller ID: 063-00931::20260 Receipt Vacuum(in Hg): 7.0

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	60.0	60.0		ND	84	84	6	1	5/7/25 13:20	DFH

Surrogate(s)	% Recovery	% Recovery Limits		
1,4-Difluorobenzene (Surr), as received	98.6	80-120		5/7/25 13:20

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	4/30/25 23:16	MJRL
Carbon dioxide, as received	11.1	0.45	0.45		9	1	4/30/25 23:16	MJRL
Oxygen (O2), as received	6.61	0.45	0.45		9	1	4/30/25 23:16	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	4/30/25 23:16	MJRL
Nitrogen (N2), as received	64.8	18.0	18.0		18	1	5/6/25 13:35	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	4/30/25 23:16	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 11:53	DFH
1,1,1,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 11:53	DFH
1,1,2,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 11:53	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.50	3.75		ND	11	29	3	2.5	4/29/25 11:53	DFH
1,1,2-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 11:53	DFH
1,1-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 11:53	DFH
1,1-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 11:53	DFH
1,2,4-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 11:53	DFH
1,2-Dibromoethane (EDB)	ND	1.50	3.75		ND	12	29	3	2.5	4/29/25 11:53	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-42 Project Location:

Sample ID: 25D1774-11 Canister ID: 063-00993::50712 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 14:40 Flow Controller ID: 063-00931::20260 Receipt Vacuum(in Hg): 7.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 11:53	DFH
1,2-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 11:53	DFH
1,2-Dichloropropane	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 11:53	DFH
1,2-Dichlorotetrafluoroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 11:53	DFH
1,3,5-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 11:53	DFH
1,3-Butadiene	ND	1.50	3.75		ND	3.3	8.3	3	2.5	4/29/25 11:53	DFH
1,3-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 11:53	DFH
1,4-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 11:53	DFH
1,4-Dioxane	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 11:53	DFH
2-Butanone (MEK)	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 11:53	DFH
2-Chlorotoluene	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 11:53	DFH
2-Hexanone (MBK)	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 11:53	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.50	3.75		ND	17	43	3	2.5	4/29/25 11:53	DFH
Allyl chloride	ND	1.50	3.75		ND	4.7	12	3	2.5	4/29/25 11:53	DFH
Benzene	ND	1.50	1.50		ND	4.8	4.8	3	2.5	4/29/25 11:53	DFH
Benzyl Chloride	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 11:53	DFH
Bromoform	ND	1.50	3.75		ND	16	39	3	2.5	4/29/25 11:53	DFH
Bromomethane	ND	1.50	3.75		ND	5.8	15	3	2.5	4/29/25 11:53	DFH
Carbon Disulfide	ND	3.75	3.75		ND	12	12	3	2.5	4/29/25 11:53	DFH
Carbon Tetrachloride	ND	1.50	3.75		ND	9.4	24	3	2.5	4/29/25 11:53	DFH
Chlorobenzene	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 11:53	DFH
Chloroethane	ND	1.50	3.75		ND	4.0	9.9	3	2.5	4/29/25 11:53	DFH
Chloroform	ND	1.50	1.50		ND	7.3	7.3	3	2.5	4/29/25 11:53	DFH
Chloromethane	ND	1.50	3.75		ND	3.1	7.7	3	2.5	4/29/25 11:53	DFH
cis-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 11:53	DFH
cis-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 11:53	DFH
Cyclohexane	ND	1.50	3.75		ND	5.2	13	3	2.5	4/29/25 11:53	DFH
Dibromochloromethane	ND	1.50	3.75		ND	13	32	3	2.5	4/29/25 11:53	DFH
Dichlorodifluoromethane	ND	3.75	3.75		ND	19	19	3	2.5	4/29/25 11:53	DFH

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-42
Project Location:

Sample ID: 25D1774-11
Sample Matrix: Air
Sampled: 4/15/2025 14:40
Sample Type: SG

Canister ID: 063-00993::50712
Canister Size: 6
Flow Controller ID: 063-00931::20260
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.0

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 11:53	DFH
Ethylbenzene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 11:53	DFH
Heptane	2.85	1.50	3.75	J	12	6.1	15	3	2.5	4/29/25 11:53	DFH
Hexachlorobutadiene	ND	1.50	3.75		ND	16	40	3	2.5	4/29/25 11:53	DFH
Hexane	2.40	1.50	3.75	J	8.5	5.3	13	3	2.5	4/29/25 11:53	DFH
Isopropylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 11:53	DFH
m+p-Xylenes	ND	3.00	7.50		ND	13	33	3	2.5	4/29/25 11:53	DFH
Methyl methacrylate	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 11:53	DFH
Methylene chloride	ND	3.75	7.50		ND	13	26	3	2.5	4/29/25 11:53	DFH
Methyl-t-butyl ether (MTBE)	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 11:53	DFH
Naphthalene	1.72	1.50	1.50		9.0	7.9	7.9	3	2.5	4/29/25 11:53	DFH
o-Xylene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 11:53	DFH
Propylene	ND	1.20	1.20		ND	2.1	2.1	3	2.5	4/29/25 11:53	DFH
Styrene	ND	1.50	3.75		ND	6.4	16	3	2.5	4/29/25 11:53	DFH
TBA	ND	3.75	3.75		ND	11	11	3	2.5	4/29/25 11:53	DFH
Tetrachloroethylene (PCE)	ND	1.50	3.75		ND	10	25	3	2.5	4/29/25 11:53	DFH
Tetrahydrofuran	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 11:53	DFH
Toluene	1.50	1.50	3.75	J	5.7	5.7	14	3	2.5	4/29/25 11:53	DFH
trans-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 11:53	DFH
trans-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 11:53	DFH
Trichloroethylene	ND	1.50	1.50		ND	8.1	8.1	3	2.5	4/29/25 11:53	DFH
Trichlorofluoromethane	ND	3.75	3.75		ND	21	21	3	2.5	4/29/25 11:53	DFH
Vinyl acetate	ND	1.50	3.75		ND	5.3	13	3	2.5	4/29/25 11:53	DFH
Vinyl bromide	ND	1.50	3.75		ND	6.6	16	3	2.5	4/29/25 11:53	DFH
Vinyl chloride	ND	1.50	3.75		ND	3.8	9.6	3	2.5	4/29/25 11:53	DFH
Xylenes, Total	ND	4.50	11.2		ND	20	49	3	2.5	4/29/25 11:53	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	97.0	80-120	4/29/25 11:53

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-42

Project Location:

Sample ID: 25D1774-11
Sample Matrix: Air
Sampled: 4/15/2025 14:40
Sample Type: SG

Canister ID: 063-00993::50712
Canister Size: 6
Flow Controller ID: 063-00931::20260
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.0

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-44 Project Location:

Sample ID: 25D1774-12 Canister ID: 063-00054::20574 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 14:40 Flow Controller ID: 063-00389::10522 Receipt Vacuum(in Hg): 5.0

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	60.0	60.0		ND	84	84	6	1	5/8/25 10:02	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	97.0	80-120	5/8/25 10:02

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	5/1/25 0:01	MJRL
Carbon dioxide, as received	2.40	0.45	0.45		9	1	5/1/25 0:01	MJRL
Oxygen (O2), as received	17.7	0.45	0.45		9	1	5/1/25 0:01	MJRL
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/1/25 0:01	MJRL
Nitrogen (N2), as received	76.5	18.0	18.0		18	1	5/6/25 13:50	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/1/25 0:01	MJRL

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 12:43	DFH
1,1,1,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 12:43	DFH
1,1,2,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 12:43	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.50	3.75		ND	11	29	3	2.5	4/29/25 12:43	DFH
1,1,2-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 12:43	DFH
1,1-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 12:43	DFH
1,1-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 12:43	DFH
1,2,4-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 12:43	DFH
1,2-Dibromoethane (EDB)	ND	1.50	3.75		ND	12	29	3	2.5	4/29/25 12:43	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-44 Project Location:

Sample ID: 25D1774-12 Canister ID: 063-00054::20574 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 14:40 Flow Controller ID: 063-00389::10522 Receipt Vacuum(in Hg): 5.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 12:43	DFH
1,2-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 12:43	DFH
1,2-Dichloropropane	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 12:43	DFH
1,2-Dichlorotetrafluoroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 12:43	DFH
1,3,5-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 12:43	DFH
1,3-Butadiene	ND	1.50	3.75		ND	3.3	8.3	3	2.5	4/29/25 12:43	DFH
1,3-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 12:43	DFH
1,4-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 12:43	DFH
1,4-Dioxane	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 12:43	DFH
2-Butanone (MEK)	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 12:43	DFH
2-Chlorotoluene	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 12:43	DFH
2-Hexanone (MBK)	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 12:43	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.50	3.75		ND	17	43	3	2.5	4/29/25 12:43	DFH
Allyl chloride	ND	1.50	3.75		ND	4.7	12	3	2.5	4/29/25 12:43	DFH
Benzene	ND	1.50	1.50		ND	4.8	4.8	3	2.5	4/29/25 12:43	DFH
Benzyl Chloride	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 12:43	DFH
Bromoform	ND	1.50	3.75		ND	16	39	3	2.5	4/29/25 12:43	DFH
Bromomethane	ND	1.50	3.75		ND	5.8	15	3	2.5	4/29/25 12:43	DFH
Carbon Disulfide	ND	3.75	3.75		ND	12	12	3	2.5	4/29/25 12:43	DFH
Carbon Tetrachloride	ND	1.50	3.75		ND	9.4	24	3	2.5	4/29/25 12:43	DFH
Chlorobenzene	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 12:43	DFH
Chloroethane	ND	1.50	3.75		ND	4.0	9.9	3	2.5	4/29/25 12:43	DFH
Chloroform	1.58	1.50	1.50		7.7	7.3	7.3	3	2.5	4/29/25 12:43	DFH
Chloromethane	ND	1.50	3.75		ND	3.1	7.7	3	2.5	4/29/25 12:43	DFH
cis-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 12:43	DFH
cis-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 12:43	DFH
Cyclohexane	ND	1.50	3.75		ND	5.2	13	3	2.5	4/29/25 12:43	DFH
Dibromochloromethane	ND	1.50	3.75		ND	13	32	3	2.5	4/29/25 12:43	DFH
Dichlorodifluoromethane	ND	3.75	3.75		ND	19	19	3	2.5	4/29/25 12:43	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-44
Project Location:

Sample ID: 25D1774-12
Sample Matrix: Air
Sampled: 4/15/2025 14:40
Sample Type: SG

Canister ID: 063-00054::20574
Canister Size: 6
Flow Controller ID: 063-00389::10522
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.0

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 12:43	DFH
Ethylbenzene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 12:43	DFH
Heptane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 12:43	DFH
Hexachlorobutadiene	ND	1.50	3.75		ND	16	40	3	2.5	4/29/25 12:43	DFH
Hexane	2.55	1.50	3.75	J	9.0	5.3	13	3	2.5	4/29/25 12:43	DFH
Isopropylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 12:43	DFH
m+p-Xylenes	ND	3.00	7.50		ND	13	33	3	2.5	4/29/25 12:43	DFH
Methyl methacrylate	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 12:43	DFH
Methylene chloride	19.6	3.75	7.50		68	13	26	3	2.5	4/29/25 12:43	DFH
Methyl-t-butyl ether (MTBE)	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 12:43	DFH
Naphthalene	ND	1.50	1.50		ND	7.9	7.9	3	2.5	4/29/25 12:43	DFH
o-Xylene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 12:43	DFH
Propylene	ND	1.20	1.20		ND	2.1	2.1	3	2.5	4/29/25 12:43	DFH
Styrene	ND	1.50	3.75		ND	6.4	16	3	2.5	4/29/25 12:43	DFH
TBA	ND	3.75	3.75		ND	11	11	3	2.5	4/29/25 12:43	DFH
Tetrachloroethylene (PCE)	ND	1.50	3.75		ND	10	25	3	2.5	4/29/25 12:43	DFH
Tetrahydrofuran	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 12:43	DFH
Toluene	ND	1.50	3.75		ND	5.7	14	3	2.5	4/29/25 12:43	DFH
trans-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 12:43	DFH
trans-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 12:43	DFH
Trichloroethylene	ND	1.50	1.50		ND	8.1	8.1	3	2.5	4/29/25 12:43	DFH
Trichlorofluoromethane	ND	3.75	3.75		ND	21	21	3	2.5	4/29/25 12:43	DFH
Vinyl acetate	ND	1.50	3.75		ND	5.3	13	3	2.5	4/29/25 12:43	DFH
Vinyl bromide	ND	1.50	3.75		ND	6.6	16	3	2.5	4/29/25 12:43	DFH
Vinyl chloride	ND	1.50	3.75		ND	3.8	9.6	3	2.5	4/29/25 12:43	DFH
Xylenes, Total	ND	4.50	11.2		ND	20	49	3	2.5	4/29/25 12:43	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	96.6	80-120	4/29/25 12:43

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-44

Project Location:

Sample ID: 25D1774-12
Sample Matrix: Air
Sampled: 4/15/2025 14:40
Sample Type: SG

Canister ID: 063-00054::20574
Canister Size: 6
Flow Controller ID: 063-00389::10522
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.0

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-47 Project Location:

Sample ID: 25D1774-13 Canister ID: 063-00839::48092 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 15:00 Flow Controller ID: 063-00800::20114 Receipt Vacuum(in Hg): 8.0

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	60.0	60.0		ND	84	84	6	1	5/8/25 10:46	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	97.4	80-120	5/8/25 10:46

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	5/1/25 15:22	NSD
Carbon dioxide, as received	0.49	0.45	0.45		9	1	5/1/25 15:22	NSD
Oxygen (O2), as received	20.8	0.45	0.45		9	1	5/1/25 15:22	NSD
Hydrogen (H2), as received	0.18	0.18	0.18		9	1	5/1/25 15:22	NSD
Nitrogen (N2), as received	75.5	18.0	18.0		18	1	5/6/25 14:05	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/1/25 15:22	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 17:58	DFH
1,1,1,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 17:58	DFH
1,1,2,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 17:58	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.50	3.75		ND	11	29	3	2.5	4/29/25 17:58	DFH
1,1,2-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 17:58	DFH
1,1-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 17:58	DFH
1,1-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 17:58	DFH
1,2,4-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 17:58	DFH
1,2-Dibromoethane (EDB)	ND	1.50	3.75		ND	12	29	3	2.5	4/29/25 17:58	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-47

Project Location:

Sample ID: 25D1774-13
Sample Matrix: Air
Sampled: 4/15/2025 15:00
Sample Type: SG

Canister ID: 063-00839::48092
Canister Size: 6
Flow Controller ID: 063-00800::20114
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.0

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 17:58	DFH
1,2-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 17:58	DFH
1,2-Dichloropropane	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 17:58	DFH
1,2-Dichlorotetrafluoroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 17:58	DFH
1,3,5-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 17:58	DFH
1,3-Butadiene	ND	1.50	3.75		ND	3.3	8.3	3	2.5	4/29/25 17:58	DFH
1,3-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 17:58	DFH
1,4-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 17:58	DFH
1,4-Dioxane	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 17:58	DFH
2-Butanone (MEK)	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 17:58	DFH
2-Chlorotoluene	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 17:58	DFH
2-Hexanone (MBK)	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 17:58	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.50	3.75		ND	17	43	3	2.5	4/29/25 17:58	DFH
Allyl chloride	ND	1.50	3.75		ND	4.7	12	3	2.5	4/29/25 17:58	DFH
Benzene	ND	1.50	1.50		ND	4.8	4.8	3	2.5	4/29/25 17:58	DFH
Benzyl Chloride	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 17:58	DFH
Bromoform	ND	1.50	3.75		ND	16	39	3	2.5	4/29/25 17:58	DFH
Bromomethane	ND	1.50	3.75		ND	5.8	15	3	2.5	4/29/25 17:58	DFH
Carbon Disulfide	ND	3.75	3.75		ND	12	12	3	2.5	4/29/25 17:58	DFH
Carbon Tetrachloride	ND	1.50	3.75		ND	9.4	24	3	2.5	4/29/25 17:58	DFH
Chlorobenzene	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 17:58	DFH
Chloroethane	ND	1.50	3.75		ND	4.0	9.9	3	2.5	4/29/25 17:58	DFH
Chloroform	ND	1.50	1.50		ND	7.3	7.3	3	2.5	4/29/25 17:58	DFH
Chloromethane	ND	1.50	3.75		ND	3.1	7.7	3	2.5	4/29/25 17:58	DFH
cis-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 17:58	DFH
cis-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 17:58	DFH
Cyclohexane	ND	1.50	3.75		ND	5.2	13	3	2.5	4/29/25 17:58	DFH
Dibromochloromethane	ND	1.50	3.75		ND	13	32	3	2.5	4/29/25 17:58	DFH
Dichlorodifluoromethane	ND	3.75	3.75		ND	19	19	3	2.5	4/29/25 17:58	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-47
Project Location:

Sample ID: 25D1774-13
Sample Matrix: Air
Sampled: 4/15/2025 15:00
Sample Type: SG

Canister ID: 063-00839::48092
Canister Size: 6
Flow Controller ID: 063-00800::20114
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.0

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 17:58	DFH
Ethylbenzene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 17:58	DFH
Heptane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 17:58	DFH
Hexachlorobutadiene	ND	1.50	3.75		ND	16	40	3	2.5	4/29/25 17:58	DFH
Hexane	1.65	1.50	3.75	J	5.8	5.3	13	3	2.5	4/29/25 17:58	DFH
Isopropylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 17:58	DFH
m+p-Xylenes	ND	3.00	7.50		ND	13	33	3	2.5	4/29/25 17:58	DFH
Methyl methacrylate	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 17:58	DFH
Methylene chloride	ND	3.75	7.50		ND	13	26	3	2.5	4/29/25 17:58	DFH
Methyl-t-butyl ether (MTBE)	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 17:58	DFH
Naphthalene	ND	1.50	1.50		ND	7.9	7.9	3	2.5	4/29/25 17:58	DFH
o-Xylene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 17:58	DFH
Propylene	ND	1.20	1.20		ND	2.1	2.1	3	2.5	4/29/25 17:58	DFH
Styrene	ND	1.50	3.75		ND	6.4	16	3	2.5	4/29/25 17:58	DFH
TBA	ND	3.75	3.75		ND	11	11	3	2.5	4/29/25 17:58	DFH
Tetrachloroethylene (PCE)	ND	1.50	3.75		ND	10	25	3	2.5	4/29/25 17:58	DFH
Tetrahydrofuran	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 17:58	DFH
Toluene	ND	1.50	3.75		ND	5.7	14	3	2.5	4/29/25 17:58	DFH
trans-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 17:58	DFH
trans-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 17:58	DFH
Trichloroethylene	ND	1.50	1.50		ND	8.1	8.1	3	2.5	4/29/25 17:58	DFH
Trichlorofluoromethane	ND	3.75	3.75		ND	21	21	3	2.5	4/29/25 17:58	DFH
Vinyl acetate	ND	1.50	3.75		ND	5.3	13	3	2.5	4/29/25 17:58	DFH
Vinyl bromide	ND	1.50	3.75		ND	6.6	16	3	2.5	4/29/25 17:58	DFH
Vinyl chloride	ND	1.50	3.75		ND	3.8	9.6	3	2.5	4/29/25 17:58	DFH
Xylenes, Total	ND	4.50	11.2		ND	20	49	3	2.5	4/29/25 17:58	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	94.8	80-120	4/29/25 17:58

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-47

Project Location:

Sample ID: 25D1774-13
Sample Matrix: Air
Sampled: 4/15/2025 15:00
Sample Type: SG

Canister ID: 063-00839::48092
Canister Size: 6
Flow Controller ID: 063-00800::20114
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.0

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-48 Project Location:

Sample ID: 25D1774-14 Canister ID: 063-00784::48100 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 16:00 Flow Controller ID: 063-00813::20120 Receipt Vacuum(in Hg): 8.6

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	60.0	60.0		ND	84	84	6	1	5/8/25 21:40	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	99.8	80-120	5/8/25 21:40

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	5/1/25 16:07	NSD
Carbon dioxide, as received	0.63	0.45	0.45		9	1	5/1/25 16:07	NSD
Oxygen (O2), as received	20.7	0.45	0.45		9	1	5/1/25 16:07	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/1/25 16:07	NSD
Nitrogen (N2), as received	76.2	18.0	18.0		18	1	5/6/25 14:39	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/1/25 16:07	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 18:48	DFH
1,1,1,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 18:48	DFH
1,1,2,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 18:48	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.50	3.75		ND	11	29	3	2.5	4/29/25 18:48	DFH
1,1,2-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	4/29/25 18:48	DFH
1,1-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 18:48	DFH
1,1-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 18:48	DFH
1,2,4-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 18:48	DFH
1,2-Dibromoethane (EDB)	ND	1.50	3.75		ND	12	29	3	2.5	4/29/25 18:48	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-48

Project Location:

Sample ID: 25D1774-14
Sample Matrix: Air
Sampled: 4/15/2025 16:00
Sample Type: SG

Canister ID: 063-00784::48100
Canister Size: 6
Flow Controller ID: 063-00813::20120
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.6

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 18:48	DFH
1,2-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 18:48	DFH
1,2-Dichloropropane	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 18:48	DFH
1,2-Dichlorotetrafluoroethane	ND	1.50	3.75		ND	10	26	3	2.5	4/29/25 18:48	DFH
1,3,5-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 18:48	DFH
1,3-Butadiene	ND	1.50	3.75		ND	3.3	8.3	3	2.5	4/29/25 18:48	DFH
1,3-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 18:48	DFH
1,4-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	4/29/25 18:48	DFH
1,4-Dioxane	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 18:48	DFH
2-Butanone (MEK)	1.95	1.50	3.75	J	5.8	4.4	11	3	2.5	4/29/25 18:48	DFH
2-Chlorotoluene	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 18:48	DFH
2-Hexanone (MBK)	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 18:48	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.50	3.75		ND	17	43	3	2.5	4/29/25 18:48	DFH
Allyl chloride	ND	1.50	3.75		ND	4.7	12	3	2.5	4/29/25 18:48	DFH
Benzene	ND	1.50	1.50		ND	4.8	4.8	3	2.5	4/29/25 18:48	DFH
Benzyl Chloride	ND	1.50	3.75		ND	7.8	19	3	2.5	4/29/25 18:48	DFH
Bromoform	ND	1.50	3.75		ND	16	39	3	2.5	4/29/25 18:48	DFH
Bromomethane	ND	1.50	3.75		ND	5.8	15	3	2.5	4/29/25 18:48	DFH
Carbon Disulfide	ND	3.75	3.75		ND	12	12	3	2.5	4/29/25 18:48	DFH
Carbon Tetrachloride	ND	1.50	3.75		ND	9.4	24	3	2.5	4/29/25 18:48	DFH
Chlorobenzene	ND	1.50	3.75		ND	6.9	17	3	2.5	4/29/25 18:48	DFH
Chloroethane	ND	1.50	3.75		ND	4.0	9.9	3	2.5	4/29/25 18:48	DFH
Chloroform	ND	1.50	1.50		ND	7.3	7.3	3	2.5	4/29/25 18:48	DFH
Chloromethane	ND	1.50	3.75		ND	3.1	7.7	3	2.5	4/29/25 18:48	DFH
cis-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 18:48	DFH
cis-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 18:48	DFH
Cyclohexane	ND	1.50	3.75		ND	5.2	13	3	2.5	4/29/25 18:48	DFH
Dibromochloromethane	ND	1.50	3.75		ND	13	32	3	2.5	4/29/25 18:48	DFH
Dichlorodifluoromethane	ND	3.75	3.75		ND	19	19	3	2.5	4/29/25 18:48	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-48
Project Location:

Sample ID: 25D1774-14
Sample Matrix: Air
Sampled: 4/15/2025 16:00
Sample Type: SG

Canister ID: 063-00784::48100
Canister Size: 6
Flow Controller ID: 063-00813::20120
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.6

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 18:48	DFH
Ethylbenzene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 18:48	DFH
Heptane	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 18:48	DFH
Hexachlorobutadiene	ND	1.50	3.75		ND	16	40	3	2.5	4/29/25 18:48	DFH
Hexane	1.65	1.50	3.75	J	5.8	5.3	13	3	2.5	4/29/25 18:48	DFH
Isopropylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	4/29/25 18:48	DFH
m+p-Xylenes	ND	3.00	7.50		ND	13	33	3	2.5	4/29/25 18:48	DFH
Methyl methacrylate	ND	1.50	3.75		ND	6.1	15	3	2.5	4/29/25 18:48	DFH
Methylene chloride	ND	3.75	7.50		ND	13	26	3	2.5	4/29/25 18:48	DFH
Methyl-t-butyl ether (MTBE)	ND	1.50	3.75		ND	5.4	14	3	2.5	4/29/25 18:48	DFH
Naphthalene	ND	1.50	1.50		ND	7.9	7.9	3	2.5	4/29/25 18:48	DFH
o-Xylene	ND	1.50	3.75		ND	6.5	16	3	2.5	4/29/25 18:48	DFH
Propylene	ND	1.20	1.20		ND	2.1	2.1	3	2.5	4/29/25 18:48	DFH
Styrene	ND	1.50	3.75		ND	6.4	16	3	2.5	4/29/25 18:48	DFH
TBA	ND	3.75	3.75		ND	11	11	3	2.5	4/29/25 18:48	DFH
Tetrachloroethylene (PCE)	ND	1.50	3.75		ND	10	25	3	2.5	4/29/25 18:48	DFH
Tetrahydrofuran	ND	1.50	3.75		ND	4.4	11	3	2.5	4/29/25 18:48	DFH
Toluene	1.65	1.50	3.75	J	6.2	5.7	14	3	2.5	4/29/25 18:48	DFH
trans-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	4/29/25 18:48	DFH
trans-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	4/29/25 18:48	DFH
Trichloroethylene	ND	1.50	1.50		ND	8.1	8.1	3	2.5	4/29/25 18:48	DFH
Trichlorofluoromethane	ND	3.75	3.75		ND	21	21	3	2.5	4/29/25 18:48	DFH
Vinyl acetate	ND	1.50	3.75		ND	5.3	13	3	2.5	4/29/25 18:48	DFH
Vinyl bromide	ND	1.50	3.75		ND	6.6	16	3	2.5	4/29/25 18:48	DFH
Vinyl chloride	ND	1.50	3.75		ND	3.8	9.6	3	2.5	4/29/25 18:48	DFH
Xylenes, Total	ND	4.50	11.2		ND	20	49	3	2.5	4/29/25 18:48	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	94.4	80-120	4/29/25 18:48

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-48

Project Location:

Sample ID: 25D1774-14
Sample Matrix: Air
Sampled: 4/15/2025 16:00
Sample Type: SG

Canister ID: 063-00784::48100
Canister Size: 6
Flow Controller ID: 063-00813::20120
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 8.6

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-46 Project Location:

Sample ID: 25D1774-15 Canister ID: 063-00825::49516 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 15:20 Flow Controller ID: 063-00924::20259 Receipt Vacuum(in Hg): 6.8

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	90.0	90.0		ND	130	130	9	1	5/8/25 22:22	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	97.8	80-120	5/8/25 22:22

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	5/1/25 16:52	NSD
Carbon dioxide, as received	0.79	0.45	0.45		9	1	5/1/25 16:52	NSD
Oxygen (O2), as received	20.7	0.45	0.45		9	1	5/1/25 16:52	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/1/25 16:52	NSD
Nitrogen (N2), as received	76.2	18.0	18.0		18	1	5/6/25 14:54	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/1/25 16:52	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	3.60	9.00		ND	20	49	7.2	2.5	4/29/25 19:34	DFH
1,1,1,2-Tetrachloroethane	ND	3.60	9.00		ND	25	62	7.2	2.5	4/29/25 19:34	DFH
1,1,2,2-Tetrachloroethane	ND	3.60	9.00		ND	25	62	7.2	2.5	4/29/25 19:34	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.60	9.00		ND	28	69	7.2	2.5	4/29/25 19:34	DFH
1,1,2-Trichloroethane	ND	3.60	9.00		ND	20	49	7.2	2.5	4/29/25 19:34	DFH
1,1-Dichloroethane	ND	3.60	9.00		ND	15	36	7.2	2.5	4/29/25 19:34	DFH
1,1-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 19:34	DFH
1,2,4-Trimethylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 19:34	DFH
1,2-Dibromoethane (EDB)	ND	3.60	9.00		ND	28	69	7.2	2.5	4/29/25 19:34	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-46 Project Location:

Sample ID: 25D1774-15 Canister ID: 063-00825::49516 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 15:20 Flow Controller ID: 063-00924::20259 Receipt Vacuum(in Hg): 6.8

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 19:34	DFH
1,2-Dichloroethane	ND	3.60	9.00		ND	15	36	7.2	2.5	4/29/25 19:34	DFH
1,2-Dichloropropane	ND	3.60	9.00		ND	17	42	7.2	2.5	4/29/25 19:34	DFH
1,2-Dichlorotetrafluoroethane	ND	3.60	9.00		ND	25	63	7.2	2.5	4/29/25 19:34	DFH
1,3,5-Trimethylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 19:34	DFH
1,3-Butadiene	ND	3.60	9.00		ND	8.0	20	7.2	2.5	4/29/25 19:34	DFH
1,3-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 19:34	DFH
1,4-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 19:34	DFH
1,4-Dioxane	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 19:34	DFH
2-Butanone (MEK)	ND	3.60	9.00		ND	11	27	7.2	2.5	4/29/25 19:34	DFH
2-Chlorotoluene	ND	3.60	9.00		ND	19	47	7.2	2.5	4/29/25 19:34	DFH
2-Hexanone (MBK)	ND	3.60	9.00		ND	15	37	7.2	2.5	4/29/25 19:34	DFH
4-Methyl-2-pentanone (MIBK)	ND	3.60	9.00		ND	41	100	7.2	2.5	4/29/25 19:34	DFH
Allyl chloride	ND	3.60	9.00		ND	11	28	7.2	2.5	4/29/25 19:34	DFH
Benzene	ND	3.60	3.60		ND	12	12	7.2	2.5	4/29/25 19:34	DFH
Benzyl Chloride	ND	3.60	9.00		ND	19	47	7.2	2.5	4/29/25 19:34	DFH
Bromoform	ND	3.60	9.00		ND	37	93	7.2	2.5	4/29/25 19:34	DFH
Bromomethane	ND	3.60	9.00		ND	14	35	7.2	2.5	4/29/25 19:34	DFH
Carbon Disulfide	ND	9.00	9.00		ND	28	28	7.2	2.5	4/29/25 19:34	DFH
Carbon Tetrachloride	ND	3.60	9.00		ND	23	57	7.2	2.5	4/29/25 19:34	DFH
Chlorobenzene	ND	3.60	9.00		ND	17	41	7.2	2.5	4/29/25 19:34	DFH
Chloroethane	ND	3.60	9.00		ND	9.5	24	7.2	2.5	4/29/25 19:34	DFH
Chloroform	ND	3.60	3.60		ND	18	18	7.2	2.5	4/29/25 19:34	DFH
Chloromethane	ND	3.60	9.00		ND	7.4	19	7.2	2.5	4/29/25 19:34	DFH
cis-1,2-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 19:34	DFH
cis-1,3-Dichloropropene	ND	3.60	9.00		ND	16	41	7.2	2.5	4/29/25 19:34	DFH
Cyclohexane	ND	3.60	9.00		ND	12	31	7.2	2.5	4/29/25 19:34	DFH
Dibromochloromethane	ND	3.60	9.00		ND	31	77	7.2	2.5	4/29/25 19:34	DFH
Dichlorodifluoromethane	ND	9.00	9.00		ND	45	45	7.2	2.5	4/29/25 19:34	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-46 Project Location:

Sample ID: 25D1774-15 Canister ID: 063-00825::49516 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/15/2025 15:20 Flow Controller ID: 063-00924::20259 Receipt Vacuum(in Hg): 6.8

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 19:34	DFH
Ethylbenzene	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 19:34	DFH
Heptane	ND	3.60	9.00		ND	15	37	7.2	2.5	4/29/25 19:34	DFH
Hexachlorobutadiene	ND	3.60	9.00		ND	38	96	7.2	2.5	4/29/25 19:34	DFH
Hexane	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 19:34	DFH
Isopropylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 19:34	DFH
m+p-Xylenes	ND	7.20	18.0		ND	31	78	7.2	2.5	4/29/25 19:34	DFH
Methyl methacrylate	ND	3.60	9.00		ND	15	37	7.2	2.5	4/29/25 19:34	DFH
Methylene chloride	ND	9.00	18.0		ND	31	63	7.2	2.5	4/29/25 19:34	DFH
Methyl-t-butyl ether (MTBE)	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 19:34	DFH
Naphthalene	ND	3.60	3.60		ND	19	19	7.2	2.5	4/29/25 19:34	DFH
o-Xylene	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 19:34	DFH
Propylene	ND	2.88	2.88		ND	5.0	5.0	7.2	2.5	4/29/25 19:34	DFH
Styrene	ND	3.60	9.00		ND	15	38	7.2	2.5	4/29/25 19:34	DFH
TBA	ND	9.00	9.00		ND	27	27	7.2	2.5	4/29/25 19:34	DFH
Tetrachloroethylene (PCE)	ND	3.60	9.00		ND	24	61	7.2	2.5	4/29/25 19:34	DFH
Tetrahydrofuran	ND	3.60	9.00		ND	11	27	7.2	2.5	4/29/25 19:34	DFH
Toluene	ND	3.60	9.00		ND	14	34	7.2	2.5	4/29/25 19:34	DFH
trans-1,2-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 19:34	DFH
trans-1,3-Dichloropropene	ND	3.60	9.00		ND	16	41	7.2	2.5	4/29/25 19:34	DFH
Trichloroethylene	ND	3.60	3.60		ND	19	19	7.2	2.5	4/29/25 19:34	DFH
Trichlorofluoromethane	ND	9.00	9.00		ND	51	51	7.2	2.5	4/29/25 19:34	DFH
Vinyl acetate	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 19:34	DFH
Vinyl bromide	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 19:34	DFH
Vinyl chloride	ND	3.60	9.00		ND	9.2	23	7.2	2.5	4/29/25 19:34	DFH
Xylenes, Total	ND	10.8	27.0		ND	47	120	7.2	2.5	4/29/25 19:34	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	94.0	80-120	4/29/25 19:34

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-46

Project Location:

Sample ID: 25D1774-15
Sample Matrix: Air
Sampled: 4/15/2025 15:20
Sample Type: SG

Canister ID: 063-00825::49516
Canister Size: 6
Flow Controller ID: 063-00924::20259
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.8

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-29 Project Location:

Sample ID: 25D1774-16 Canister ID: 063-00570::46743 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 14:00 Flow Controller ID: 063-00451::10516 Receipt Vacuum(in Hg): 6.2

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	900	900		ND	1300	1300	90	1	5/6/25 19:53	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	97.6	80-120	5/6/25 19:53

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	33.6	0.45	0.45		9	1	5/1/25 17:38	NSD
Carbon dioxide, as received	25.5	0.45	0.45		9	1	5/1/25 17:38	NSD
Oxygen (O2), as received	ND	0.45	0.45		9	1	5/1/25 17:38	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/1/25 17:38	NSD
Nitrogen (N2), as received	39.9	9.00	9.00		9	1	5/1/25 17:38	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/1/25 17:38	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	4/29/25 20:17	DFH
1,1,1,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	4/29/25 20:17	DFH
1,1,2,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	4/29/25 20:17	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	18.0	45.0		ND	140	340	36	2.5	4/29/25 20:17	DFH
1,1,2-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	4/29/25 20:17	DFH
1,1-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	4/29/25 20:17	DFH
1,1-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/29/25 20:17	DFH
1,2,4-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/29/25 20:17	DFH
1,2-Dibromoethane (EDB)	ND	18.0	45.0		ND	140	350	36	2.5	4/29/25 20:17	DFH

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Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-29 Project Location:

Sample ID: 25D1774-16 Canister ID: 063-00570::46743 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 14:00 Flow Controller ID: 063-00451::10516 Receipt Vacuum(in Hg): 6.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/29/25 20:17	DFH
1,2-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	4/29/25 20:17	DFH
1,2-Dichloropropane	ND	18.0	45.0		ND	83	210	36	2.5	4/29/25 20:17	DFH
1,2-Dichlorotetrafluoroethane	65.7	18.0	45.0		460	130	310	36	2.5	4/29/25 20:17	DFH
1,3,5-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/29/25 20:17	DFH
1,3-Butadiene	ND	18.0	45.0		ND	40	100	36	2.5	4/29/25 20:17	DFH
1,3-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/29/25 20:17	DFH
1,4-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/29/25 20:17	DFH
1,4-Dioxane	ND	18.0	45.0		ND	65	160	36	2.5	4/29/25 20:17	DFH
2-Butanone (MEK)	ND	18.0	45.0		ND	53	130	36	2.5	4/29/25 20:17	DFH
2-Chlorotoluene	ND	18.0	45.0		ND	93	230	36	2.5	4/29/25 20:17	DFH
2-Hexanone (MBK)	ND	18.0	45.0		ND	74	180	36	2.5	4/29/25 20:17	DFH
4-Methyl-2-pentanone (MIBK)	ND	18.0	45.0		ND	210	520	36	2.5	4/29/25 20:17	DFH
Allyl chloride	ND	18.0	45.0		ND	56	140	36	2.5	4/29/25 20:17	DFH
Benzene	96.3	18.0	18.0		310	58	58	36	2.5	4/29/25 20:17	DFH
Benzyl Chloride	ND	18.0	45.0		ND	93	230	36	2.5	4/29/25 20:17	DFH
Bromoform	ND	18.0	45.0		ND	190	470	36	2.5	4/29/25 20:17	DFH
Bromomethane	ND	18.0	45.0		ND	70	170	36	2.5	4/29/25 20:17	DFH
Carbon Disulfide	ND	45.0	45.0		ND	140	140	36	2.5	4/29/25 20:17	DFH
Carbon Tetrachloride	ND	18.0	45.0		ND	110	280	36	2.5	4/29/25 20:17	DFH
Chlorobenzene	55.8	18.0	45.0		260	83	210	36	2.5	4/29/25 20:17	DFH
Chloroethane	242	18.0	45.0		640	47	120	36	2.5	4/29/25 20:17	DFH
Chloroform	ND	18.0	18.0		ND	88	88	36	2.5	4/29/25 20:17	DFH
Chloromethane	ND	18.0	45.0		ND	37	93	36	2.5	4/29/25 20:17	DFH
cis-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/29/25 20:17	DFH
cis-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	4/29/25 20:17	DFH
Cyclohexane	330	18.0	45.0		1100	62	150	36	2.5	4/29/25 20:17	DFH
Dibromochloromethane	ND	18.0	45.0		ND	150	380	36	2.5	4/29/25 20:17	DFH
Dichlorodifluoromethane	ND	45.0	45.0		ND	220	220	36	2.5	4/29/25 20:17	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-29 Project Location:

Sample ID: 25D1774-16 Canister ID: 063-00570::46743 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 14:00 Flow Controller ID: 063-00451::10516 Receipt Vacuum(in Hg): 6.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	18.0	45.0		ND	65	160	36	2.5	4/29/25 20:17	DFH
Ethylbenzene	ND	18.0	45.0		ND	78	200	36	2.5	4/29/25 20:17	DFH
Heptane	204	18.0	45.0		840	74	180	36	2.5	4/29/25 20:17	DFH
Hexachlorobutadiene	ND	18.0	45.0		ND	190	480	36	2.5	4/29/25 20:17	DFH
Hexane	826	18.0	45.0		2900	63	160	36	2.5	4/29/25 20:17	DFH
Isopropylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/29/25 20:17	DFH
m+p-Xylenes	ND	36.0	90.0		ND	160	390	36	2.5	4/29/25 20:17	DFH
Methyl methacrylate	ND	18.0	45.0		ND	74	180	36	2.5	4/29/25 20:17	DFH
Methylene chloride	ND	45.0	90.0		ND	160	310	36	2.5	4/29/25 20:17	DFH
Methyl-t-butyl ether (MTBE)	ND	18.0	45.0		ND	65	160	36	2.5	4/29/25 20:17	DFH
Naphthalene	ND	18.0	18.0		ND	94	94	36	2.5	4/29/25 20:17	DFH
o-Xylene	ND	18.0	45.0		ND	78	200	36	2.5	4/29/25 20:17	DFH
Propylene	110	14.4	14.4		190	25	25	36	2.5	4/29/25 20:17	DFH
Styrene	ND	18.0	45.0		ND	77	190	36	2.5	4/29/25 20:17	DFH
TBA	ND	45.0	45.0		ND	140	140	36	2.5	4/29/25 20:17	DFH
Tetrachloroethylene (PCE)	ND	18.0	45.0		ND	120	310	36	2.5	4/29/25 20:17	DFH
Tetrahydrofuran	ND	18.0	45.0		ND	53	130	36	2.5	4/29/25 20:17	DFH
Toluene	ND	18.0	45.0		ND	68	170	36	2.5	4/29/25 20:17	DFH
trans-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/29/25 20:17	DFH
trans-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	4/29/25 20:17	DFH
Trichloroethylene	ND	18.0	18.0		ND	97	97	36	2.5	4/29/25 20:17	DFH
Trichlorofluoromethane	ND	45.0	45.0		ND	250	250	36	2.5	4/29/25 20:17	DFH
Vinyl acetate	ND	18.0	45.0		ND	63	160	36	2.5	4/29/25 20:17	DFH
Vinyl bromide	ND	18.0	45.0		ND	79	200	36	2.5	4/29/25 20:17	DFH
Vinyl chloride	ND	18.0	45.0		ND	46	120	36	2.5	4/29/25 20:17	DFH
Xylenes, Total	ND	54.0	135		ND	230	590	36	2.5	4/29/25 20:17	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	99.6	80-120	4/29/25 20:17

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-29

Project Location:

Sample ID: 25D1774-16
Sample Matrix: Air
Sampled: 4/10/2025 14:00
Sample Type: SG

Canister ID: 063-00570::46743
Canister Size: 6
Flow Controller ID: 063-00451::10516
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.2

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-27

Project Location:

Sample ID: 25D1774-17
Sample Matrix: Air
Sampled: 4/10/2025 12:45
Sample Type: SG

Canister ID: 063-01015::49346
Canister Size: 6
Flow Controller ID: 063-00404::10523
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.0

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	6510	2700	2700		9100	3800	3800	270	1	5/7/25 14:00	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	96.5	80-120	5/7/25 14:00

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	63.6	0.90	0.90		18	1	5/1/25 19:32	NSD
Carbon dioxide, as received	37.4	0.90	0.90		18	1	5/1/25 19:32	NSD
Oxygen (O2), as received	ND	0.90	0.90		18	1	5/1/25 19:32	NSD
Hydrogen (H2), as received	ND	0.36	0.36		18	1	5/1/25 19:32	NSD
Nitrogen (N2), as received	ND	18.0	18.0		18	1	5/1/25 19:32	NSD
Carbon Monoxide, as received	ND	0.02	0.02		18	1	5/1/25 19:32	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/29/25 21:01	DFH
1,1,1,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/29/25 21:01	DFH
1,1,2,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/29/25 21:01	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	9.00	22.5		ND	69	170	18	2.5	4/29/25 21:01	DFH
1,1,2-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/29/25 21:01	DFH
1,1-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/29/25 21:01	DFH
1,1-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/29/25 21:01	DFH
1,2,4-Trimethylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/29/25 21:01	DFH
1,2-Dibromoethane (EDB)	ND	9.00	22.5		ND	69	170	18	2.5	4/29/25 21:01	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-27 Project Location:

Sample ID: 25D1774-17 Canister ID: 063-01015::49346 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 12:45 Flow Controller ID: 063-00404::10523 Receipt Vacuum(in Hg): 7.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 21:01	DFH
1,2-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/29/25 21:01	DFH
1,2-Dichloropropane	ND	9.00	22.5		ND	42	100	18	2.5	4/29/25 21:01	DFH
1,2-Dichlorotetrafluoroethane	49.0	9.00	22.5		340	63	160	18	2.5	4/29/25 21:01	DFH
1,3,5-Trimethylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/29/25 21:01	DFH
1,3-Butadiene	ND	9.00	22.5		ND	20	50	18	2.5	4/29/25 21:01	DFH
1,3-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 21:01	DFH
1,4-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 21:01	DFH
1,4-Dioxane	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 21:01	DFH
2-Butanone (MEK)	ND	9.00	22.5		ND	27	66	18	2.5	4/29/25 21:01	DFH
2-Chlorotoluene	ND	9.00	22.5		ND	47	120	18	2.5	4/29/25 21:01	DFH
2-Hexanone (MBK)	ND	9.00	22.5		ND	37	92	18	2.5	4/29/25 21:01	DFH
4-Methyl-2-pentanone (MIBK)	ND	9.00	22.5		ND	100	260	18	2.5	4/29/25 21:01	DFH
Allyl chloride	ND	9.00	22.5		ND	28	70	18	2.5	4/29/25 21:01	DFH
Benzene	168	9.00	9.00		540	29	29	18	2.5	4/29/25 21:01	DFH
Benzyl Chloride	ND	9.00	22.5		ND	47	120	18	2.5	4/29/25 21:01	DFH
Bromoform	ND	9.00	22.5		ND	93	230	18	2.5	4/29/25 21:01	DFH
Bromomethane	ND	9.00	22.5		ND	35	87	18	2.5	4/29/25 21:01	DFH
Carbon Disulfide	ND	22.5	22.5		ND	70	70	18	2.5	4/29/25 21:01	DFH
Carbon Tetrachloride	ND	9.00	22.5		ND	57	140	18	2.5	4/29/25 21:01	DFH
Chlorobenzene	155	9.00	22.5		710	41	100	18	2.5	4/29/25 21:01	DFH
Chloroethane	48.2	9.00	22.5		130	24	59	18	2.5	4/29/25 21:01	DFH
Chloroform	ND	9.00	9.00		ND	44	44	18	2.5	4/29/25 21:01	DFH
Chloromethane	ND	9.00	22.5		ND	19	46	18	2.5	4/29/25 21:01	DFH
cis-1,2-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/29/25 21:01	DFH
cis-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/29/25 21:01	DFH
Cyclohexane	95.9	9.00	22.5		330	31	77	18	2.5	4/29/25 21:01	DFH
Dibromochloromethane	ND	9.00	22.5		ND	77	190	18	2.5	4/29/25 21:01	DFH
Dichlorodifluoromethane	ND	22.5	22.5		ND	110	110	18	2.5	4/29/25 21:01	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-27 Project Location:

Sample ID: 25D1774-17 Canister ID: 063-01015::49346 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 12:45 Flow Controller ID: 063-00404::10523 Receipt Vacuum(in Hg): 7.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 21:01	DFH
Ethylbenzene	ND	9.00	22.5		ND	39	98	18	2.5	4/29/25 21:01	DFH
Heptane	200	9.00	22.5		820	37	92	18	2.5	4/29/25 21:01	DFH
Hexachlorobutadiene	ND	9.00	22.5		ND	96	240	18	2.5	4/29/25 21:01	DFH
Hexane	252	9.00	22.5		890	32	79	18	2.5	4/29/25 21:01	DFH
Isopropylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/29/25 21:01	DFH
m+p-Xylenes	22.5	18.0	45.0	J	98	78	200	18	2.5	4/29/25 21:01	DFH
Methyl methacrylate	ND	9.00	22.5		ND	37	92	18	2.5	4/29/25 21:01	DFH
Methylene chloride	ND	22.5	45.0		ND	78	160	18	2.5	4/29/25 21:01	DFH
Methyl-t-butyl ether (MTBE)	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 21:01	DFH
Naphthalene	ND	9.00	9.00		ND	47	47	18	2.5	4/29/25 21:01	DFH
o-Xylene	ND	9.00	22.5		ND	39	98	18	2.5	4/29/25 21:01	DFH
Propylene	731	28.8	28.8		1300	50	50	72	2.5	4/30/25 9:53	DFH
Styrene	ND	9.00	22.5		ND	38	96	18	2.5	4/29/25 21:01	DFH
TBA	ND	22.5	22.5		ND	68	68	18	2.5	4/29/25 21:01	DFH
Tetrachloroethylene (PCE)	ND	9.00	22.5		ND	61	150	18	2.5	4/29/25 21:01	DFH
Tetrahydrofuran	70.6	9.00	22.5		210	27	66	18	2.5	4/29/25 21:01	DFH
Toluene	12.2	9.00	22.5	J	46	34	85	18	2.5	4/29/25 21:01	DFH
trans-1,2-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/29/25 21:01	DFH
trans-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/29/25 21:01	DFH
Trichloroethylene	ND	9.00	9.00		ND	48	48	18	2.5	4/29/25 21:01	DFH
Trichlorofluoromethane	ND	22.5	22.5		ND	130	130	18	2.5	4/29/25 21:01	DFH
Vinyl acetate	ND	9.00	22.5		ND	32	79	18	2.5	4/29/25 21:01	DFH
Vinyl bromide	ND	9.00	22.5		ND	39	98	18	2.5	4/29/25 21:01	DFH
Vinyl chloride	ND	9.00	22.5		ND	23	58	18	2.5	4/29/25 21:01	DFH
Xylenes, Total	27.9	27.0	67.5	J	120	120	290	18	2.5	4/29/25 21:01	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	94.4	80-120	4/30/25 9:53
4-Bromofluorobenzene (Surr)	110	80-120	4/29/25 21:01

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-27

Project Location:

Sample ID: 25D1774-17
Sample Matrix: Air
Sampled: 4/10/2025 12:45
Sample Type: SG

Canister ID: 063-01015::49346
Canister Size: 6
Flow Controller ID: 063-00404::10523
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.0

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-26

Project Location:

Sample ID: 25D1774-18
Sample Matrix: Air
Sampled: 4/10/2025 13:00
Sample Type: SG

Canister ID: 063-00823::49515
Canister Size: 6
Flow Controller ID: 063-00916::20072
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.2

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	360	360		ND	500	500	36	1	5/7/25 16:01	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	96.6	80-120	5/7/25 16:01

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	24.3	0.90	0.90		18	1	5/1/25 20:17	NSD
Carbon dioxide, as received	13.1	0.90	0.90		18	1	5/1/25 20:17	NSD
Oxygen (O2), as received	15.1	0.90	0.90		18	1	5/1/25 20:17	NSD
Hydrogen (H2), as received	ND	0.36	0.36		18	1	5/1/25 20:17	NSD
Nitrogen (N2), as received	53.8	18.0	18.0		18	1	5/1/25 20:17	NSD
Carbon Monoxide, as received	ND	0.02	0.02		18	1	5/1/25 20:17	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/29/25 21:45	DFH
1,1,1,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/29/25 21:45	DFH
1,1,2,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/29/25 21:45	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	9.00	22.5		ND	69	170	18	2.5	4/29/25 21:45	DFH
1,1,2-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/29/25 21:45	DFH
1,1-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/29/25 21:45	DFH
1,1-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/29/25 21:45	DFH
1,2,4-Trimethylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/29/25 21:45	DFH
1,2-Dibromoethane (EDB)	ND	9.00	22.5		ND	69	170	18	2.5	4/29/25 21:45	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-26 Project Location:

Sample ID: 25D1774-18 Canister ID: 063-00823::49515 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 13:00 Flow Controller ID: 063-00916::20072 Receipt Vacuum(in Hg): 6.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 21:45	DFH
1,2-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/29/25 21:45	DFH
1,2-Dichloropropane	ND	9.00	22.5		ND	42	100	18	2.5	4/29/25 21:45	DFH
1,2-Dichlorotetrafluoroethane	17.1	9.00	22.5	J	120	63	160	18	2.5	4/29/25 21:45	DFH
1,3,5-Trimethylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/29/25 21:45	DFH
1,3-Butadiene	ND	9.00	22.5		ND	20	50	18	2.5	4/29/25 21:45	DFH
1,3-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 21:45	DFH
1,4-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 21:45	DFH
1,4-Dioxane	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 21:45	DFH
2-Butanone (MEK)	ND	9.00	22.5		ND	27	66	18	2.5	4/29/25 21:45	DFH
2-Chlorotoluene	ND	9.00	22.5		ND	47	120	18	2.5	4/29/25 21:45	DFH
2-Hexanone (MBK)	ND	9.00	22.5		ND	37	92	18	2.5	4/29/25 21:45	DFH
4-Methyl-2-pentanone (MIBK)	ND	9.00	22.5		ND	100	260	18	2.5	4/29/25 21:45	DFH
Allyl chloride	ND	9.00	22.5		ND	28	70	18	2.5	4/29/25 21:45	DFH
Benzene	61.6	9.00	9.00		200	29	29	18	2.5	4/29/25 21:45	DFH
Benzyl Chloride	ND	9.00	22.5		ND	47	120	18	2.5	4/29/25 21:45	DFH
Bromoform	ND	9.00	22.5		ND	93	230	18	2.5	4/29/25 21:45	DFH
Bromomethane	ND	9.00	22.5		ND	35	87	18	2.5	4/29/25 21:45	DFH
Carbon Disulfide	ND	22.5	22.5		ND	70	70	18	2.5	4/29/25 21:45	DFH
Carbon Tetrachloride	ND	9.00	22.5		ND	57	140	18	2.5	4/29/25 21:45	DFH
Chlorobenzene	38.2	9.00	22.5		180	41	100	18	2.5	4/29/25 21:45	DFH
Chloroethane	34.6	9.00	22.5		91	24	59	18	2.5	4/29/25 21:45	DFH
Chloroform	ND	9.00	9.00		ND	44	44	18	2.5	4/29/25 21:45	DFH
Chloromethane	ND	9.00	22.5		ND	19	46	18	2.5	4/29/25 21:45	DFH
cis-1,2-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/29/25 21:45	DFH
cis-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/29/25 21:45	DFH
Cyclohexane	62.6	9.00	22.5		220	31	77	18	2.5	4/29/25 21:45	DFH
Dibromochloromethane	ND	9.00	22.5		ND	77	190	18	2.5	4/29/25 21:45	DFH
Dichlorodifluoromethane	ND	22.5	22.5		ND	110	110	18	2.5	4/29/25 21:45	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-26 Project Location:

Sample ID: 25D1774-18 Canister ID: 063-00823::49515 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 13:00 Flow Controller ID: 063-00916::20072 Receipt Vacuum(in Hg): 6.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 21:45	DFH
Ethylbenzene	ND	9.00	22.5		ND	39	98	18	2.5	4/29/25 21:45	DFH
Heptane	42.3	9.00	22.5		170	37	92	18	2.5	4/29/25 21:45	DFH
Hexachlorobutadiene	ND	9.00	22.5		ND	96	240	18	2.5	4/29/25 21:45	DFH
Hexane	169	9.00	22.5		590	32	79	18	2.5	4/29/25 21:45	DFH
Isopropylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/29/25 21:45	DFH
m+p-Xylenes	ND	18.0	45.0		ND	78	200	18	2.5	4/29/25 21:45	DFH
Methyl methacrylate	ND	9.00	22.5		ND	37	92	18	2.5	4/29/25 21:45	DFH
Methylene chloride	ND	22.5	45.0		ND	78	160	18	2.5	4/29/25 21:45	DFH
Methyl-t-butyl ether (MTBE)	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 21:45	DFH
Naphthalene	ND	9.00	9.00		ND	47	47	18	2.5	4/29/25 21:45	DFH
o-Xylene	ND	9.00	22.5		ND	39	98	18	2.5	4/29/25 21:45	DFH
Propylene	489	7.20	7.20		840	12	12	18	2.5	4/29/25 21:45	DFH
Styrene	ND	9.00	22.5		ND	38	96	18	2.5	4/29/25 21:45	DFH
TBA	ND	22.5	22.5		ND	68	68	18	2.5	4/29/25 21:45	DFH
Tetrachloroethylene (PCE)	ND	9.00	22.5		ND	61	150	18	2.5	4/29/25 21:45	DFH
Tetrahydrofuran	ND	9.00	22.5		ND	27	66	18	2.5	4/29/25 21:45	DFH
Toluene	9.00	9.00	22.5	J	34	34	85	18	2.5	4/29/25 21:45	DFH
trans-1,2-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/29/25 21:45	DFH
trans-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/29/25 21:45	DFH
Trichloroethylene	ND	9.00	9.00		ND	48	48	18	2.5	4/29/25 21:45	DFH
Trichlorofluoromethane	ND	22.5	22.5		ND	130	130	18	2.5	4/29/25 21:45	DFH
Vinyl acetate	ND	9.00	22.5		ND	32	79	18	2.5	4/29/25 21:45	DFH
Vinyl bromide	ND	9.00	22.5		ND	39	98	18	2.5	4/29/25 21:45	DFH
Vinyl chloride	ND	9.00	22.5		ND	23	58	18	2.5	4/29/25 21:45	DFH
Xylenes, Total	ND	27.0	67.5		ND	120	290	18	2.5	4/29/25 21:45	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	98.4	80-120	4/29/25 21:45

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-26

Project Location:

Sample ID: 25D1774-18
Sample Matrix: Air
Sampled: 4/10/2025 13:00
Sample Type: SG

Canister ID: 063-00823::49515
Canister Size: 6
Flow Controller ID: 063-00916::20072
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.2

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-28 Project Location:

Sample ID: 25D1774-19 Canister ID: 063-01071::50958 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 13:20 Flow Controller ID: 063-00932::20258 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	892	90.0	90.0		1200	130	130	9	1	5/8/25 23:06	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	100	80-120	5/8/25 23:06

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	2.23	0.45	0.45		9	1	5/1/25 21:47	NSD
Carbon dioxide, as received	19.0	0.45	0.45		9	1	5/1/25 21:47	NSD
Oxygen (O2), as received	ND	0.45	0.45		9	1	5/1/25 21:47	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/1/25 21:47	NSD
Nitrogen (N2), as received	76.9	18.0	18.0		18	1	5/6/25 15:09	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/1/25 21:47	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	3.60	9.00		ND	20	49	7.2	2.5	4/29/25 23:14	DFH
1,1,1,2-Tetrachloroethane	ND	3.60	9.00		ND	25	62	7.2	2.5	4/29/25 23:14	DFH
1,1,2,2-Tetrachloroethane	ND	3.60	9.00		ND	25	62	7.2	2.5	4/29/25 23:14	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	3.60	9.00		ND	28	69	7.2	2.5	4/29/25 23:14	DFH
1,1,2-Trichloroethane	ND	3.60	9.00		ND	20	49	7.2	2.5	4/29/25 23:14	DFH
1,1-Dichloroethane	ND	3.60	9.00		ND	15	36	7.2	2.5	4/29/25 23:14	DFH
1,1-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 23:14	DFH
1,2,4-Trimethylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 23:14	DFH
1,2-Dibromoethane (EDB)	ND	3.60	9.00		ND	28	69	7.2	2.5	4/29/25 23:14	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-28 Project Location:

Sample ID: 25D1774-19 Canister ID: 063-01071::50958 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 13:20 Flow Controller ID: 063-00932::20258 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 23:14	DFH
1,2-Dichloroethane	ND	3.60	9.00		ND	15	36	7.2	2.5	4/29/25 23:14	DFH
1,2-Dichloropropane	ND	3.60	9.00		ND	17	42	7.2	2.5	4/29/25 23:14	DFH
1,2-Dichlorotetrafluoroethane	28.6	3.60	9.00		200	25	63	7.2	2.5	4/29/25 23:14	DFH
1,3,5-Trimethylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 23:14	DFH
1,3-Butadiene	ND	3.60	9.00		ND	8.0	20	7.2	2.5	4/29/25 23:14	DFH
1,3-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 23:14	DFH
1,4-Dichlorobenzene	ND	3.60	9.00		ND	22	54	7.2	2.5	4/29/25 23:14	DFH
1,4-Dioxane	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 23:14	DFH
2-Butanone (MEK)	4.32	3.60	9.00	J	13	11	27	7.2	2.5	4/29/25 23:14	DFH
2-Chlorotoluene	ND	3.60	9.00		ND	19	47	7.2	2.5	4/29/25 23:14	DFH
2-Hexanone (MBK)	ND	3.60	9.00		ND	15	37	7.2	2.5	4/29/25 23:14	DFH
4-Methyl-2-pentanone (MIBK)	ND	3.60	9.00		ND	41	100	7.2	2.5	4/29/25 23:14	DFH
Allyl chloride	ND	3.60	9.00		ND	11	28	7.2	2.5	4/29/25 23:14	DFH
Benzene	22.5	3.60	3.60		72	12	12	7.2	2.5	4/29/25 23:14	DFH
Benzyl Chloride	ND	3.60	9.00		ND	19	47	7.2	2.5	4/29/25 23:14	DFH
Bromoform	ND	3.60	9.00		ND	37	93	7.2	2.5	4/29/25 23:14	DFH
Bromomethane	ND	3.60	9.00		ND	14	35	7.2	2.5	4/29/25 23:14	DFH
Carbon Disulfide	ND	9.00	9.00		ND	28	28	7.2	2.5	4/29/25 23:14	DFH
Carbon Tetrachloride	ND	3.60	9.00		ND	23	57	7.2	2.5	4/29/25 23:14	DFH
Chlorobenzene	144	3.60	9.00		660	17	41	7.2	2.5	4/29/25 23:14	DFH
Chloroethane	ND	3.60	9.00		ND	9.5	24	7.2	2.5	4/29/25 23:14	DFH
Chloroform	ND	3.60	3.60		ND	18	18	7.2	2.5	4/29/25 23:14	DFH
Chloromethane	ND	3.60	9.00		ND	7.4	19	7.2	2.5	4/29/25 23:14	DFH
cis-1,2-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 23:14	DFH
cis-1,3-Dichloropropene	ND	3.60	9.00		ND	16	41	7.2	2.5	4/29/25 23:14	DFH
Cyclohexane	16.4	3.60	9.00		56	12	31	7.2	2.5	4/29/25 23:14	DFH
Dibromochloromethane	ND	3.60	9.00		ND	31	77	7.2	2.5	4/29/25 23:14	DFH
Dichlorodifluoromethane	74.3	9.00	9.00		370	45	45	7.2	2.5	4/29/25 23:14	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-28 Project Location:

Sample ID: 25D1774-19 Canister ID: 063-01071::50958 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 13:20 Flow Controller ID: 063-00932::20258 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 23:14	DFH
Ethylbenzene	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 23:14	DFH
Heptane	16.0	3.60	9.00		66	15	37	7.2	2.5	4/29/25 23:14	DFH
Hexachlorobutadiene	ND	3.60	9.00		ND	38	96	7.2	2.5	4/29/25 23:14	DFH
Hexane	47.3	3.60	9.00		170	13	32	7.2	2.5	4/29/25 23:14	DFH
Isopropylbenzene	ND	3.60	9.00		ND	18	44	7.2	2.5	4/29/25 23:14	DFH
m+p-Xylenes	ND	7.20	18.0		ND	31	78	7.2	2.5	4/29/25 23:14	DFH
Methyl methacrylate	ND	3.60	9.00		ND	15	37	7.2	2.5	4/29/25 23:14	DFH
Methylene chloride	ND	9.00	18.0		ND	31	63	7.2	2.5	4/29/25 23:14	DFH
Methyl-t-butyl ether (MTBE)	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 23:14	DFH
Naphthalene	ND	3.60	3.60		ND	19	19	7.2	2.5	4/29/25 23:14	DFH
o-Xylene	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 23:14	DFH
Propylene	55.3	2.88	2.88		95	5.0	5.0	7.2	2.5	4/29/25 23:14	DFH
Styrene	ND	3.60	9.00		ND	15	38	7.2	2.5	4/29/25 23:14	DFH
TBA	ND	9.00	9.00		ND	27	27	7.2	2.5	4/29/25 23:14	DFH
Tetrachloroethylene (PCE)	ND	3.60	9.00		ND	24	61	7.2	2.5	4/29/25 23:14	DFH
Tetrahydrofuran	ND	3.60	9.00		ND	11	27	7.2	2.5	4/29/25 23:14	DFH
Toluene	8.82	3.60	9.00	J	33	14	34	7.2	2.5	4/29/25 23:14	DFH
trans-1,2-Dichloroethylene	ND	3.60	9.00		ND	14	36	7.2	2.5	4/29/25 23:14	DFH
trans-1,3-Dichloropropene	ND	3.60	9.00		ND	16	41	7.2	2.5	4/29/25 23:14	DFH
Trichloroethylene	ND	3.60	3.60		ND	19	19	7.2	2.5	4/29/25 23:14	DFH
Trichlorofluoromethane	ND	9.00	9.00		ND	51	51	7.2	2.5	4/29/25 23:14	DFH
Vinyl acetate	ND	3.60	9.00		ND	13	32	7.2	2.5	4/29/25 23:14	DFH
Vinyl bromide	ND	3.60	9.00		ND	16	39	7.2	2.5	4/29/25 23:14	DFH
Vinyl chloride	ND	3.60	9.00		ND	9.2	23	7.2	2.5	4/29/25 23:14	DFH
Xylenes, Total	ND	10.8	27.0		ND	47	120	7.2	2.5	4/29/25 23:14	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	95.2	80-120	4/29/25 23:14

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-28

Project Location:

Sample ID: 25D1774-19
Sample Matrix: Air
Sampled: 4/10/2025 13:20
Sample Type: SG

Canister ID: 063-01071::50958
Canister Size: 6
Flow Controller ID: 063-00932::20258
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.4

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-18 Project Location:

Sample ID: 25D1774-20 Canister ID: 063-00427::44623 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 12:30 Flow Controller ID: 063-00422::10518 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	2260	900	900		3100	1300	1300	90	1	5/7/25 16:41	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	98.5	80-120	5/7/25 16:41

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	64.2	0.90	0.90		18	1	5/1/25 21:02	NSD
Carbon dioxide, as received	36.9	0.90	0.90		18	1	5/1/25 21:02	NSD
Oxygen (O2), as received	ND	0.90	0.90		18	1	5/1/25 21:02	NSD
Hydrogen (H2), as received	ND	0.36	0.36		18	1	5/1/25 21:02	NSD
Nitrogen (N2), as received	ND	18.0	18.0		18	1	5/1/25 21:02	NSD
Carbon Monoxide, as received	ND	0.02	0.02		18	1	5/1/25 21:02	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/29/25 23:57	DFH
1,1,1,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/29/25 23:57	DFH
1,1,2,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/29/25 23:57	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	9.00	22.5		ND	69	170	18	2.5	4/29/25 23:57	DFH
1,1,2-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/29/25 23:57	DFH
1,1-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/29/25 23:57	DFH
1,1-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/29/25 23:57	DFH
1,2,4-Trimethylbenzene	20.7	9.00	22.5	J	100	44	110	18	2.5	4/29/25 23:57	DFH
1,2-Dibromoethane (EDB)	ND	9.00	22.5		ND	69	170	18	2.5	4/29/25 23:57	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-18 Project Location:

Sample ID: 25D1774-20 Canister ID: 063-00427::44623 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 12:30 Flow Controller ID: 063-00422::10518 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 23:57	DFH
1,2-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/29/25 23:57	DFH
1,2-Dichloropropane	ND	9.00	22.5		ND	42	100	18	2.5	4/29/25 23:57	DFH
1,2-Dichlorotetrafluoroethane	90.4	9.00	22.5		630	63	160	18	2.5	4/29/25 23:57	DFH
1,3,5-Trimethylbenzene	20.2	9.00	22.5	J	100	44	110	18	2.5	4/29/25 23:57	DFH
1,3-Butadiene	ND	9.00	22.5		ND	20	50	18	2.5	4/29/25 23:57	DFH
1,3-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 23:57	DFH
1,4-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/29/25 23:57	DFH
1,4-Dioxane	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 23:57	DFH
2-Butanone (MEK)	ND	9.00	22.5		ND	27	66	18	2.5	4/29/25 23:57	DFH
2-Chlorotoluene	ND	9.00	22.5		ND	47	120	18	2.5	4/29/25 23:57	DFH
2-Hexanone (MBK)	ND	9.00	22.5		ND	37	92	18	2.5	4/29/25 23:57	DFH
4-Methyl-2-pentanone (MIBK)	ND	9.00	22.5		ND	100	260	18	2.5	4/29/25 23:57	DFH
Allyl chloride	ND	9.00	22.5		ND	28	70	18	2.5	4/29/25 23:57	DFH
Benzene	214	9.00	9.00		680	29	29	18	2.5	4/29/25 23:57	DFH
Benzyl Chloride	ND	9.00	22.5		ND	47	120	18	2.5	4/29/25 23:57	DFH
Bromoform	ND	9.00	22.5		ND	93	230	18	2.5	4/29/25 23:57	DFH
Bromomethane	ND	9.00	22.5		ND	35	87	18	2.5	4/29/25 23:57	DFH
Carbon Disulfide	ND	22.5	22.5		ND	70	70	18	2.5	4/29/25 23:57	DFH
Carbon Tetrachloride	ND	9.00	22.5		ND	57	140	18	2.5	4/29/25 23:57	DFH
Chlorobenzene	42.3	9.00	22.5		190	41	100	18	2.5	4/29/25 23:57	DFH
Chloroethane	15.3	9.00	22.5	J	40	24	59	18	2.5	4/29/25 23:57	DFH
Chloroform	ND	9.00	9.00		ND	44	44	18	2.5	4/29/25 23:57	DFH
Chloromethane	ND	9.00	22.5		ND	19	46	18	2.5	4/29/25 23:57	DFH
cis-1,2-Dichloroethylene	10.4	9.00	22.5	J	41	36	89	18	2.5	4/29/25 23:57	DFH
cis-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/29/25 23:57	DFH
Cyclohexane	184	9.00	22.5		630	31	77	18	2.5	4/29/25 23:57	DFH
Dibromochloromethane	ND	9.00	22.5		ND	77	190	18	2.5	4/29/25 23:57	DFH
Dichlorodifluoromethane	85.0	22.5	22.5		420	110	110	18	2.5	4/29/25 23:57	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-18

Project Location:

Sample ID: 25D1774-20
Sample Matrix: Air
Sampled: 4/10/2025 12:30
Sample Type: SG

Canister ID: 063-00427::44623
Canister Size: 6
Flow Controller ID: 063-00422::10518
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.4

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 23:57	DFH
Ethylbenzene	324	9.00	22.5		1400	39	98	18	2.5	4/29/25 23:57	DFH
Heptane	706	9.00	22.5		2900	37	92	18	2.5	4/29/25 23:57	DFH
Hexachlorobutadiene	ND	9.00	22.5		ND	96	240	18	2.5	4/29/25 23:57	DFH
Hexane	523	9.00	22.5		1800	32	79	18	2.5	4/29/25 23:57	DFH
Isopropylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/29/25 23:57	DFH
m+p-Xylenes	203	18.0	45.0		880	78	200	18	2.5	4/29/25 23:57	DFH
Methyl methacrylate	ND	9.00	22.5		ND	37	92	18	2.5	4/29/25 23:57	DFH
Methylene chloride	ND	22.5	45.0		ND	78	160	18	2.5	4/29/25 23:57	DFH
Methyl-t-butyl ether (MTBE)	ND	9.00	22.5		ND	32	81	18	2.5	4/29/25 23:57	DFH
Naphthalene	ND	9.00	9.00		ND	47	47	18	2.5	4/29/25 23:57	DFH
o-Xylene	17.6	9.00	22.5	J	76	39	98	18	2.5	4/29/25 23:57	DFH
Propylene	1000	28.8	28.8		1700	50	50	72	2.5	4/30/25 10:36	DFH
Styrene	ND	9.00	22.5		ND	38	96	18	2.5	4/29/25 23:57	DFH
TBA	ND	22.5	22.5		ND	68	68	18	2.5	4/29/25 23:57	DFH
Tetrachloroethylene (PCE)	ND	9.00	22.5		ND	61	150	18	2.5	4/29/25 23:57	DFH
Tetrahydrofuran	ND	9.00	22.5		ND	27	66	18	2.5	4/29/25 23:57	DFH
Toluene	18.4	9.00	22.5	J	70	34	85	18	2.5	4/29/25 23:57	DFH
trans-1,2-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/29/25 23:57	DFH
trans-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/29/25 23:57	DFH
Trichloroethylene	ND	9.00	9.00		ND	48	48	18	2.5	4/29/25 23:57	DFH
Trichlorofluoromethane	ND	22.5	22.5		ND	130	130	18	2.5	4/29/25 23:57	DFH
Vinyl acetate	ND	9.00	22.5		ND	32	79	18	2.5	4/29/25 23:57	DFH
Vinyl bromide	ND	9.00	22.5		ND	39	98	18	2.5	4/29/25 23:57	DFH
Vinyl chloride	26.6	9.00	22.5		68	23	58	18	2.5	4/29/25 23:57	DFH
Xylenes, Total	221	27.0	67.5		960	120	290	18	2.5	4/29/25 23:57	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	96.8	80-120	4/30/25 10:36
4-Bromofluorobenzene (Surr)	109	80-120	4/29/25 23:57

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-18

Project Location:

Sample ID: 25D1774-20
Sample Matrix: Air
Sampled: 4/10/2025 12:30
Sample Type: SG

Canister ID: 063-00427::44623
Canister Size: 6
Flow Controller ID: 063-00422::10518
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.4

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUPLICATE-03 Project Location:

Sample ID: 25D1774-21 Canister ID: 063-00690::48086 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 00:00 Flow Controller ID: 063-00446::10527 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	18000	2430	2430		25000	3400	3400	243	1	5/8/25 9:18	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.6	80-120	5/8/25 9:18

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	62.3	0.45	0.45		9	1	5/1/25 22:32	NSD
Carbon dioxide, as received	35.3	0.45	0.45		9	1	5/1/25 22:32	NSD
Oxygen (O2), as received	0.99	0.45	0.45		9	1	5/1/25 22:32	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/1/25 22:32	NSD
Nitrogen (N2), as received	ND	9.00	9.00		9	1	5/1/25 22:32	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/1/25 22:32	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/30/25 17:06	DFH
1,1,1,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/30/25 17:06	DFH
1,1,2,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/30/25 17:06	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	9.00	22.5		ND	69	170	18	2.5	4/30/25 17:06	DFH
1,1,2-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/30/25 17:06	DFH
1,1-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/30/25 17:06	DFH
1,1-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/30/25 17:06	DFH
1,2,4-Trimethylbenzene	17.1	9.00	22.5	J	84	44	110	18	2.5	4/30/25 17:06	DFH
1,2-Dibromoethane (EDB)	ND	9.00	22.5		ND	69	170	18	2.5	4/30/25 17:06	DFH

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUPLICATE-03 Project Location:

Sample ID: 25D1774-21 Canister ID: 063-00690::48086 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 00:00 Flow Controller ID: 063-00446::10527 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/30/25 17:06	DFH
1,2-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/30/25 17:06	DFH
1,2-Dichloropropane	ND	9.00	22.5		ND	42	100	18	2.5	4/30/25 17:06	DFH
1,2-Dichlorotetrafluoroethane	86.4	9.00	22.5		600	63	160	18	2.5	4/30/25 17:06	DFH
1,3,5-Trimethylbenzene	16.6	9.00	22.5	J	82	44	110	18	2.5	4/30/25 17:06	DFH
1,3-Butadiene	ND	9.00	22.5		ND	20	50	18	2.5	4/30/25 17:06	DFH
1,3-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/30/25 17:06	DFH
1,4-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/30/25 17:06	DFH
1,4-Dioxane	ND	9.00	22.5		ND	32	81	18	2.5	4/30/25 17:06	DFH
2-Butanone (MEK)	ND	9.00	22.5		ND	27	66	18	2.5	4/30/25 17:06	DFH
2-Chlorotoluene	ND	9.00	22.5		ND	47	120	18	2.5	4/30/25 17:06	DFH
2-Hexanone (MBK)	ND	9.00	22.5		ND	37	92	18	2.5	4/30/25 17:06	DFH
4-Methyl-2-pentanone (MIBK)	ND	9.00	22.5		ND	100	260	18	2.5	4/30/25 17:06	DFH
Allyl chloride	ND	9.00	22.5		ND	28	70	18	2.5	4/30/25 17:06	DFH
Benzene	202	9.00	9.00		650	29	29	18	2.5	4/30/25 17:06	DFH
Benzyl Chloride	ND	9.00	22.5		ND	47	120	18	2.5	4/30/25 17:06	DFH
Bromoform	ND	9.00	22.5		ND	93	230	18	2.5	4/30/25 17:06	DFH
Bromomethane	ND	9.00	22.5		ND	35	87	18	2.5	4/30/25 17:06	DFH
Carbon Disulfide	ND	22.5	22.5		ND	70	70	18	2.5	4/30/25 17:06	DFH
Carbon Tetrachloride	ND	9.00	22.5		ND	57	140	18	2.5	4/30/25 17:06	DFH
Chlorobenzene	37.4	9.00	22.5		170	41	100	18	2.5	4/30/25 17:06	DFH
Chloroethane	15.8	9.00	22.5	J	42	24	59	18	2.5	4/30/25 17:06	DFH
Chloroform	ND	9.00	9.00		ND	44	44	18	2.5	4/30/25 17:06	DFH
Chloromethane	ND	9.00	22.5		ND	19	46	18	2.5	4/30/25 17:06	DFH
cis-1,2-Dichloroethylene	9.00	9.00	22.5	J	36	36	89	18	2.5	4/30/25 17:06	DFH
cis-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/30/25 17:06	DFH
Cyclohexane	172	9.00	22.5		590	31	77	18	2.5	4/30/25 17:06	DFH
Dibromochloromethane	ND	9.00	22.5		ND	77	190	18	2.5	4/30/25 17:06	DFH
Dichlorodifluoromethane	82.4	22.5	22.5		410	110	110	18	2.5	4/30/25 17:06	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUPLICATE-03 Project Location:

Sample ID: 25D1774-21 Canister ID: 063-00690::48086 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 00:00 Flow Controller ID: 063-00446::10527 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	9.00	22.5		ND	32	81	18	2.5	4/30/25 17:06	DFH
Ethylbenzene	297	9.00	22.5		1300	39	98	18	2.5	4/30/25 17:06	DFH
Heptane	660	9.00	22.5		2700	37	92	18	2.5	4/30/25 17:06	DFH
Hexachlorobutadiene	ND	9.00	22.5		ND	96	240	18	2.5	4/30/25 17:06	DFH
Hexane	492	9.00	22.5		1700	32	79	18	2.5	4/30/25 17:06	DFH
Isopropylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/30/25 17:06	DFH
m+p-Xylenes	183	18.0	45.0		790	78	200	18	2.5	4/30/25 17:06	DFH
Methyl methacrylate	ND	9.00	22.5		ND	37	92	18	2.5	4/30/25 17:06	DFH
Methylene chloride	ND	22.5	45.0		ND	78	160	18	2.5	4/30/25 17:06	DFH
Methyl-t-butyl ether (MTBE)	ND	9.00	22.5		ND	32	81	18	2.5	4/30/25 17:06	DFH
Naphthalene	ND	9.00	9.00		ND	47	47	18	2.5	4/30/25 17:06	DFH
o-Xylene	15.3	9.00	22.5	J	66	39	98	18	2.5	4/30/25 17:06	DFH
Propylene	812	7.20	7.20		1400	12	12	18	2.5	4/30/25 17:06	DFH
Styrene	ND	9.00	22.5		ND	38	96	18	2.5	4/30/25 17:06	DFH
TBA	ND	22.5	22.5		ND	68	68	18	2.5	4/30/25 17:06	DFH
Tetrachloroethylene (PCE)	ND	9.00	22.5		ND	61	150	18	2.5	4/30/25 17:06	DFH
Tetrahydrofuran	ND	9.00	22.5		ND	27	66	18	2.5	4/30/25 17:06	DFH
Toluene	15.3	9.00	22.5	J	58	34	85	18	2.5	4/30/25 17:06	DFH
trans-1,2-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/30/25 17:06	DFH
trans-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/30/25 17:06	DFH
Trichloroethylene	ND	9.00	9.00		ND	48	48	18	2.5	4/30/25 17:06	DFH
Trichlorofluoromethane	ND	22.5	22.5		ND	130	130	18	2.5	4/30/25 17:06	DFH
Vinyl acetate	ND	9.00	22.5		ND	32	79	18	2.5	4/30/25 17:06	DFH
Vinyl bromide	ND	9.00	22.5		ND	39	98	18	2.5	4/30/25 17:06	DFH
Vinyl chloride	26.1	9.00	22.5		67	23	58	18	2.5	4/30/25 17:06	DFH
Xylenes, Total	198	27.0	67.5		860	120	290	18	2.5	4/30/25 17:06	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	108	80-120	4/30/25 17:06

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Final Report

Laboratory Order ID 25D1774

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUPLICATE-03

Project Location:

Sample ID: 25D1774-21
Sample Matrix: Air
Sampled: 4/10/2025 00:00
Sample Type: SG

Canister ID: 063-00690::48086
Canister Size: 6
Flow Controller ID: 063-00446::10527
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.0

ENTHALPY ANALYTICAL

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-19

Project Location:

Sample ID: 25D1774-23
Sample Matrix: Air
Sampled: 4/10/2025 12:00
Sample Type: SG

Canister ID: 063-01070::50954
Canister Size: 6
Flow Controller ID: 063-00918::20256
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 10.2

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	2690	900	900		3800	1300	1300	90	1	5/8/25 8:37	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	96.4	80-120	5/8/25 8:37

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	61.0	0.45	0.45		9	1	5/1/25 23:18	NSD
Carbon dioxide, as received	35.5	0.45	0.45		9	1	5/1/25 23:18	NSD
Oxygen (O2), as received	ND	0.45	0.45		9	1	5/1/25 23:18	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/1/25 23:18	NSD
Nitrogen (N2), as received	ND	9.00	9.00		9	1	5/1/25 23:18	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/1/25 23:18	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/30/25 17:49	DFH
1,1,1,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/30/25 17:49	DFH
1,1,2,2-Tetrachloroethane	ND	9.00	22.5		ND	62	150	18	2.5	4/30/25 17:49	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	9.00	22.5		ND	69	170	18	2.5	4/30/25 17:49	DFH
1,1,2-Trichloroethane	ND	9.00	22.5		ND	49	120	18	2.5	4/30/25 17:49	DFH
1,1-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/30/25 17:49	DFH
1,1-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/30/25 17:49	DFH
1,2,4-Trimethylbenzene	50.0	9.00	22.5		250	44	110	18	2.5	4/30/25 17:49	DFH
1,2-Dibromoethane (EDB)	ND	9.00	22.5		ND	69	170	18	2.5	4/30/25 17:49	DFH

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-19 Project Location:

Sample ID: 25D1774-23 Canister ID: 063-01070::50954 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 12:00 Flow Controller ID: 063-00918::20256 Receipt Vacuum(in Hg): 10.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/30/25 17:49	DFH
1,2-Dichloroethane	ND	9.00	22.5		ND	36	91	18	2.5	4/30/25 17:49	DFH
1,2-Dichloropropane	ND	9.00	22.5		ND	42	100	18	2.5	4/30/25 17:49	DFH
1,2-Dichlorotetrafluoroethane	58.0	9.00	22.5		410	63	160	18	2.5	4/30/25 17:49	DFH
1,3,5-Trimethylbenzene	31.0	9.00	22.5		150	44	110	18	2.5	4/30/25 17:49	DFH
1,3-Butadiene	ND	9.00	22.5		ND	20	50	18	2.5	4/30/25 17:49	DFH
1,3-Dichlorobenzene	ND	9.00	22.5		ND	54	140	18	2.5	4/30/25 17:49	DFH
1,4-Dichlorobenzene	17.1	9.00	22.5	J	100	54	140	18	2.5	4/30/25 17:49	DFH
1,4-Dioxane	ND	9.00	22.5		ND	32	81	18	2.5	4/30/25 17:49	DFH
2-Butanone (MEK)	ND	9.00	22.5		ND	27	66	18	2.5	4/30/25 17:49	DFH
2-Chlorotoluene	ND	9.00	22.5		ND	47	120	18	2.5	4/30/25 17:49	DFH
2-Hexanone (MBK)	ND	9.00	22.5		ND	37	92	18	2.5	4/30/25 17:49	DFH
4-Methyl-2-pentanone (MIBK)	ND	9.00	22.5		ND	100	260	18	2.5	4/30/25 17:49	DFH
Allyl chloride	ND	9.00	22.5		ND	28	70	18	2.5	4/30/25 17:49	DFH
Benzene	270	9.00	9.00		860	29	29	18	2.5	4/30/25 17:49	DFH
Benzyl Chloride	ND	9.00	22.5		ND	47	120	18	2.5	4/30/25 17:49	DFH
Bromoform	ND	9.00	22.5		ND	93	230	18	2.5	4/30/25 17:49	DFH
Bromomethane	ND	9.00	22.5		ND	35	87	18	2.5	4/30/25 17:49	DFH
Carbon Disulfide	ND	22.5	22.5		ND	70	70	18	2.5	4/30/25 17:49	DFH
Carbon Tetrachloride	ND	9.00	22.5		ND	57	140	18	2.5	4/30/25 17:49	DFH
Chlorobenzene	297	9.00	22.5		1400	41	100	18	2.5	4/30/25 17:49	DFH
Chloroethane	106	9.00	22.5		280	24	59	18	2.5	4/30/25 17:49	DFH
Chloroform	ND	9.00	9.00		ND	44	44	18	2.5	4/30/25 17:49	DFH
Chloromethane	ND	9.00	22.5		ND	19	46	18	2.5	4/30/25 17:49	DFH
cis-1,2-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/30/25 17:49	DFH
cis-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/30/25 17:49	DFH
Cyclohexane	540	9.00	22.5		1900	31	77	18	2.5	4/30/25 17:49	DFH
Dibromochloromethane	ND	9.00	22.5		ND	77	190	18	2.5	4/30/25 17:49	DFH
Dichlorodifluoromethane	621	22.5	22.5		3100	110	110	18	2.5	4/30/25 17:49	DFH

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-19 Project Location:

Sample ID: 25D1774-23 Canister ID: 063-01070::50954 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/10/2025 12:00 Flow Controller ID: 063-00918::20256 Receipt Vacuum(in Hg): 10.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	9.00	22.5		ND	32	81	18	2.5	4/30/25 17:49	DFH
Ethylbenzene	127	9.00	22.5		550	39	98	18	2.5	4/30/25 17:49	DFH
Heptane	1470	36.0	90.0		6000	150	370	72	2.5	5/1/25 12:41	DFH
Hexachlorobutadiene	ND	9.00	22.5		ND	96	240	18	2.5	4/30/25 17:49	DFH
Hexane	1070	36.0	90.0		3800	130	320	72	2.5	5/1/25 12:41	DFH
Isopropylbenzene	ND	9.00	22.5		ND	44	110	18	2.5	4/30/25 17:49	DFH
m+p-Xylenes	629	18.0	45.0		2700	78	200	18	2.5	4/30/25 17:49	DFH
Methyl methacrylate	ND	9.00	22.5		ND	37	92	18	2.5	4/30/25 17:49	DFH
Methylene chloride	ND	22.5	45.0		ND	78	160	18	2.5	4/30/25 17:49	DFH
Methyl-t-butyl ether (MTBE)	ND	9.00	22.5		ND	32	81	18	2.5	4/30/25 17:49	DFH
Naphthalene	ND	9.00	9.00		ND	47	47	18	2.5	4/30/25 17:49	DFH
o-Xylene	78.3	9.00	22.5		340	39	98	18	2.5	4/30/25 17:49	DFH
Propylene	705	7.20	7.20		1200	12	12	18	2.5	4/30/25 17:49	DFH
Styrene	ND	9.00	22.5		ND	38	96	18	2.5	4/30/25 17:49	DFH
TBA	ND	22.5	22.5		ND	68	68	18	2.5	4/30/25 17:49	DFH
Tetrachloroethylene (PCE)	ND	9.00	22.5		ND	61	150	18	2.5	4/30/25 17:49	DFH
Tetrahydrofuran	ND	9.00	22.5		ND	27	66	18	2.5	4/30/25 17:49	DFH
Toluene	134	9.00	22.5		510	34	85	18	2.5	4/30/25 17:49	DFH
trans-1,2-Dichloroethylene	ND	9.00	22.5		ND	36	89	18	2.5	4/30/25 17:49	DFH
trans-1,3-Dichloropropene	ND	9.00	22.5		ND	41	100	18	2.5	4/30/25 17:49	DFH
Trichloroethylene	12.6	9.00	9.00		68	48	48	18	2.5	4/30/25 17:49	DFH
Trichlorofluoromethane	ND	22.5	22.5		ND	130	130	18	2.5	4/30/25 17:49	DFH
Vinyl acetate	ND	9.00	22.5		ND	32	79	18	2.5	4/30/25 17:49	DFH
Vinyl bromide	ND	9.00	22.5		ND	39	98	18	2.5	4/30/25 17:49	DFH
Vinyl chloride	10.8	9.00	22.5	J	28	23	58	18	2.5	4/30/25 17:49	DFH
Xylenes, Total	707	27.0	67.5		3100	120	290	18	2.5	4/30/25 17:49	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	101	80-120	5/1/25 12:41
4-Bromofluorobenzene (Surr)	97.8	80-120	4/30/25 17:49

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Certificate of Analysis

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-19

Project Location:

Sample ID: 25D1774-23
Sample Matrix: Air
Sampled: 4/10/2025 12:00
Sample Type: SG

Canister ID: 063-01070::50954
Canister Size: 6
Flow Controller ID: 063-00918::20256
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 10.2

ENTHALPY ANALYTICAL

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ANALYTICAL RESULTS

Field Sample #: DUPLICATE-04 Project Location:

Sample ID: 25D1774-24 Canister ID: 063-00013::31333 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 00:00 Flow Controller ID: 063-00405::14197 Receipt Vacuum(in Hg): 5.2

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	450	450		ND	630	630	45	1	5/7/25 1:56	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	98.0	80-120	5/7/25 1:56

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	65.3	0.45	0.45		9	1	5/2/25 0:03	NSD
Carbon dioxide, as received	35.1	0.45	0.45		9	1	5/2/25 0:03	NSD
Oxygen (O2), as received	ND	0.45	0.45		9	1	5/2/25 0:03	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/2/25 0:03	NSD
Nitrogen (N2), as received	ND	9.00	9.00		9	1	5/2/25 0:03	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/2/25 0:03	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	4/30/25 18:32	DFH
1,1,1,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	4/30/25 18:32	DFH
1,1,2,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	4/30/25 18:32	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	18.0	45.0		ND	140	340	36	2.5	4/30/25 18:32	DFH
1,1,2-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	4/30/25 18:32	DFH
1,1-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	4/30/25 18:32	DFH
1,1-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/30/25 18:32	DFH
1,2,4-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/30/25 18:32	DFH
1,2-Dibromoethane (EDB)	ND	18.0	45.0		ND	140	350	36	2.5	4/30/25 18:32	DFH

ENTHALPY ANALYTICAL

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ANALYTICAL RESULTS

Field Sample #: DUPLICATE-04 Project Location:

Sample ID: 25D1774-24 Canister ID: 063-00013::31333 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 00:00 Flow Controller ID: 063-00405::14197 Receipt Vacuum(in Hg): 5.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/30/25 18:32	DFH
1,2-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	4/30/25 18:32	DFH
1,2-Dichloropropane	ND	18.0	45.0		ND	83	210	36	2.5	4/30/25 18:32	DFH
1,2-Dichlorotetrafluoroethane	164	18.0	45.0		1100	130	310	36	2.5	4/30/25 18:32	DFH
1,3,5-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/30/25 18:32	DFH
1,3-Butadiene	ND	18.0	45.0		ND	40	100	36	2.5	4/30/25 18:32	DFH
1,3-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/30/25 18:32	DFH
1,4-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	4/30/25 18:32	DFH
1,4-Dioxane	ND	18.0	45.0		ND	65	160	36	2.5	4/30/25 18:32	DFH
2-Butanone (MEK)	ND	18.0	45.0		ND	53	130	36	2.5	4/30/25 18:32	DFH
2-Chlorotoluene	ND	18.0	45.0		ND	93	230	36	2.5	4/30/25 18:32	DFH
2-Hexanone (MBK)	ND	18.0	45.0		ND	74	180	36	2.5	4/30/25 18:32	DFH
4-Methyl-2-pentanone (MIBK)	ND	18.0	45.0		ND	210	520	36	2.5	4/30/25 18:32	DFH
Allyl chloride	ND	18.0	45.0		ND	56	140	36	2.5	4/30/25 18:32	DFH
Benzene	273	18.0	18.0		870	58	58	36	2.5	4/30/25 18:32	DFH
Benzyl Chloride	ND	18.0	45.0		ND	93	230	36	2.5	4/30/25 18:32	DFH
Bromoform	ND	18.0	45.0		ND	190	470	36	2.5	4/30/25 18:32	DFH
Bromomethane	ND	18.0	45.0		ND	70	170	36	2.5	4/30/25 18:32	DFH
Carbon Disulfide	ND	45.0	45.0		ND	140	140	36	2.5	4/30/25 18:32	DFH
Carbon Tetrachloride	ND	18.0	45.0		ND	110	280	36	2.5	4/30/25 18:32	DFH
Chlorobenzene	1610	18.0	45.0		7400	83	210	36	2.5	4/30/25 18:32	DFH
Chloroethane	120	18.0	45.0		320	47	120	36	2.5	4/30/25 18:32	DFH
Chloroform	ND	18.0	18.0		ND	88	88	36	2.5	4/30/25 18:32	DFH
Chloromethane	ND	18.0	45.0		ND	37	93	36	2.5	4/30/25 18:32	DFH
cis-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/30/25 18:32	DFH
cis-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	4/30/25 18:32	DFH
Cyclohexane	148	18.0	45.0		510	62	150	36	2.5	4/30/25 18:32	DFH
Dibromochloromethane	ND	18.0	45.0		ND	150	380	36	2.5	4/30/25 18:32	DFH
Dichlorodifluoromethane	ND	45.0	45.0		ND	220	220	36	2.5	4/30/25 18:32	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUPLICATE-04 Project Location:

Sample ID: 25D1774-24 Canister ID: 063-00013::31333 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 00:00 Flow Controller ID: 063-00405::14197 Receipt Vacuum(in Hg): 5.2

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	18.0	45.0		ND	65	160	36	2.5	4/30/25 18:32	DFH
Ethylbenzene	164	18.0	45.0		710	78	200	36	2.5	4/30/25 18:32	DFH
Heptane	675	18.0	45.0		2800	74	180	36	2.5	4/30/25 18:32	DFH
Hexachlorobutadiene	ND	18.0	45.0		ND	190	480	36	2.5	4/30/25 18:32	DFH
Hexane	567	18.0	45.0		2000	63	160	36	2.5	4/30/25 18:32	DFH
Isopropylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	4/30/25 18:32	DFH
m+p-Xylenes	393	36.0	90.0		1700	160	390	36	2.5	4/30/25 18:32	DFH
Methyl methacrylate	ND	18.0	45.0		ND	74	180	36	2.5	4/30/25 18:32	DFH
Methylene chloride	ND	45.0	90.0		ND	160	310	36	2.5	4/30/25 18:32	DFH
Methyl-t-butyl ether (MTBE)	ND	18.0	45.0		ND	65	160	36	2.5	4/30/25 18:32	DFH
Naphthalene	ND	18.0	18.0		ND	94	94	36	2.5	4/30/25 18:32	DFH
o-Xylene	48.6	18.0	45.0		210	78	200	36	2.5	4/30/25 18:32	DFH
Propylene	1080	28.8	28.8		1900	50	50	72	2.5	5/1/25 11:58	DFH
Styrene	ND	18.0	45.0		ND	77	190	36	2.5	4/30/25 18:32	DFH
TBA	ND	45.0	45.0		ND	140	140	36	2.5	4/30/25 18:32	DFH
Tetrachloroethylene (PCE)	ND	18.0	45.0		ND	120	310	36	2.5	4/30/25 18:32	DFH
Tetrahydrofuran	20.7	18.0	45.0	J	61	53	130	36	2.5	4/30/25 18:32	DFH
Toluene	23.4	18.0	45.0	J	88	68	170	36	2.5	4/30/25 18:32	DFH
trans-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	4/30/25 18:32	DFH
trans-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	4/30/25 18:32	DFH
Trichloroethylene	ND	18.0	18.0		ND	97	97	36	2.5	4/30/25 18:32	DFH
Trichlorofluoromethane	ND	45.0	45.0		ND	250	250	36	2.5	4/30/25 18:32	DFH
Vinyl acetate	ND	18.0	45.0		ND	63	160	36	2.5	4/30/25 18:32	DFH
Vinyl bromide	ND	18.0	45.0		ND	79	200	36	2.5	4/30/25 18:32	DFH
Vinyl chloride	21.6	18.0	45.0	J	55	46	120	36	2.5	4/30/25 18:32	DFH
Xylenes, Total	442	54.0	135		1900	230	590	36	2.5	4/30/25 18:32	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	98.0	80-120	5/1/25 11:58
4-Bromofluorobenzene (Surr)	101	80-120	4/30/25 18:32

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUPLICATE-04

Project Location:

Sample ID: 25D1774-24
Sample Matrix: Air
Sampled: 4/11/2025 00:00
Sample Type: SG

Canister ID: 063-00013::31333
Canister Size: 6
Flow Controller ID: 063-00405::14197
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.2

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-20 Project Location:

Sample ID: 25D1774-25 Canister ID: 063-00241::36452 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 12:30 Flow Controller ID: 063-00514::17211 Receipt Vacuum(in Hg): 5.8

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	900	900		ND	1300	1300	90	1	5/9/25 0:31	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	96.7	80-120	5/9/25 0:31

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	64.4	0.90	0.90		18	1	5/6/25 19:16	NSD
Carbon dioxide, as received	35.9	0.90	0.90		18	1	5/6/25 19:16	NSD
Oxygen (O2), as received	ND	0.90	0.90		18	1	5/6/25 19:16	NSD
Hydrogen (H2), as received	ND	0.36	0.36		18	1	5/6/25 19:16	NSD
Nitrogen (N2), as received	ND	18.0	18.0		18	1	5/6/25 19:16	NSD
Carbon Monoxide, as received	ND	0.02	0.02		18	1	5/6/25 19:16	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	5/5/25 13:47	DFH
1,1,1,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	5/5/25 13:47	DFH
1,1,2,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	5/5/25 13:47	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	18.0	45.0		ND	140	340	36	2.5	5/5/25 13:47	DFH
1,1,2-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	5/5/25 13:47	DFH
1,1-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	5/5/25 13:47	DFH
1,1-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	5/5/25 13:47	DFH
1,2,4-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	5/5/25 13:47	DFH
1,2-Dibromoethane (EDB)	ND	18.0	45.0		ND	140	350	36	2.5	5/5/25 13:47	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-20
Project Location:

Sample ID: 25D1774-25
Sample Matrix: Air
Sampled: 4/11/2025 12:30
Sample Type: SG

Canister ID: 063-00241::36452
Canister Size: 6
Flow Controller ID: 063-00514::17211
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.8

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	5/5/25 13:47	DFH
1,2-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	5/5/25 13:47	DFH
1,2-Dichloropropane	ND	18.0	45.0		ND	83	210	36	2.5	5/5/25 13:47	DFH
1,2-Dichlorotetrafluoroethane	87.3	18.0	45.0		610	130	310	36	2.5	5/5/25 13:47	DFH
1,3,5-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	5/5/25 13:47	DFH
1,3-Butadiene	ND	18.0	45.0		ND	40	100	36	2.5	5/5/25 13:47	DFH
1,3-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	5/5/25 13:47	DFH
1,4-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	5/5/25 13:47	DFH
1,4-Dioxane	ND	18.0	45.0		ND	65	160	36	2.5	5/5/25 13:47	DFH
2-Butanone (MEK)	ND	18.0	45.0		ND	53	130	36	2.5	5/5/25 13:47	DFH
2-Chlorotoluene	ND	18.0	45.0		ND	93	230	36	2.5	5/5/25 13:47	DFH
2-Hexanone (MBK)	ND	18.0	45.0		ND	74	180	36	2.5	5/5/25 13:47	DFH
4-Methyl-2-pentanone (MIBK)	ND	18.0	45.0		ND	210	520	36	2.5	5/5/25 13:47	DFH
Allyl chloride	ND	18.0	45.0		ND	56	140	36	2.5	5/5/25 13:47	DFH
Benzene	302	18.0	18.0		960	58	58	36	2.5	5/5/25 13:47	DFH
Benzyl Chloride	ND	18.0	45.0		ND	93	230	36	2.5	5/5/25 13:47	DFH
Bromoform	ND	18.0	45.0		ND	190	470	36	2.5	5/5/25 13:47	DFH
Bromomethane	ND	18.0	45.0		ND	70	170	36	2.5	5/5/25 13:47	DFH
Carbon Disulfide	ND	45.0	45.0		ND	140	140	36	2.5	5/5/25 13:47	DFH
Carbon Tetrachloride	ND	18.0	45.0		ND	110	280	36	2.5	5/5/25 13:47	DFH
Chlorobenzene	870	18.0	45.0		4000	83	210	36	2.5	5/5/25 13:47	DFH
Chloroethane	ND	18.0	45.0		ND	47	120	36	2.5	5/5/25 13:47	DFH
Chloroform	ND	18.0	18.0		ND	88	88	36	2.5	5/5/25 13:47	DFH
Chloromethane	ND	18.0	45.0		ND	37	93	36	2.5	5/5/25 13:47	DFH
cis-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	5/5/25 13:47	DFH
cis-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	5/5/25 13:47	DFH
Cyclohexane	833	18.0	45.0		2900	62	150	36	2.5	5/5/25 13:47	DFH
Dibromochloromethane	ND	18.0	45.0		ND	150	380	36	2.5	5/5/25 13:47	DFH
Dichlorodifluoromethane	ND	45.0	45.0		ND	220	220	36	2.5	5/5/25 13:47	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-20 Project Location:

Sample ID: 25D1774-25 Canister ID: 063-00241::36452 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 12:30 Flow Controller ID: 063-00514::17211 Receipt Vacuum(in Hg): 5.8

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	18.0	45.0		ND	65	160	36	2.5	5/5/25 13:47	DFH
Ethylbenzene	ND	18.0	45.0		ND	78	200	36	2.5	5/5/25 13:47	DFH
Heptane	823	18.0	45.0		3400	74	180	36	2.5	5/5/25 13:47	DFH
Hexachlorobutadiene	ND	18.0	45.0		ND	190	480	36	2.5	5/5/25 13:47	DFH
Hexane	630	18.0	45.0		2200	63	160	36	2.5	5/5/25 13:47	DFH
Isopropylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	5/5/25 13:47	DFH
m+p-Xylenes	ND	36.0	90.0		ND	160	390	36	2.5	5/5/25 13:47	DFH
Methyl methacrylate	ND	18.0	45.0		ND	74	180	36	2.5	5/5/25 13:47	DFH
Methylene chloride	ND	45.0	90.0		ND	160	310	36	2.5	5/5/25 13:47	DFH
Methyl-t-butyl ether (MTBE)	ND	18.0	45.0		ND	65	160	36	2.5	5/5/25 13:47	DFH
Naphthalene	ND	18.0	18.0		ND	94	94	36	2.5	5/5/25 13:47	DFH
o-Xylene	ND	18.0	45.0		ND	78	200	36	2.5	5/5/25 13:47	DFH
Propylene	830	14.4	14.4		1400	25	25	36	2.5	5/5/25 13:47	DFH
Styrene	ND	18.0	45.0		ND	77	190	36	2.5	5/5/25 13:47	DFH
TBA	ND	45.0	45.0		ND	140	140	36	2.5	5/5/25 13:47	DFH
Tetrachloroethylene (PCE)	ND	18.0	45.0		ND	120	310	36	2.5	5/5/25 13:47	DFH
Tetrahydrofuran	ND	18.0	45.0		ND	53	130	36	2.5	5/5/25 13:47	DFH
Toluene	20.7	18.0	45.0	J	78	68	170	36	2.5	5/5/25 13:47	DFH
trans-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	5/5/25 13:47	DFH
trans-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	5/5/25 13:47	DFH
Trichloroethylene	ND	18.0	18.0		ND	97	97	36	2.5	5/5/25 13:47	DFH
Trichlorofluoromethane	ND	45.0	45.0		ND	250	250	36	2.5	5/5/25 13:47	DFH
Vinyl acetate	ND	18.0	45.0		ND	63	160	36	2.5	5/5/25 13:47	DFH
Vinyl bromide	ND	18.0	45.0		ND	79	200	36	2.5	5/5/25 13:47	DFH
Vinyl chloride	25.2	18.0	45.0	J	64	46	120	36	2.5	5/5/25 13:47	DFH
Xylenes, Total	ND	54.0	135		ND	230	590	36	2.5	5/5/25 13:47	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	105	80-120	5/5/25 13:47

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-20

Project Location:

Sample ID: 25D1774-25
Sample Matrix: Air
Sampled: 4/11/2025 12:30
Sample Type: SG

Canister ID: 063-00241::36452
Canister Size: 6
Flow Controller ID: 063-00514::17211
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 5.8

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Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-25 Project Location:

Sample ID: 25D1774-26 Canister ID: 063-00012::41608 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 12:30 Flow Controller ID: 063-00935::20079 Receipt Vacuum(in Hg): 9.4

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	10700	2700	2700		15000	3800	3800	270	1	5/9/25 9:59	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.2	80-120	5/9/25 9:59

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	58.4	0.90	0.90		18	1	5/6/25 20:02	NSD
Carbon dioxide, as received	31.6	0.90	0.90		18	1	5/6/25 20:02	NSD
Oxygen (O2), as received	8.18	0.90	0.90		18	1	5/6/25 20:02	NSD
Hydrogen (H2), as received	ND	0.36	0.36		18	1	5/6/25 20:02	NSD
Nitrogen (N2), as received	29.3	18.0	18.0		18	1	5/6/25 20:02	NSD
Carbon Monoxide, as received	ND	0.02	0.02		18	1	5/6/25 20:02	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	5/5/25 15:58	DFH
1,1,1,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	5/5/25 15:58	DFH
1,1,2,2-Tetrachloroethane	ND	18.0	45.0		ND	120	310	36	2.5	5/5/25 15:58	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	18.0	45.0		ND	140	340	36	2.5	5/5/25 15:58	DFH
1,1,2-Trichloroethane	ND	18.0	45.0		ND	98	250	36	2.5	5/5/25 15:58	DFH
1,1-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	5/5/25 15:58	DFH
1,1-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	5/5/25 15:58	DFH
1,2,4-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	5/5/25 15:58	DFH
1,2-Dibromoethane (EDB)	ND	18.0	45.0		ND	140	350	36	2.5	5/5/25 15:58	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 18, 2025 8:00
Date Issued: May 9, 2025 17:01

Submitted To: Connor Hicks

Project Number: 23050459

Client Site I.D.: Cliffdale LF

Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGI-25

Project Location:

Sample ID: 25D1774-26
Sample Matrix: Air
Sampled: 4/11/2025 12:30
Sample Type: SG

Canister ID: 063-00012::41608
Canister Size: 6
Flow Controller ID: 063-00935::20079
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 9.4

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	5/5/25 15:58	DFH
1,2-Dichloroethane	ND	18.0	45.0		ND	73	180	36	2.5	5/5/25 15:58	DFH
1,2-Dichloropropane	ND	18.0	45.0		ND	83	210	36	2.5	5/5/25 15:58	DFH
1,2-Dichlorotetrafluoroethane	122	18.0	45.0		860	130	310	36	2.5	5/5/25 15:58	DFH
1,3,5-Trimethylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	5/5/25 15:58	DFH
1,3-Butadiene	ND	18.0	45.0		ND	40	100	36	2.5	5/5/25 15:58	DFH
1,3-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	5/5/25 15:58	DFH
1,4-Dichlorobenzene	ND	18.0	45.0		ND	110	270	36	2.5	5/5/25 15:58	DFH
1,4-Dioxane	ND	18.0	45.0		ND	65	160	36	2.5	5/5/25 15:58	DFH
2-Butanone (MEK)	18.0	18.0	45.0	J	53	53	130	36	2.5	5/5/25 15:58	DFH
2-Chlorotoluene	ND	18.0	45.0		ND	93	230	36	2.5	5/5/25 15:58	DFH
2-Hexanone (MBK)	ND	18.0	45.0		ND	74	180	36	2.5	5/5/25 15:58	DFH
4-Methyl-2-pentanone (MIBK)	ND	18.0	45.0		ND	210	520	36	2.5	5/5/25 15:58	DFH
Allyl chloride	ND	18.0	45.0		ND	56	140	36	2.5	5/5/25 15:58	DFH
Benzene	204	18.0	18.0		650	58	58	36	2.5	5/5/25 15:58	DFH
Benzyl Chloride	ND	18.0	45.0		ND	93	230	36	2.5	5/5/25 15:58	DFH
Bromoform	ND	18.0	45.0		ND	190	470	36	2.5	5/5/25 15:58	DFH
Bromomethane	ND	18.0	45.0		ND	70	170	36	2.5	5/5/25 15:58	DFH
Carbon Disulfide	ND	45.0	45.0		ND	140	140	36	2.5	5/5/25 15:58	DFH
Carbon Tetrachloride	ND	18.0	45.0		ND	110	280	36	2.5	5/5/25 15:58	DFH
Chlorobenzene	1070	18.0	45.0		4900	83	210	36	2.5	5/5/25 15:58	DFH
Chloroethane	90.0	18.0	45.0		240	47	120	36	2.5	5/5/25 15:58	DFH
Chloroform	ND	18.0	18.0		ND	88	88	36	2.5	5/5/25 15:58	DFH
Chloromethane	ND	18.0	45.0		ND	37	93	36	2.5	5/5/25 15:58	DFH
cis-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	5/5/25 15:58	DFH
cis-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	5/5/25 15:58	DFH
Cyclohexane	104	18.0	45.0		360	62	150	36	2.5	5/5/25 15:58	DFH
Dibromochloromethane	ND	18.0	45.0		ND	150	380	36	2.5	5/5/25 15:58	DFH
Dichlorodifluoromethane	ND	45.0	45.0		ND	220	220	36	2.5	5/5/25 15:58	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-25 Project Location:

Sample ID: 25D1774-26 Canister ID: 063-00012::41608 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 12:30 Flow Controller ID: 063-00935::20079 Receipt Vacuum(in Hg): 9.4

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	18.0	45.0		ND	65	160	36	2.5	5/5/25 15:58	DFH
Ethylbenzene	105	18.0	45.0		460	78	200	36	2.5	5/5/25 15:58	DFH
Heptane	476	18.0	45.0		2000	74	180	36	2.5	5/5/25 15:58	DFH
Hexachlorobutadiene	ND	18.0	45.0		ND	190	480	36	2.5	5/5/25 15:58	DFH
Hexane	410	18.0	45.0		1400	63	160	36	2.5	5/5/25 15:58	DFH
Isopropylbenzene	ND	18.0	45.0		ND	88	220	36	2.5	5/5/25 15:58	DFH
m+p-Xylenes	245	36.0	90.0		1100	160	390	36	2.5	5/5/25 15:58	DFH
Methyl methacrylate	ND	18.0	45.0		ND	74	180	36	2.5	5/5/25 15:58	DFH
Methylene chloride	ND	45.0	90.0		ND	160	310	36	2.5	5/5/25 15:58	DFH
Methyl-t-butyl ether (MTBE)	ND	18.0	45.0		ND	65	160	36	2.5	5/5/25 15:58	DFH
Naphthalene	ND	18.0	18.0		ND	94	94	36	2.5	5/5/25 15:58	DFH
o-Xylene	32.4	18.0	45.0	J	140	78	200	36	2.5	5/5/25 15:58	DFH
Propylene	ND	14.4	14.4		ND	25	25	36	2.5	5/5/25 15:58	DFH
Styrene	ND	18.0	45.0		ND	77	190	36	2.5	5/5/25 15:58	DFH
TBA	ND	45.0	45.0		ND	140	140	36	2.5	5/5/25 15:58	DFH
Tetrachloroethylene (PCE)	ND	18.0	45.0		ND	120	310	36	2.5	5/5/25 15:58	DFH
Tetrahydrofuran	19.8	18.0	45.0	J	58	53	130	36	2.5	5/5/25 15:58	DFH
Toluene	22.5	18.0	45.0	J	85	68	170	36	2.5	5/5/25 15:58	DFH
trans-1,2-Dichloroethylene	ND	18.0	45.0		ND	71	180	36	2.5	5/5/25 15:58	DFH
trans-1,3-Dichloropropene	ND	18.0	45.0		ND	82	200	36	2.5	5/5/25 15:58	DFH
Trichloroethylene	ND	18.0	18.0		ND	97	97	36	2.5	5/5/25 15:58	DFH
Trichlorofluoromethane	ND	45.0	45.0		ND	250	250	36	2.5	5/5/25 15:58	DFH
Vinyl acetate	ND	18.0	45.0		ND	63	160	36	2.5	5/5/25 15:58	DFH
Vinyl bromide	ND	18.0	45.0		ND	79	200	36	2.5	5/5/25 15:58	DFH
Vinyl chloride	ND	18.0	45.0		ND	46	120	36	2.5	5/5/25 15:58	DFH
Xylenes, Total	277	54.0	135		1200	230	590	36	2.5	5/5/25 15:58	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	100	80-120	5/5/25 15:58

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGI-25

Project Location:

Sample ID: 25D1774-26
Sample Matrix: Air
Sampled: 4/11/2025 12:30
Sample Type: SG

Canister ID: 063-00012::41608
Canister Size: 6
Flow Controller ID: 063-00935::20079
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 9.4

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-24 Project Location:

Sample ID: 25D1774-27 Canister ID: 063-00174::41726 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 13:00 Flow Controller ID: 063-00937::20217 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	900	900		ND	1300	1300	90	1	5/9/25 1:51	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
1,4-Difluorobenzene (Surr), as received	95.5	80-120	5/9/25 1:51

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	52.2	0.45	0.45		9	1	5/6/25 20:47	NSD
Carbon dioxide, as received	25.3	0.45	0.45		9	1	5/6/25 20:47	NSD
Oxygen (O2), as received	5.35	0.45	0.45		9	1	5/6/25 20:47	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/6/25 20:47	NSD
Nitrogen (N2), as received	19.1	9.00	9.00		9	1	5/6/25 20:47	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/6/25 20:47	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	5/5/25 21:49	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	5/5/25 21:49	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	5/5/25 21:49	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	5/5/25 21:49	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	5/5/25 21:49	DFH
1,1-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	5/5/25 21:49	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	5/5/25 21:49	DFH
1,2,4-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	5/5/25 21:49	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	5/5/25 21:49	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-24 Project Location:

Sample ID: 25D1774-27 Canister ID: 063-00174::41726 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/11/2025 13:00 Flow Controller ID: 063-00937::20217 Receipt Vacuum(in Hg): 6.0

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	5/5/25 21:49	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	5/5/25 21:49	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	5/5/25 21:49	DFH
1,2-Dichlorotetrafluoroethane	115	36.0	90.0		810	250	630	72	2.5	5/5/25 21:49	DFH
1,3,5-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	5/5/25 21:49	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	5/5/25 21:49	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	5/5/25 21:49	DFH
1,4-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	5/5/25 21:49	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	5/5/25 21:49	DFH
2-Butanone (MEK)	ND	36.0	90.0		ND	110	270	72	2.5	5/5/25 21:49	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	5/5/25 21:49	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	5/5/25 21:49	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	5/5/25 21:49	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	5/5/25 21:49	DFH
Benzene	175	36.0	36.0		560	120	120	72	2.5	5/5/25 21:49	DFH
Benzyl Chloride	ND	36.0	90.0		ND	190	470	72	2.5	5/5/25 21:49	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	5/5/25 21:49	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	5/5/25 21:49	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	5/5/25 21:49	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	5/5/25 21:49	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	5/5/25 21:49	DFH
Chloroethane	358	36.0	90.0		950	95	240	72	2.5	5/5/25 21:49	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	5/5/25 21:49	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	5/5/25 21:49	DFH
cis-1,2-Dichloroethylene	101	36.0	90.0		400	140	360	72	2.5	5/5/25 21:49	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	5/5/25 21:49	DFH
Cyclohexane	1700	36.0	90.0		5800	120	310	72	2.5	5/5/25 21:49	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	5/5/25 21:49	DFH
Dichlorodifluoromethane	504	90.0	90.0		2500	450	450	72	2.5	5/5/25 21:49	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-24
Project Location:

Sample ID: 25D1774-27
Sample Matrix: Air
Sampled: 4/11/2025 13:00
Sample Type: SG

Canister ID: 063-00174::41726
Canister Size: 6
Flow Controller ID: 063-00937::20217
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.0

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	5/5/25 21:49	DFH
Ethylbenzene	ND	36.0	90.0		ND	160	390	72	2.5	5/5/25 21:49	DFH
Heptane	1880	36.0	90.0		7700	150	370	72	2.5	5/5/25 21:49	DFH
Hexachlorobutadiene	ND	36.0	90.0		ND	380	960	72	2.5	5/5/25 21:49	DFH
Hexane	2160	36.0	90.0		7600	130	320	72	2.5	5/5/25 21:49	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	5/5/25 21:49	DFH
m+p-Xylenes	ND	72.0	180		ND	310	780	72	2.5	5/5/25 21:49	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	5/5/25 21:49	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	5/5/25 21:49	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	5/5/25 21:49	DFH
Naphthalene	ND	36.0	36.0		ND	190	190	72	2.5	5/5/25 21:49	DFH
o-Xylene	ND	36.0	90.0		ND	160	390	72	2.5	5/5/25 21:49	DFH
Propylene	286	28.8	28.8		490	50	50	72	2.5	5/5/25 21:49	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	5/5/25 21:49	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	5/5/25 21:49	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	5/5/25 21:49	DFH
Tetrahydrofuran	ND	36.0	90.0		ND	110	270	72	2.5	5/5/25 21:49	DFH
Toluene	ND	36.0	90.0		ND	140	340	72	2.5	5/5/25 21:49	DFH
trans-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	5/5/25 21:49	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	5/5/25 21:49	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	5/5/25 21:49	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	5/5/25 21:49	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	5/5/25 21:49	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	5/5/25 21:49	DFH
Vinyl chloride	72.0	36.0	90.0	J	180	92	230	72	2.5	5/5/25 21:49	DFH
Xylenes, Total	ND	108	270		ND	470	1200	72	2.5	5/5/25 21:49	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	99.2	80-120	5/5/25 21:49

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-24

Project Location:

Sample ID: 25D1774-27
Sample Matrix: Air
Sampled: 4/11/2025 13:00
Sample Type: SG

Canister ID: 063-00174::41726
Canister Size: 6
Flow Controller ID: 063-00937::20217
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.0

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-33 Project Location:

Sample ID: 25D1774-28 Canister ID: 063-00045::39976 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 4

Sampled: 4/14/2025 12:22 Flow Controller ID: 063-00505::16059 Receipt Vacuum(in Hg): 3.8

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	60.0	60.0		ND	84	84	6	1	5/8/25 23:50	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.7	80-120	5/8/25 23:50

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	ND	0.45	0.45		9	1	5/6/25 21:32	NSD
Carbon dioxide, as received	3.52	0.45	0.45		9	1	5/6/25 21:32	NSD
Oxygen (O2), as received	17.1	0.45	0.45		9	1	5/6/25 21:32	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/6/25 21:32	NSD
Nitrogen (N2), as received	77.7	18.0	18.0		18	1	5/7/25 16:18	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/6/25 21:32	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	5/5/25 11:33	DFH
1,1,1,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	5/5/25 11:33	DFH
1,1,2,2-Tetrachloroethane	ND	1.50	3.75		ND	10	26	3	2.5	5/5/25 11:33	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	1.50	3.75		ND	11	29	3	2.5	5/5/25 11:33	DFH
1,1,2-Trichloroethane	ND	1.50	3.75		ND	8.2	20	3	2.5	5/5/25 11:33	DFH
1,1-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	5/5/25 11:33	DFH
1,1-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	5/5/25 11:33	DFH
1,2,4-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	5/5/25 11:33	DFH
1,2-Dibromoethane (EDB)	ND	1.50	3.75		ND	12	29	3	2.5	5/5/25 11:33	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Submitted To: Connor Hicks

Client Site I.D.: Cliffdale LF

Date Received: April 18, 2025 8:00

Date Issued: May 9, 2025 17:01

Project Number: 23050459

Purchase Order:

ANALYTICAL RESULTS

Field Sample #: SGP-33

Sample ID: 25D1774-28

Sample Matrix: Air

Sampled: 4/14/2025 12:22

Sample Type: SG

Project Location:

Canister ID: 063-00045::39976

Canister Size: 6

Flow Controller ID: 063-00505::16059

Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30

Final Vacuum(in Hg): 4

Receipt Vacuum(in Hg): 3.8

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	5/5/25 11:33	DFH
1,2-Dichloroethane	ND	1.50	3.75		ND	6.1	15	3	2.5	5/5/25 11:33	DFH
1,2-Dichloropropane	ND	1.50	3.75		ND	6.9	17	3	2.5	5/5/25 11:33	DFH
1,2-Dichlorotetrafluoroethane	ND	1.50	3.75		ND	10	26	3	2.5	5/5/25 11:33	DFH
1,3,5-Trimethylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	5/5/25 11:33	DFH
1,3-Butadiene	ND	1.50	3.75		ND	3.3	8.3	3	2.5	5/5/25 11:33	DFH
1,3-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	5/5/25 11:33	DFH
1,4-Dichlorobenzene	ND	1.50	3.75		ND	9.0	23	3	2.5	5/5/25 11:33	DFH
1,4-Dioxane	ND	1.50	3.75		ND	5.4	14	3	2.5	5/5/25 11:33	DFH
2-Butanone (MEK)	ND	1.50	3.75		ND	4.4	11	3	2.5	5/5/25 11:33	DFH
2-Chlorotoluene	ND	1.50	3.75		ND	7.8	19	3	2.5	5/5/25 11:33	DFH
2-Hexanone (MBK)	ND	1.50	3.75		ND	6.1	15	3	2.5	5/5/25 11:33	DFH
4-Methyl-2-pentanone (MIBK)	ND	1.50	3.75		ND	17	43	3	2.5	5/5/25 11:33	DFH
Allyl chloride	ND	1.50	3.75		ND	4.7	12	3	2.5	5/5/25 11:33	DFH
Benzene	ND	1.50	1.50		ND	4.8	4.8	3	2.5	5/5/25 11:33	DFH
Benzyl Chloride	ND	1.50	3.75		ND	7.8	19	3	2.5	5/5/25 11:33	DFH
Bromoform	ND	1.50	3.75		ND	16	39	3	2.5	5/5/25 11:33	DFH
Bromomethane	ND	1.50	3.75		ND	5.8	15	3	2.5	5/5/25 11:33	DFH
Carbon Disulfide	ND	3.75	3.75		ND	12	12	3	2.5	5/5/25 11:33	DFH
Carbon Tetrachloride	ND	1.50	3.75		ND	9.4	24	3	2.5	5/5/25 11:33	DFH
Chlorobenzene	ND	1.50	3.75		ND	6.9	17	3	2.5	5/5/25 11:33	DFH
Chloroethane	ND	1.50	3.75		ND	4.0	9.9	3	2.5	5/5/25 11:33	DFH
Chloroform	ND	1.50	1.50		ND	7.3	7.3	3	2.5	5/5/25 11:33	DFH
Chloromethane	ND	1.50	3.75		ND	3.1	7.7	3	2.5	5/5/25 11:33	DFH
cis-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	5/5/25 11:33	DFH
cis-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	5/5/25 11:33	DFH
Cyclohexane	ND	1.50	3.75		ND	5.2	13	3	2.5	5/5/25 11:33	DFH
Dibromochloromethane	ND	1.50	3.75		ND	13	32	3	2.5	5/5/25 11:33	DFH
Dichlorodifluoromethane	ND	3.75	3.75		ND	19	19	3	2.5	5/5/25 11:33	DFH

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-33
Project Location:

Sample ID: 25D1774-28
Sample Matrix: Air
Sampled: 4/14/2025 12:22
Sample Type: SG

Canister ID: 063-00045::39976
Canister Size: 6
Flow Controller ID: 063-00505::16059
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 4
Receipt Vacuum(in Hg): 3.8

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	1.50	3.75		ND	5.4	14	3	2.5	5/5/25 11:33	DFH
Ethylbenzene	ND	1.50	3.75		ND	6.5	16	3	2.5	5/5/25 11:33	DFH
Heptane	ND	1.50	3.75		ND	6.1	15	3	2.5	5/5/25 11:33	DFH
Hexachlorobutadiene	ND	1.50	3.75		ND	16	40	3	2.5	5/5/25 11:33	DFH
Hexane	ND	1.50	3.75		ND	5.3	13	3	2.5	5/5/25 11:33	DFH
Isopropylbenzene	ND	1.50	3.75		ND	7.4	18	3	2.5	5/5/25 11:33	DFH
m+p-Xylenes	ND	3.00	7.50		ND	13	33	3	2.5	5/5/25 11:33	DFH
Methyl methacrylate	ND	1.50	3.75		ND	6.1	15	3	2.5	5/5/25 11:33	DFH
Methylene chloride	ND	3.75	7.50		ND	13	26	3	2.5	5/5/25 11:33	DFH
Methyl-t-butyl ether (MTBE)	ND	1.50	3.75		ND	5.4	14	3	2.5	5/5/25 11:33	DFH
Naphthalene	ND	1.50	1.50		ND	7.9	7.9	3	2.5	5/5/25 11:33	DFH
o-Xylene	ND	1.50	3.75		ND	6.5	16	3	2.5	5/5/25 11:33	DFH
Propylene	ND	1.20	1.20		ND	2.1	2.1	3	2.5	5/5/25 11:33	DFH
Styrene	ND	1.50	3.75		ND	6.4	16	3	2.5	5/5/25 11:33	DFH
TBA	ND	3.75	3.75		ND	11	11	3	2.5	5/5/25 11:33	DFH
Tetrachloroethylene (PCE)	ND	1.50	3.75		ND	10	25	3	2.5	5/5/25 11:33	DFH
Tetrahydrofuran	ND	1.50	3.75		ND	4.4	11	3	2.5	5/5/25 11:33	DFH
Toluene	ND	1.50	3.75		ND	5.7	14	3	2.5	5/5/25 11:33	DFH
trans-1,2-Dichloroethylene	ND	1.50	3.75		ND	5.9	15	3	2.5	5/5/25 11:33	DFH
trans-1,3-Dichloropropene	ND	1.50	3.75		ND	6.8	17	3	2.5	5/5/25 11:33	DFH
Trichloroethylene	ND	1.50	1.50		ND	8.1	8.1	3	2.5	5/5/25 11:33	DFH
Trichlorofluoromethane	ND	3.75	3.75		ND	21	21	3	2.5	5/5/25 11:33	DFH
Vinyl acetate	ND	1.50	3.75		ND	5.3	13	3	2.5	5/5/25 11:33	DFH
Vinyl bromide	ND	1.50	3.75		ND	6.6	16	3	2.5	5/5/25 11:33	DFH
Vinyl chloride	ND	1.50	3.75		ND	3.8	9.6	3	2.5	5/5/25 11:33	DFH
Xylenes, Total	ND	4.50	11.2		ND	20	49	3	2.5	5/5/25 11:33	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	94.8	80-120	5/5/25 11:33

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-33

Project Location:

Sample ID: 25D1774-28
Sample Matrix: Air
Sampled: 4/14/2025 12:22
Sample Type: SG

Canister ID: 063-00045::39976
Canister Size: 6
Flow Controller ID: 063-00505::16059
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 4
Receipt Vacuum(in Hg): 3.8

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-31 Project Location:

Sample ID: 25D1774-29 Canister ID: 063-00649::47666 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/14/2025 12:25 Flow Controller ID: 063-00345::16523 Receipt Vacuum(in Hg): 6.6

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	900	900		ND	1300	1300	90	1	5/9/25 2:31	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	97.4	80-120	5/9/25 2:31

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	28.4	0.90	0.90		18	1	5/6/25 18:31	NSD
Carbon dioxide, as received	3.34	0.90	0.90		18	1	5/6/25 18:31	NSD
Oxygen (O2), as received	8.68	0.90	0.90		18	1	5/6/25 18:31	NSD
Hydrogen (H2), as received	ND	0.36	0.36		18	1	5/6/25 18:31	NSD
Nitrogen (N2), as received	59.5	18.0	18.0		18	1	5/6/25 18:31	NSD
Carbon Monoxide, as received	ND	0.02	0.02		18	1	5/6/25 18:31	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	4.50	11.2		ND	25	61	9	2.5	5/5/25 12:19	DFH
1,1,1,2-Tetrachloroethane	ND	4.50	11.2		ND	31	77	9	2.5	5/5/25 12:19	DFH
1,1,2,2-Tetrachloroethane	ND	4.50	11.2		ND	31	77	9	2.5	5/5/25 12:19	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	4.50	11.2		ND	34	86	9	2.5	5/5/25 12:19	DFH
1,1,2-Trichloroethane	ND	4.50	11.2		ND	25	61	9	2.5	5/5/25 12:19	DFH
1,1-Dichloroethane	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 12:19	DFH
1,1-Dichloroethylene	ND	4.50	11.2		ND	18	45	9	2.5	5/5/25 12:19	DFH
1,2,4-Trimethylbenzene	ND	4.50	11.2		ND	22	55	9	2.5	5/5/25 12:19	DFH
1,2-Dibromoethane (EDB)	ND	4.50	11.2		ND	35	86	9	2.5	5/5/25 12:19	DFH

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1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-31 Project Location:

Sample ID: 25D1774-29 Canister ID: 063-00649::47666 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/14/2025 12:25 Flow Controller ID: 063-00345::16523 Receipt Vacuum(in Hg): 6.6

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	4.50	11.2		ND	27	68	9	2.5	5/5/25 12:19	DFH
1,2-Dichloroethane	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 12:19	DFH
1,2-Dichloropropane	ND	4.50	11.2		ND	21	52	9	2.5	5/5/25 12:19	DFH
1,2-Dichlorotetrafluoroethane	54.2	4.50	11.2		380	31	79	9	2.5	5/5/25 12:19	DFH
1,3,5-Trimethylbenzene	ND	4.50	11.2		ND	22	55	9	2.5	5/5/25 12:19	DFH
1,3-Butadiene	ND	4.50	11.2		ND	10.0	25	9	2.5	5/5/25 12:19	DFH
1,3-Dichlorobenzene	ND	4.50	11.2		ND	27	68	9	2.5	5/5/25 12:19	DFH
1,4-Dichlorobenzene	ND	4.50	11.2		ND	27	68	9	2.5	5/5/25 12:19	DFH
1,4-Dioxane	ND	4.50	11.2		ND	16	41	9	2.5	5/5/25 12:19	DFH
2-Butanone (MEK)	5.18	4.50	11.2	J	15	13	33	9	2.5	5/5/25 12:19	DFH
2-Chlorotoluene	ND	4.50	11.2		ND	23	58	9	2.5	5/5/25 12:19	DFH
2-Hexanone (MBK)	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 12:19	DFH
4-Methyl-2-pentanone (MIBK)	ND	4.50	11.2		ND	52	130	9	2.5	5/5/25 12:19	DFH
Allyl chloride	ND	4.50	11.2		ND	14	35	9	2.5	5/5/25 12:19	DFH
Benzene	ND	4.50	4.50		ND	14	14	9	2.5	5/5/25 12:19	DFH
Benzyl Chloride	ND	4.50	11.2		ND	23	58	9	2.5	5/5/25 12:19	DFH
Bromoform	ND	4.50	11.2		ND	47	120	9	2.5	5/5/25 12:19	DFH
Bromomethane	ND	4.50	11.2		ND	17	44	9	2.5	5/5/25 12:19	DFH
Carbon Disulfide	ND	11.2	11.2		ND	35	35	9	2.5	5/5/25 12:19	DFH
Carbon Tetrachloride	ND	4.50	11.2		ND	28	71	9	2.5	5/5/25 12:19	DFH
Chlorobenzene	ND	4.50	11.2		ND	21	52	9	2.5	5/5/25 12:19	DFH
Chloroethane	ND	4.50	11.2		ND	12	30	9	2.5	5/5/25 12:19	DFH
Chloroform	ND	4.50	4.50		ND	22	22	9	2.5	5/5/25 12:19	DFH
Chloromethane	ND	4.50	11.2		ND	9.3	23	9	2.5	5/5/25 12:19	DFH
cis-1,2-Dichloroethylene	ND	4.50	11.2		ND	18	45	9	2.5	5/5/25 12:19	DFH
cis-1,3-Dichloropropene	ND	4.50	11.2		ND	20	51	9	2.5	5/5/25 12:19	DFH
Cyclohexane	9.90	4.50	11.2	J	34	15	39	9	2.5	5/5/25 12:19	DFH
Dibromochloromethane	ND	4.50	11.2		ND	38	96	9	2.5	5/5/25 12:19	DFH
Dichlorodifluoromethane	ND	11.2	11.2		ND	56	56	9	2.5	5/5/25 12:19	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-31
Project Location:

Sample ID: 25D1774-29
Sample Matrix: Air
Sampled: 4/14/2025 12:25
Sample Type: SG

Canister ID: 063-00649::47666
Canister Size: 6
Flow Controller ID: 063-00345::16523
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.6

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	4.50	11.2		ND	16	41	9	2.5	5/5/25 12:19	DFH
Ethylbenzene	ND	4.50	11.2		ND	20	49	9	2.5	5/5/25 12:19	DFH
Heptane	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 12:19	DFH
Hexachlorobutadiene	ND	4.50	11.2		ND	48	120	9	2.5	5/5/25 12:19	DFH
Hexane	4.95	4.50	11.2	J	17	16	40	9	2.5	5/5/25 12:19	DFH
Isopropylbenzene	ND	4.50	11.2		ND	22	55	9	2.5	5/5/25 12:19	DFH
m+p-Xylenes	ND	9.00	22.5		ND	39	98	9	2.5	5/5/25 12:19	DFH
Methyl methacrylate	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 12:19	DFH
Methylene chloride	ND	11.2	22.5		ND	39	78	9	2.5	5/5/25 12:19	DFH
Methyl-t-butyl ether (MTBE)	ND	4.50	11.2		ND	16	41	9	2.5	5/5/25 12:19	DFH
Naphthalene	ND	4.50	4.50		ND	24	24	9	2.5	5/5/25 12:19	DFH
o-Xylene	ND	4.50	11.2		ND	20	49	9	2.5	5/5/25 12:19	DFH
Propylene	ND	3.60	3.60		ND	6.2	6.2	9	2.5	5/5/25 12:19	DFH
Styrene	ND	4.50	11.2		ND	19	48	9	2.5	5/5/25 12:19	DFH
TBA	ND	11.2	11.2		ND	34	34	9	2.5	5/5/25 12:19	DFH
Tetrachloroethylene (PCE)	ND	4.50	11.2		ND	31	76	9	2.5	5/5/25 12:19	DFH
Tetrahydrofuran	ND	4.50	11.2		ND	13	33	9	2.5	5/5/25 12:19	DFH
Toluene	ND	4.50	11.2		ND	17	42	9	2.5	5/5/25 12:19	DFH
trans-1,2-Dichloroethylene	ND	4.50	11.2		ND	18	45	9	2.5	5/5/25 12:19	DFH
trans-1,3-Dichloropropene	ND	4.50	11.2		ND	20	51	9	2.5	5/5/25 12:19	DFH
Trichloroethylene	ND	4.50	4.50		ND	24	24	9	2.5	5/5/25 12:19	DFH
Trichlorofluoromethane	ND	11.2	11.2		ND	63	63	9	2.5	5/5/25 12:19	DFH
Vinyl acetate	ND	4.50	11.2		ND	16	40	9	2.5	5/5/25 12:19	DFH
Vinyl bromide	ND	4.50	11.2		ND	20	49	9	2.5	5/5/25 12:19	DFH
Vinyl chloride	ND	4.50	11.2		ND	12	29	9	2.5	5/5/25 12:19	DFH
Xylenes, Total	ND	13.5	33.8		ND	59	150	9	2.5	5/5/25 12:19	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	99.6	80-120	5/5/25 12:19

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-31

Project Location:

Sample ID: 25D1774-29
Sample Matrix: Air
Sampled: 4/14/2025 12:25
Sample Type: SG

Canister ID: 063-00649::47666
Canister Size: 6
Flow Controller ID: 063-00345::16523
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 6.6

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-34 Project Location:

Sample ID: 25D1774-30 Canister ID: 063-01034::49288 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 2

Sampled: 4/14/2025 12:30 Flow Controller ID: 063-00802::20118 Receipt Vacuum(in Hg): 5.6

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	18400	2700	2700		26000	3800	3800	270	1	5/9/25 10:39	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	99.0	80-120	5/9/25 10:39

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	57.9	0.45	0.45		9	1	5/6/25 22:17	NSD
Carbon dioxide, as received	26.8	0.45	0.45		9	1	5/6/25 22:17	NSD
Oxygen (O2), as received	2.33	0.45	0.45		9	1	5/6/25 22:17	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/6/25 22:17	NSD
Nitrogen (N2), as received	14.4	9.00	9.00		9	1	5/6/25 22:17	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/6/25 22:17	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	5/5/25 22:32	DFH
1,1,1,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	5/5/25 22:32	DFH
1,1,2,2-Tetrachloroethane	ND	36.0	90.0		ND	250	620	72	2.5	5/5/25 22:32	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	36.0	90.0		ND	280	690	72	2.5	5/5/25 22:32	DFH
1,1,2-Trichloroethane	ND	36.0	90.0		ND	200	490	72	2.5	5/5/25 22:32	DFH
1,1-Dichloroethane	434	36.0	90.0		1800	150	360	72	2.5	5/5/25 22:32	DFH
1,1-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	5/5/25 22:32	DFH
1,2,4-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	5/5/25 22:32	DFH
1,2-Dibromoethane (EDB)	ND	36.0	90.0		ND	280	690	72	2.5	5/5/25 22:32	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-34

Project Location:

Sample ID: 25D1774-30
Sample Matrix: Air
Sampled: 4/14/2025 12:30
Sample Type: SG

Canister ID: 063-01034::49288
Canister Size: 6
Flow Controller ID: 063-00802::20118
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 2
Receipt Vacuum(in Hg): 5.6

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	5/5/25 22:32	DFH
1,2-Dichloroethane	ND	36.0	90.0		ND	150	360	72	2.5	5/5/25 22:32	DFH
1,2-Dichloropropane	ND	36.0	90.0		ND	170	420	72	2.5	5/5/25 22:32	DFH
1,2-Dichlorotetrafluoroethane	288	36.0	90.0		2000	250	630	72	2.5	5/5/25 22:32	DFH
1,3,5-Trimethylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	5/5/25 22:32	DFH
1,3-Butadiene	ND	36.0	90.0		ND	80	200	72	2.5	5/5/25 22:32	DFH
1,3-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	5/5/25 22:32	DFH
1,4-Dichlorobenzene	ND	36.0	90.0		ND	220	540	72	2.5	5/5/25 22:32	DFH
1,4-Dioxane	ND	36.0	90.0		ND	130	320	72	2.5	5/5/25 22:32	DFH
2-Butanone (MEK)	ND	36.0	90.0		ND	110	270	72	2.5	5/5/25 22:32	DFH
2-Chlorotoluene	ND	36.0	90.0		ND	190	470	72	2.5	5/5/25 22:32	DFH
2-Hexanone (MBK)	ND	36.0	90.0		ND	150	370	72	2.5	5/5/25 22:32	DFH
4-Methyl-2-pentanone (MIBK)	ND	36.0	90.0		ND	410	1000	72	2.5	5/5/25 22:32	DFH
Allyl chloride	ND	36.0	90.0		ND	110	280	72	2.5	5/5/25 22:32	DFH
Benzene	212	36.0	36.0		680	120	120	72	2.5	5/5/25 22:32	DFH
Benzyl Chloride	ND	36.0	90.0		ND	190	470	72	2.5	5/5/25 22:32	DFH
Bromoform	ND	36.0	90.0		ND	370	930	72	2.5	5/5/25 22:32	DFH
Bromomethane	ND	36.0	90.0		ND	140	350	72	2.5	5/5/25 22:32	DFH
Carbon Disulfide	ND	90.0	90.0		ND	280	280	72	2.5	5/5/25 22:32	DFH
Carbon Tetrachloride	ND	36.0	90.0		ND	230	570	72	2.5	5/5/25 22:32	DFH
Chlorobenzene	ND	36.0	90.0		ND	170	410	72	2.5	5/5/25 22:32	DFH
Chloroethane	491	36.0	90.0		1300	95	240	72	2.5	5/5/25 22:32	DFH
Chloroform	ND	36.0	36.0		ND	180	180	72	2.5	5/5/25 22:32	DFH
Chloromethane	ND	36.0	90.0		ND	74	190	72	2.5	5/5/25 22:32	DFH
cis-1,2-Dichloroethylene	52.2	36.0	90.0	J	210	140	360	72	2.5	5/5/25 22:32	DFH
cis-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	5/5/25 22:32	DFH
Cyclohexane	1250	36.0	90.0		4300	120	310	72	2.5	5/5/25 22:32	DFH
Dibromochloromethane	ND	36.0	90.0		ND	310	770	72	2.5	5/5/25 22:32	DFH
Dichlorodifluoromethane	560	90.0	90.0		2800	450	450	72	2.5	5/5/25 22:32	DFH

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-34 Project Location:

Sample ID: 25D1774-30 Canister ID: 063-01034::49288 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 2

Sampled: 4/14/2025 12:30 Flow Controller ID: 063-00802::20118 Receipt Vacuum(in Hg): 5.6

Sample Type: SG Flow Controller Type: PASSIVE

Volatile Organic Compounds by GCMS
EPA TO-15

	ppbv				ug/M³						
Analyte	Results	MDL	LOQ	Flag/Qual	Results	MDL	LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	5/5/25 22:32	DFH
Ethylbenzene	ND	36.0	90.0		ND	160	390	72	2.5	5/5/25 22:32	DFH
Heptane	3430	36.0	90.0		14000	150	370	72	2.5	5/5/25 22:32	DFH
Hexachlorobutadiene	ND	36.0	90.0		ND	380	960	72	2.5	5/5/25 22:32	DFH
Hexane	2010	36.0	90.0		7100	130	320	72	2.5	5/5/25 22:32	DFH
Isopropylbenzene	ND	36.0	90.0		ND	180	440	72	2.5	5/5/25 22:32	DFH
m+p-Xylenes	ND	72.0	180		ND	310	780	72	2.5	5/5/25 22:32	DFH
Methyl methacrylate	ND	36.0	90.0		ND	150	370	72	2.5	5/5/25 22:32	DFH
Methylene chloride	ND	90.0	180		ND	310	630	72	2.5	5/5/25 22:32	DFH
Methyl-t-butyl ether (MTBE)	ND	36.0	90.0		ND	130	320	72	2.5	5/5/25 22:32	DFH
Naphthalene	ND	36.0	36.0		ND	190	190	72	2.5	5/5/25 22:32	DFH
o-Xylene	ND	36.0	90.0		ND	160	390	72	2.5	5/5/25 22:32	DFH
Propylene	1460	28.8	28.8		2500	50	50	72	2.5	5/5/25 22:32	DFH
Styrene	ND	36.0	90.0		ND	150	380	72	2.5	5/5/25 22:32	DFH
TBA	ND	90.0	90.0		ND	270	270	72	2.5	5/5/25 22:32	DFH
Tetrachloroethylene (PCE)	ND	36.0	90.0		ND	240	610	72	2.5	5/5/25 22:32	DFH
Tetrahydrofuran	ND	36.0	90.0		ND	110	270	72	2.5	5/5/25 22:32	DFH
Toluene	ND	36.0	90.0		ND	140	340	72	2.5	5/5/25 22:32	DFH
trans-1,2-Dichloroethylene	ND	36.0	90.0		ND	140	360	72	2.5	5/5/25 22:32	DFH
trans-1,3-Dichloropropene	ND	36.0	90.0		ND	160	410	72	2.5	5/5/25 22:32	DFH
Trichloroethylene	ND	36.0	36.0		ND	190	190	72	2.5	5/5/25 22:32	DFH
Trichlorofluoromethane	ND	90.0	90.0		ND	510	510	72	2.5	5/5/25 22:32	DFH
Vinyl acetate	ND	36.0	90.0		ND	130	320	72	2.5	5/5/25 22:32	DFH
Vinyl bromide	ND	36.0	90.0		ND	160	390	72	2.5	5/5/25 22:32	DFH
Vinyl chloride	1240	36.0	90.0		3200	92	230	72	2.5	5/5/25 22:32	DFH
Xylenes, Total	ND	108	270		ND	470	1200	72	2.5	5/5/25 22:32	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	101	80-120	5/5/25 22:32

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: SGP-34

Project Location:

Sample ID: 25D1774-30
Sample Matrix: Air
Sampled: 4/14/2025 12:30
Sample Type: SG

Canister ID: 063-01034::49288
Canister Size: 6
Flow Controller ID: 063-00802::20118
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 2
Receipt Vacuum(in Hg): 5.6

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUP-05 Project Location:

Sample ID: 25D1774-31 Canister ID: 063-00991::50710 Initial Vacuum(in Hg): 30

Sample Matrix: Air Canister Size: 6 Final Vacuum(in Hg): 5

Sampled: 4/14/2025 12:25 Flow Controller ID: 063-00919::20251 Receipt Vacuum(in Hg): 7.4

Sample Type: SG Flow Controller Type: PASSIVE

Sulfur Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Hydrogen Sulfide, as received	ND	900	900		ND	1300	1300	90	1	5/9/25 3:51	DFH

Surrogate(s)	% Recovery	% Recovery Limits	Date/Time Analyzed
1,4-Difluorobenzene (Surr), as received	98.4	80-120	5/9/25 3:51

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis
EPA 3C

Analyte	Vol% Result	Vol% MDL	Vol% LOQ	Flag/Qual	Dilution	PF	Date/Time Analyzed	Analyst
Methane, as received	28.4	0.45	0.45		9	1	5/6/25 23:02	NSD
Carbon dioxide, as received	3.27	0.45	0.45		9	1	5/6/25 23:02	NSD
Oxygen (O2), as received	8.38	0.45	0.45		9	1	5/6/25 23:02	NSD
Hydrogen (H2), as received	ND	0.18	0.18		9	1	5/6/25 23:02	NSD
Nitrogen (N2), as received	58.6	18.0	18.0		18	1	5/7/25 16:32	NSD
Carbon Monoxide, as received	ND	0.009	0.009		9	1	5/6/25 23:02	NSD

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,1,1-Trichloroethane	ND	4.50	11.2		ND	25	61	9	2.5	5/5/25 13:03	DFH
1,1,1,2-Tetrachloroethane	ND	4.50	11.2		ND	31	77	9	2.5	5/5/25 13:03	DFH
1,1,2,2-Tetrachloroethane	ND	4.50	11.2		ND	31	77	9	2.5	5/5/25 13:03	DFH
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	4.50	11.2		ND	34	86	9	2.5	5/5/25 13:03	DFH
1,1,2-Trichloroethane	ND	4.50	11.2		ND	25	61	9	2.5	5/5/25 13:03	DFH
1,1-Dichloroethane	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 13:03	DFH
1,1-Dichloroethylene	ND	4.50	11.2		ND	18	45	9	2.5	5/5/25 13:03	DFH
1,2,4-Trimethylbenzene	ND	4.50	11.2		ND	22	55	9	2.5	5/5/25 13:03	DFH
1,2-Dibromoethane (EDB)	ND	4.50	11.2		ND	35	86	9	2.5	5/5/25 13:03	DFH

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Certificate of Analysis

Final Report

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUP-05
Project Location:

Sample ID: 25D1774-31
Sample Matrix: Air
Sampled: 4/14/2025 12:25
Sample Type: SG

Canister ID: 063-00991::50710
Canister Size: 6
Flow Controller ID: 063-00919::20251
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.4

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
1,2-Dichlorobenzene	ND	4.50	11.2		ND	27	68	9	2.5	5/5/25 13:03	DFH
1,2-Dichloroethane	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 13:03	DFH
1,2-Dichloropropane	ND	4.50	11.2		ND	21	52	9	2.5	5/5/25 13:03	DFH
1,2-Dichlorotetrafluoroethane	51.3	4.50	11.2		360	31	79	9	2.5	5/5/25 13:03	DFH
1,3,5-Trimethylbenzene	ND	4.50	11.2		ND	22	55	9	2.5	5/5/25 13:03	DFH
1,3-Butadiene	ND	4.50	11.2		ND	10.0	25	9	2.5	5/5/25 13:03	DFH
1,3-Dichlorobenzene	ND	4.50	11.2		ND	27	68	9	2.5	5/5/25 13:03	DFH
1,4-Dichlorobenzene	ND	4.50	11.2		ND	27	68	9	2.5	5/5/25 13:03	DFH
1,4-Dioxane	ND	4.50	11.2		ND	16	41	9	2.5	5/5/25 13:03	DFH
2-Butanone (MEK)	ND	4.50	11.2		ND	13	33	9	2.5	5/5/25 13:03	DFH
2-Chlorotoluene	ND	4.50	11.2		ND	23	58	9	2.5	5/5/25 13:03	DFH
2-Hexanone (MBK)	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 13:03	DFH
4-Methyl-2-pentanone (MIBK)	ND	4.50	11.2		ND	52	130	9	2.5	5/5/25 13:03	DFH
Allyl chloride	ND	4.50	11.2		ND	14	35	9	2.5	5/5/25 13:03	DFH
Benzene	ND	4.50	4.50		ND	14	14	9	2.5	5/5/25 13:03	DFH
Benzyl Chloride	ND	4.50	11.2		ND	23	58	9	2.5	5/5/25 13:03	DFH
Bromoform	ND	4.50	11.2		ND	47	120	9	2.5	5/5/25 13:03	DFH
Bromomethane	ND	4.50	11.2		ND	17	44	9	2.5	5/5/25 13:03	DFH
Carbon Disulfide	ND	11.2	11.2		ND	35	35	9	2.5	5/5/25 13:03	DFH
Carbon Tetrachloride	ND	4.50	11.2		ND	28	71	9	2.5	5/5/25 13:03	DFH
Chlorobenzene	ND	4.50	11.2		ND	21	52	9	2.5	5/5/25 13:03	DFH
Chloroethane	ND	4.50	11.2		ND	12	30	9	2.5	5/5/25 13:03	DFH
Chloroform	ND	4.50	4.50		ND	22	22	9	2.5	5/5/25 13:03	DFH
Chloromethane	ND	4.50	11.2		ND	9.3	23	9	2.5	5/5/25 13:03	DFH
cis-1,2-Dichloroethylene	ND	4.50	11.2		ND	18	45	9	2.5	5/5/25 13:03	DFH
cis-1,3-Dichloropropene	ND	4.50	11.2		ND	20	51	9	2.5	5/5/25 13:03	DFH
Cyclohexane	9.00	4.50	11.2	J	31	15	39	9	2.5	5/5/25 13:03	DFH
Dibromochloromethane	ND	4.50	11.2		ND	38	96	9	2.5	5/5/25 13:03	DFH
Dichlorodifluoromethane	ND	11.2	11.2		ND	56	56	9	2.5	5/5/25 13:03	DFH

ENTHALPY ANALYTICAL

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUP-05
Project Location:

Sample ID: 25D1774-31
Sample Matrix: Air
Sampled: 4/14/2025 12:25
Sample Type: SG

Canister ID: 063-00991::50710
Canister Size: 6
Flow Controller ID: 063-00919::20251
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.4

Volatile Organic Compounds by GCMS
EPA TO-15

Analyte	ppbv Results	ppbv MDL	ppbv LOQ	Flag/Qual	ug/M³ Results	ug/M³ MDL	ug/M³ LOQ	Dilution	PF	Date/Time Analyzed	Analyst
Ethyl acetate	ND	4.50	11.2		ND	16	41	9	2.5	5/5/25 13:03	DFH
Ethylbenzene	ND	4.50	11.2		ND	20	49	9	2.5	5/5/25 13:03	DFH
Heptane	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 13:03	DFH
Hexachlorobutadiene	ND	4.50	11.2		ND	48	120	9	2.5	5/5/25 13:03	DFH
Hexane	ND	4.50	11.2		ND	16	40	9	2.5	5/5/25 13:03	DFH
Isopropylbenzene	ND	4.50	11.2		ND	22	55	9	2.5	5/5/25 13:03	DFH
m+p-Xylenes	ND	9.00	22.5		ND	39	98	9	2.5	5/5/25 13:03	DFH
Methyl methacrylate	ND	4.50	11.2		ND	18	46	9	2.5	5/5/25 13:03	DFH
Methylene chloride	ND	11.2	22.5		ND	39	78	9	2.5	5/5/25 13:03	DFH
Methyl-t-butyl ether (MTBE)	ND	4.50	11.2		ND	16	41	9	2.5	5/5/25 13:03	DFH
Naphthalene	ND	4.50	4.50		ND	24	24	9	2.5	5/5/25 13:03	DFH
o-Xylene	ND	4.50	11.2		ND	20	49	9	2.5	5/5/25 13:03	DFH
Propylene	ND	3.60	3.60		ND	6.2	6.2	9	2.5	5/5/25 13:03	DFH
Styrene	ND	4.50	11.2		ND	19	48	9	2.5	5/5/25 13:03	DFH
TBA	ND	11.2	11.2		ND	34	34	9	2.5	5/5/25 13:03	DFH
Tetrachloroethylene (PCE)	ND	4.50	11.2		ND	31	76	9	2.5	5/5/25 13:03	DFH
Tetrahydrofuran	ND	4.50	11.2		ND	13	33	9	2.5	5/5/25 13:03	DFH
Toluene	ND	4.50	11.2		ND	17	42	9	2.5	5/5/25 13:03	DFH
trans-1,2-Dichloroethylene	ND	4.50	11.2		ND	18	45	9	2.5	5/5/25 13:03	DFH
trans-1,3-Dichloropropene	ND	4.50	11.2		ND	20	51	9	2.5	5/5/25 13:03	DFH
Trichloroethylene	ND	4.50	4.50		ND	24	24	9	2.5	5/5/25 13:03	DFH
Trichlorofluoromethane	ND	11.2	11.2		ND	63	63	9	2.5	5/5/25 13:03	DFH
Vinyl acetate	ND	4.50	11.2		ND	16	40	9	2.5	5/5/25 13:03	DFH
Vinyl bromide	ND	4.50	11.2		ND	20	49	9	2.5	5/5/25 13:03	DFH
Vinyl chloride	ND	4.50	11.2		ND	12	29	9	2.5	5/5/25 13:03	DFH
Xylenes, Total	ND	13.5	33.8		ND	59	150	9	2.5	5/5/25 13:03	DFH

Surrogate(s)	% Recovery	% Recovery Limits	
4-Bromofluorobenzene (Surr)	105	80-120	5/5/25 13:03

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Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

ANALYTICAL RESULTS

Field Sample #: DUP-05

Project Location:

Sample ID: 25D1774-31
Sample Matrix: Air
Sampled: 4/14/2025 12:25
Sample Type: SG

Canister ID: 063-00991::50710
Canister Size: 6
Flow Controller ID: 063-00919::20251
Flow Controller Type: PASSIVE

Initial Vacuum(in Hg): 30
Final Vacuum(in Hg): 5
Receipt Vacuum(in Hg): 7.4

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 18, 2025 8:00
Date Issued: May 9, 2025 17:01

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

Analytical Summary

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Sulfur Volatile Organic Compounds by GCMS			**Preparation Method:**	**No Prep VOC Air**	
25D1774-01	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-02	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-03	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-04	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-05	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-06	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-07	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-08	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-09	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-10	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-11	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-12	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-13	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-16	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-17	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-18	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-20	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-21	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-23	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-24	100 mL / 100 mL	EPA TO-15	BIE0239	SIE0216	AD50170
25D1774-14	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-15	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-19	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-25	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-26	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-27	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-28	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-29	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-30	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170
25D1774-31	100 mL / 100 mL	EPA TO-15	BIE0376	SIE0335	AD50170

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis			**Preparation Method:**	**No Prep VOC GC Air**	
25D1774-01	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-02	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190

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Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis			**Preparation Method:**	**No Prep VOC GC Air**	
25D1774-03	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-04	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-05	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-06	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-07	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-08	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-09	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-11	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-12	1.00 mL / 1.00 mL	EPA 3C	BIE0059	SIE0051	AD50190
25D1774-10	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-13	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-14	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-15	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-16	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-17	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-18	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-19	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-20	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-21	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-23	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-24	1.00 mL / 1.00 mL	EPA 3C	BIE0066	SIE0132	AD50190
25D1774-02RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0144	SIE0284	AD50190
25D1774-06RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0144	SIE0284	AD50190
25D1774-08RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0144	SIE0284	AD50190
25D1774-09RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0144	SIE0284	AD50190
25D1774-11RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-12RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-13RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-14RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-15RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-19RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-25	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-26	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-27	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-28	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-29	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-30	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190
25D1774-31	1.00 mL / 1.00 mL	EPA 3C	BIE0328	SIE0289	AD50190

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Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received:	April 18, 2025 8:00
		Date Issued:	May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis			**Preparation Method:**	**No Prep VOC GC Air**	
25D1774-28RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0333	SIE0347	AD50190
25D1774-31RE1	1.00 mL / 1.00 mL	EPA 3C	BIE0333	SIE0347	AD50190

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			**Preparation Method:**	**No Prep VOC Air**	
25D1774-01	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-02	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-03	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-04	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-05	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-06	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-07	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-08	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-09	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-10	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-11	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-12	160 mL / 400 mL	EPA TO-15	BID1092	SID1230	AB50218
25D1774-13	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-14	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-15	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-16	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-17	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-17RE1	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-18	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-19	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-20	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-20RE1	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-21	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-23	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-24	160 mL / 400 mL	EPA TO-15	BID1528	SID1329	AB50218
25D1774-23RE1	160 mL / 400 mL	EPA TO-15	BID1601	SID1391	AB50218
25D1774-24RE1	160 mL / 400 mL	EPA TO-15	BID1601	SID1391	AB50218
25D1774-25	160 mL / 400 mL	EPA TO-15	BID1601	SIE0036	AB50218
25D1774-26	160 mL / 400 mL	EPA TO-15	BID1601	SIE0036	AB50218
25D1774-27	160 mL / 400 mL	EPA TO-15	BID1601	SIE0036	AB50218
25D1774-28	160 mL / 400 mL	EPA TO-15	BID1601	SIE0036	AB50218
25D1774-29	160 mL / 400 mL	EPA TO-15	BID1601	SIE0036	AB50218

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Sample ID	Preparation Factors Initial / Final	Method	Batch ID	Sequence ID	Calibration ID
Volatile Organic Compounds by GCMS			**Preparation Method:**	**No Prep VOC Air**	
25D1774-30	160 mL / 400 mL	EPA TO-15	BID1601	SIE0036	AB50218
25D1774-31	160 mL / 400 mL	EPA TO-15	BID1601	SIE0036	AB50218

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1092 - No Prep VOC Air											
Blank (BID1092-BLK1)					Prepared & Analyzed: 04/21/2025						
1,1,1-Trichloroethane		<	0.50	ppbv							
1,1,1,2-Tetrachloroethane		<	0.50	ppbv							
1,1,2,2-Tetrachloroethane		<	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane		<	0.50	ppbv							
1,1,2-Trichloroethane		<	0.50	ppbv							
1,1-Dichloroethane		<	0.50	ppbv							
1,1-Dichloroethylene		<	0.50	ppbv							
1,2,4-Trimethylbenzene		<	0.50	ppbv							
1,2-Dibromoethane (EDB)		<	0.50	ppbv							
1,2-Dichlorobenzene		<	0.50	ppbv							
1,2-Dichloroethane		<	0.50	ppbv							
1,2-Dichloropropane		<	0.50	ppbv							
1,2-Dichlorotetrafluoroethane		<	0.50	ppbv							
1,3,5-Trimethylbenzene		<	0.50	ppbv							
1,3-Butadiene		<	0.50	ppbv							
1,3-Dichlorobenzene		<	0.50	ppbv							
1,4-Dichlorobenzene		<	0.50	ppbv							
1,4-Dioxane		<	0.50	ppbv							
2-Butanone (MEK)		<	0.50	ppbv							
2-Chlorotoluene		<	0.50	ppbv							
2-Hexanone (MBK)		<	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)		<	0.50	ppbv							
Allyl chloride		<	0.50	ppbv							
Benzene		<	0.20	ppbv							
Benzyl Chloride		<	0.50	ppbv							
Bromoform		<	0.50	ppbv							
Bromomethane		<	0.50	ppbv							
Carbon Disulfide		<	0.50	ppbv							
Carbon Tetrachloride		<	0.50	ppbv							
Chlorobenzene		<	0.50	ppbv							
Chloroethane		<	0.50	ppbv							

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1092 - No Prep VOC Air											
Blank (BID1092-BLK1)					Prepared & Analyzed: 04/21/2025						
Chloroform		<	0.20	ppbv							
Chloromethane		<	0.50	ppbv							
cis-1,2-Dichloroethylene		<	0.50	ppbv							
cis-1,3-Dichloropropene		<	0.50	ppbv							
Cyclohexane		<	0.50	ppbv							
Dibromochloromethane		<	0.50	ppbv							
Dichlorodifluoromethane		<	0.50	ppbv							
Ethyl acetate		<	0.50	ppbv							
Ethylbenzene		<	0.50	ppbv							
Heptane		<	0.50	ppbv							
Hexachlorobutadiene		<	0.50	ppbv							
Hexane		<	0.50	ppbv							
Isopropylbenzene		<	0.50	ppbv							
m+p-Xylenes		<	1.00	ppbv							
Methyl methacrylate		<	0.50	ppbv							
Methylene chloride		<	1.00	ppbv							
Methyl-t-butyl ether (MTBE)		<	0.50	ppbv							
Naphthalene		<	0.20	ppbv							
o-Xylene		<	0.50	ppbv							
Propylene		<	0.16	ppbv							
Styrene		<	0.50	ppbv							
TBA		<	0.50	ppbv							
Tetrachloroethylene (PCE)		<	0.50	ppbv							
Tetrahydrofuran		<	0.50	ppbv							
Toluene		<	0.50	ppbv							
trans-1,2-Dichloroethylene		<	0.50	ppbv							
trans-1,3-Dichloropropene		<	0.50	ppbv							
Trichloroethylene		<	0.20	ppbv							
Trichlorofluoromethane		<	0.50	ppbv							
Vinyl acetate		<	0.50	ppbv							
Vinyl bromide		<	0.50	ppbv							
Vinyl chloride		<	0.50	ppbv							
Xylenes, Total		<	1.50	ppbv							

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1092 - No Prep VOC Air										
Blank (BID1092-BLK1)					Prepared & Analyzed: 04/21/2025					
Surr: 4-Bromofluorobenzene (Surr)	*4.49*		ppbv	*5.00*		*89.8*	*80-120*			
LCS (BID1092-BS1)					Prepared & Analyzed: 04/22/2025					
1,1,1-Trichloroethane	5.03		ppbv	5.00		101	70-130			
1,1,1,2-Tetrachloroethane	5.08		ppbv	5.00		102	70-130			
1,1,2,2-Tetrachloroethane	4.98		ppbv	5.00		99.6	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	4.95		ppbv	5.00		99.0	70-130			
1,1,2-Trichloroethane	5.02		ppbv	5.00		100	70-130			
1,1-Dichloroethane	5.29		ppbv	5.00		106	70-130			
1,1-Dichloroethylene	5.50		ppbv	5.00		110	70-130			
1,2,4-Trimethylbenzene	5.04		ppbv	5.00		101	70-130			
1,2-Dibromoethane (EDB)	4.86		ppbv	5.00		97.2	70-130			
1,2-Dichlorobenzene	4.65		ppbv	5.00		93.0	70-130			
1,2-Dichloroethane	5.03		ppbv	5.00		101	70-130			
1,2-Dichloropropane	5.28		ppbv	5.00		106	70-130			
1,2-Dichlorotetrafluoroethane	4.89		ppbv	5.00		97.8	70-130			
1,3,5-Trimethylbenzene	4.97		ppbv	5.00		99.4	70-130			
1,3-Butadiene	4.78		ppbv	5.00		95.6	70-130			
1,3-Dichlorobenzene	4.71		ppbv	5.00		94.2	70-130			
1,4-Dichlorobenzene	4.67		ppbv	5.00		93.4	70-130			
1,4-Dioxane	5.12		ppbv	5.00		102	70-130			
2-Butanone (MEK)	4.71		ppbv	5.00		94.2	70-130			
2-Chlorotoluene	4.91		ppbv	5.00		98.2	70-130			
2-Hexanone (MBK)	5.65		ppbv	5.00		113	70-130			
4-Methyl-2-pentanone (MIBK)	4.91		ppbv	5.00		98.2	70-130			
Allyl chloride	5.25		ppbv	5.00		105	70-130			
Benzene	5.23		ppbv	5.00		105	70-130			
Benzyl Chloride	4.77		ppbv	5.00		95.4	70-130			
Bromoform	4.83		ppbv	5.00		96.6	70-130			
Bromomethane	4.69		ppbv	5.00		93.8	70-130			
Carbon Disulfide	5.23		ppbv	5.00		105	70-130			
Carbon Tetrachloride	4.92		ppbv	5.00		98.4	70-130			
Chlorobenzene	5.08		ppbv	5.00		102	70-130			

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1092 - No Prep VOC Air										
LCS (BID1092-BS1)				Prepared & Analyzed: 04/22/2025						
Chloroethane	4.72		ppbv	5.00		94.4	70-130			
Chloroform	5.28		ppbv	5.00		106	70-130			
Chloromethane	4.68		ppbv	5.00		93.6	70-130			
cis-1,2-Dichloroethylene	5.08		ppbv	5.00		102	70-130			
cis-1,3-Dichloropropene	5.14		ppbv	5.00		103	70-130			
Cyclohexane	5.03		ppbv	5.00		101	70-130			
Dibromochloromethane	4.97		ppbv	5.00		99.4	70-130			
Dichlorodifluoromethane	4.46		ppbv	5.00		89.2	70-130			
Ethyl acetate	5.43		ppbv	5.00		109	70-130			
Ethylbenzene	5.20		ppbv	5.00		104	70-130			
Heptane	5.73		ppbv	5.00		115	70-130			
Hexachlorobutadiene	4.13		ppbv	5.00		82.6	60-140			
Hexane	5.80		ppbv	5.00		116	70-130			
Isopropylbenzene	4.94		ppbv	5.00		98.8	70-130			
m+p-Xylenes	10.1		ppbv	10.0		101	70-130			
Methyl methacrylate	5.24		ppbv	5.00		105	70-130			
Methylene chloride	5.60		ppbv	5.00		112	70-130			
Methyl-t-butyl ether (MTBE)	5.10		ppbv	5.00		102	70-130			
Naphthalene	4.29		ppbv	5.00		85.8	60-140			
o-Xylene	4.91		ppbv	5.00		98.2	70-130			
Propylene	1.93		ppbv	5.00		38.6	70-130			L
Styrene	4.96		ppbv	5.00		99.2	70-130			
TBA	4.68		ppbv	5.00		93.6	70-130			
Tetrachloroethylene (PCE)	4.77		ppbv	5.00		95.4	70-130			
Tetrahydrofuran	5.60		ppbv	5.00		112	70-130			
Toluene	5.05		ppbv	5.00		101	70-130			
trans-1,2-Dichloroethylene	4.98		ppbv	5.00		99.6	70-130			
trans-1,3-Dichloropropene	5.24		ppbv	5.00		105	70-130			
Trichloroethylene	5.05		ppbv	5.00		101	70-130			
Trichlorofluoromethane	4.75		ppbv	5.00		95.0	70-130			
Vinyl acetate	5.62		ppbv	5.00		112	70-130			
Vinyl bromide	4.88		ppbv	5.00		97.6	70-130			
Vinyl chloride	4.82		ppbv	5.00		96.4	70-130			

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Certificate of Analysis

Final Report

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1092 - No Prep VOC Air										
LCS (BID1092-BS1)					Prepared & Analyzed: 04/22/2025					
Surr: 4-Bromofluorobenzene (Surr)	*4.79*		ppbv	*5.00*		*95.8*	*70-130*			
LCS Dup (BID1092-BSD1)					Prepared & Analyzed: 04/22/2025					
1,1,1-Trichloroethane	5.05		ppbv	5.00		101	70-130	0.397	25	
1,1,1,2-Tetrachloroethane	5.19		ppbv	5.00		104	70-130	2.14	25	
1,1,2,2-Tetrachloroethane	5.06		ppbv	5.00		101	70-130	1.59	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.06		ppbv	5.00		101	70-130	2.20	25	
1,1,2-Trichloroethane	5.02		ppbv	5.00		100	70-130	0.00	25	
1,1-Dichloroethane	5.41		ppbv	5.00		108	70-130	2.24	25	
1,1-Dichloroethylene	5.53		ppbv	5.00		111	70-130	0.544	25	
1,2,4-Trimethylbenzene	5.05		ppbv	5.00		101	70-130	0.198	25	
1,2-Dibromoethane (EDB)	4.91		ppbv	5.00		98.2	70-130	1.02	25	
1,2-Dichlorobenzene	4.72		ppbv	5.00		94.4	70-130	1.49	25	
1,2-Dichloroethane	4.97		ppbv	5.00		99.4	70-130	1.20	25	
1,2-Dichloropropane	5.26		ppbv	5.00		105	70-130	0.380	25	
1,2-Dichlorotetrafluoroethane	4.76		ppbv	5.00		95.2	70-130	2.69	25	
1,3,5-Trimethylbenzene	5.00		ppbv	5.00		100	70-130	0.602	25	
1,3-Butadiene	4.73		ppbv	5.00		94.6	70-130	1.05	25	
1,3-Dichlorobenzene	4.74		ppbv	5.00		94.8	70-130	0.635	25	
1,4-Dichlorobenzene	4.69		ppbv	5.00		93.8	70-130	0.427	25	
1,4-Dioxane	5.22		ppbv	5.00		104	70-130	1.93	25	
2-Butanone (MEK)	4.88		ppbv	5.00		97.6	70-130	3.55	25	
2-Chlorotoluene	5.03		ppbv	5.00		101	70-130	2.41	25	
2-Hexanone (MBK)	5.65		ppbv	5.00		113	70-130	0.00	25	
4-Methyl-2-pentanone (MIBK)	4.99		ppbv	5.00		99.8	70-130	1.62	25	
Allyl chloride	5.29		ppbv	5.00		106	70-130	0.759	25	
Benzene	5.30		ppbv	5.00		106	70-130	1.33	25	
Benzyl Chloride	4.76		ppbv	5.00		95.2	70-130	0.210	25	
Bromoform	4.97		ppbv	5.00		99.4	70-130	2.86	25	
Bromomethane	4.71		ppbv	5.00		94.2	70-130	0.426	25	
Carbon Disulfide	5.35		ppbv	5.00		107	70-130	2.27	25	
Carbon Tetrachloride	5.00		ppbv	5.00		100	70-130	1.61	25	
Chlorobenzene	5.18		ppbv	5.00		104	70-130	1.95	25	

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1092 - No Prep VOC Air										
LCS Dup (BID1092-BSD1)				Prepared & Analyzed: 04/22/2025						
Chloroethane	4.88		ppbv	5.00		97.6	70-130	3.33	25	
Chloroform	5.43		ppbv	5.00		109	70-130	2.80	25	
Chloromethane	4.50		ppbv	5.00		90.0	70-130	3.92	25	
cis-1,2-Dichloroethylene	5.25		ppbv	5.00		105	70-130	3.29	25	
cis-1,3-Dichloropropene	5.18		ppbv	5.00		104	70-130	0.775	25	
Cyclohexane	5.09		ppbv	5.00		102	70-130	1.19	25	
Dibromochloromethane	4.99		ppbv	5.00		99.8	70-130	0.402	25	
Dichlorodifluoromethane	4.19		ppbv	5.00		83.8	70-130	6.24	25	
Ethyl acetate	5.38		ppbv	5.00		108	70-130	0.925	25	
Ethylbenzene	5.24		ppbv	5.00		105	70-130	0.766	25	
Heptane	5.66		ppbv	5.00		113	70-130	1.23	25	
Hexachlorobutadiene	4.19		ppbv	5.00		83.8	60-140	1.44	25	
Hexane	5.93		ppbv	5.00		119	70-130	2.22	25	
Isopropylbenzene	5.05		ppbv	5.00		101	70-130	2.20	25	
m+p-Xylenes	10.3		ppbv	10.0		103	70-130	1.96	25	
Methyl methacrylate	5.24		ppbv	5.00		105	70-130	0.00	25	
Methylene chloride	5.59		ppbv	5.00		112	70-130	0.179	25	
Methyl-t-butyl ether (MTBE)	5.26		ppbv	5.00		105	70-130	3.09	25	
Naphthalene	4.28		ppbv	5.00		85.6	60-140	0.233	25	
o-Xylene	5.00		ppbv	5.00		100	70-130	1.82	25	
Propylene	5.07		ppbv	5.00		101	70-130	89.7	25	P
Styrene	5.06		ppbv	5.00		101	70-130	2.00	25	
TBA	4.83		ppbv	5.00		96.6	70-130	3.15	25	
Tetrachloroethylene (PCE)	4.90		ppbv	5.00		98.0	70-130	2.69	25	
Tetrahydrofuran	5.60		ppbv	5.00		112	70-130	0.00	25	
Toluene	5.02		ppbv	5.00		100	70-130	0.596	25	
trans-1,2-Dichloroethylene	5.12		ppbv	5.00		102	70-130	2.77	25	
trans-1,3-Dichloropropene	5.22		ppbv	5.00		104	70-130	0.382	25	
Trichloroethylene	5.11		ppbv	5.00		102	70-130	1.18	25	
Trichlorofluoromethane	4.82		ppbv	5.00		96.4	70-130	1.46	25	
Vinyl acetate	5.67		ppbv	5.00		113	70-130	0.886	25	
Vinyl bromide	4.98		ppbv	5.00		99.6	70-130	2.03	25	
Vinyl chloride	4.72		ppbv	5.00		94.4	70-130	2.10	25	

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Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1092 - No Prep VOC Air										
LCS Dup (BID1092-BSD1)				Prepared & Analyzed: 04/22/2025						
Surr: 4-Bromofluorobenzene (Surr)	*4.79*		ppbv	*5.00*		*95.8*	*70-130*			
Batch BID1528 - No Prep VOC Air										
Blank (BID1528-BLK1)				Prepared & Analyzed: 04/29/2025						
1,1,1-Trichloroethane	<	0.50	ppbv							
1,1,1,2-Tetrachloroethane	<	0.50	ppbv							
1,1,2,2-Tetrachloroethane	<	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane	<	0.50	ppbv							
1,1,2-Trichloroethane	<	0.50	ppbv							
1,1-Dichloroethane	<	0.50	ppbv							
1,1-Dichloroethylene	<	0.50	ppbv							
1,2,4-Trimethylbenzene	<	0.50	ppbv							
1,2-Dibromoethane (EDB)	<	0.50	ppbv							
1,2-Dichlorobenzene	<	0.50	ppbv							
1,2-Dichloroethane	<	0.50	ppbv							
1,2-Dichloropropane	<	0.50	ppbv							
1,2-Dichlorotetrafluoroethane	<	0.50	ppbv							
1,3,5-Trimethylbenzene	<	0.50	ppbv							
1,3-Butadiene	<	0.50	ppbv							
1,3-Dichlorobenzene	<	0.50	ppbv							
1,4-Dichlorobenzene	<	0.50	ppbv							
1,4-Dioxane	<	0.50	ppbv							
2-Butanone (MEK)	<	0.50	ppbv							
2-Chlorotoluene	<	0.50	ppbv							
2-Hexanone (MBK)	<	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)	<	0.50	ppbv							
Allyl chloride	<	0.50	ppbv							
Benzene	<	0.20	ppbv							
Benzyl Chloride	<	0.50	ppbv							
Bromoform	<	0.50	ppbv							
Bromomethane	<	0.50	ppbv							
Carbon Disulfide	<	0.50	ppbv							

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1528 - No Prep VOC Air											
Blank (BID1528-BLK1)					Prepared & Analyzed: 04/29/2025						
Carbon Tetrachloride		<	0.50	ppbv							
Chlorobenzene		<	0.50	ppbv							
Chloroethane		<	0.50	ppbv							
Chloroform		<	0.20	ppbv							
Chloromethane		<	0.50	ppbv							
cis-1,2-Dichloroethylene		<	0.50	ppbv							
cis-1,3-Dichloropropene		<	0.50	ppbv							
Cyclohexane		<	0.50	ppbv							
Dibromochloromethane		<	0.50	ppbv							
Dichlorodifluoromethane		<	0.50	ppbv							
Ethyl acetate		<	0.50	ppbv							
Ethylbenzene		<	0.50	ppbv							
Heptane		<	0.50	ppbv							
Hexachlorobutadiene		<	0.50	ppbv							
Hexane		<	0.50	ppbv							
Isopropylbenzene		<	0.50	ppbv							
m+p-Xylenes		<	1.00	ppbv							
Methyl methacrylate		<	0.50	ppbv							
Methylene chloride		<	1.00	ppbv							
Methyl-t-butyl ether (MTBE)		<	0.50	ppbv							
Naphthalene		<	0.20	ppbv							
o-Xylene		<	0.50	ppbv							
Propylene		<	0.16	ppbv							
Styrene		<	0.50	ppbv							
TBA		<	0.50	ppbv							
Tetrachloroethylene (PCE)		<	0.50	ppbv							
Tetrahydrofuran		<	0.50	ppbv							
Toluene		<	0.50	ppbv							
trans-1,2-Dichloroethylene		<	0.50	ppbv							
trans-1,3-Dichloropropene		<	0.50	ppbv							
Trichloroethylene		<	0.20	ppbv							
Trichlorofluoromethane		<	0.50	ppbv							
Vinyl acetate		<	0.50	ppbv							
Vinyl bromide		<	0.50	ppbv							

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1528 - No Prep VOC Air										
Blank (BID1528-BLK1)					Prepared & Analyzed: 04/29/2025					
Vinyl chloride	<	0.50	ppbv							
Xylenes, Total	<	1.50	ppbv							
Surr: 4-Bromofluorobenzene (Surr)	*4.63*		ppbv	*5.00*		*92.6*	*80-120*			
LCS (BID1528-BS1)					Prepared & Analyzed: 04/29/2025					
1,1,1-Trichloroethane	5.87		ppbv	5.00		117	70-130			
1,1,1,2-Tetrachloroethane	5.86		ppbv	5.00		117	70-130			
1,1,2,2-Tetrachloroethane	5.68		ppbv	5.00		114	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	5.64		ppbv	5.00		113	70-130			
1,1,2-Trichloroethane	5.77		ppbv	5.00		115	70-130			
1,1-Dichloroethane	6.01		ppbv	5.00		120	70-130			
1,1-Dichloroethylene	5.66		ppbv	5.00		113	70-130			
1,2,4-Trimethylbenzene	5.61		ppbv	5.00		112	70-130			
1,2-Dibromoethane (EDB)	5.57		ppbv	5.00		111	70-130			
1,2-Dichlorobenzene	5.29		ppbv	5.00		106	70-130			
1,2-Dichloroethane	5.87		ppbv	5.00		117	70-130			
1,2-Dichloropropane	6.08		ppbv	5.00		122	70-130			
1,2-Dichlorotetrafluoroethane	5.56		ppbv	5.00		111	70-130			
1,3,5-Trimethylbenzene	5.57		ppbv	5.00		111	70-130			
1,3-Butadiene	5.56		ppbv	5.00		111	70-130			
1,3-Dichlorobenzene	5.23		ppbv	5.00		105	70-130			
1,4-Dichlorobenzene	5.17		ppbv	5.00		103	70-130			
1,4-Dioxane	5.89		ppbv	5.00		118	70-130			
2-Butanone (MEK)	5.40		ppbv	5.00		108	70-130			
2-Chlorotoluene	5.66		ppbv	5.00		113	70-130			
2-Hexanone (MBK)	6.23		ppbv	5.00		125	70-130			
4-Methyl-2-pentanone (MIBK)	5.83		ppbv	5.00		117	70-130			
Allyl chloride	5.89		ppbv	5.00		118	70-130			
Benzene	6.08		ppbv	5.00		122	70-130			
Benzyl Chloride	5.23		ppbv	5.00		105	70-130			
Bromoform	5.49		ppbv	5.00		110	70-130			
Bromomethane	5.53		ppbv	5.00		111	70-130			
Carbon Disulfide	5.82		ppbv	5.00		116	70-130			

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Certificate of Analysis

Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1528 - No Prep VOC Air										
LCS (BID1528-BS1)				Prepared & Analyzed: 04/29/2025						
Carbon Tetrachloride	5.79		ppbv	5.00		116	70-130			
Chlorobenzene	5.69		ppbv	5.00		114	70-130			
Chloroethane	5.61		ppbv	5.00		112	70-130			
Chloroform	5.98		ppbv	5.00		120	70-130			
Chloromethane	5.41		ppbv	5.00		108	70-130			
cis-1,2-Dichloroethylene	5.83		ppbv	5.00		117	70-130			
cis-1,3-Dichloropropene	5.96		ppbv	5.00		119	70-130			
Cyclohexane	5.70		ppbv	5.00		114	70-130			
Dibromochloromethane	5.78		ppbv	5.00		116	70-130			
Dichlorodifluoromethane	5.08		ppbv	5.00		102	70-130			
Ethyl acetate	5.98		ppbv	5.00		120	70-130			
Ethylbenzene	5.87		ppbv	5.00		117	70-130			
Heptane	6.42		ppbv	5.00		128	70-130			
Hexachlorobutadiene	4.49		ppbv	5.00		89.8	60-140			
Hexane	6.45		ppbv	5.00		129	70-130			
Isopropylbenzene	5.59		ppbv	5.00		112	70-130			
m+p-Xylenes	11.5		ppbv	10.0		115	70-130			
Methyl methacrylate	5.90		ppbv	5.00		118	70-130			
Methylene chloride	6.36		ppbv	5.00		127	70-130			
Methyl-t-butyl ether (MTBE)	5.76		ppbv	5.00		115	70-130			
Naphthalene	4.59		ppbv	5.00		91.8	60-140			
o-Xylene	5.60		ppbv	5.00		112	70-130			
Propylene	5.81		ppbv	5.00		116	70-130			
Styrene	5.65		ppbv	5.00		113	70-130			
TBA	5.46		ppbv	5.00		109	70-130			
Tetrachloroethylene (PCE)	5.60		ppbv	5.00		112	70-130			
Tetrahydrofuran	6.29		ppbv	5.00		126	70-130			
Toluene	5.78		ppbv	5.00		116	70-130			
trans-1,2-Dichloroethylene	5.74		ppbv	5.00		115	70-130			
trans-1,3-Dichloropropene	5.96		ppbv	5.00		119	70-130			
Trichloroethylene	5.77		ppbv	5.00		115	70-130			
Trichlorofluoromethane	5.72		ppbv	5.00		114	70-130			
Vinyl acetate	6.00		ppbv	5.00		120	70-130			
Vinyl bromide	5.74		ppbv	5.00		115	70-130			

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Certificate of Analysis

Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1528 - No Prep VOC Air										
LCS (BID1528-BS1)					Prepared & Analyzed: 04/29/2025					
Vinyl chloride	5.48		ppbv	5.00		110	70-130			
Surr: 4-Bromofluorobenzene (Surr)	*4.91*		ppbv	*5.00*		*98.2*	*70-130*			
LCS Dup (BID1528-BSD1)					Prepared & Analyzed: 04/29/2025					
1,1,1-Trichloroethane	6.01		ppbv	5.00		120	70-130	2.36	25	
1,1,1,2-Tetrachloroethane	5.99		ppbv	5.00		120	70-130	2.19	25	
1,1,2,2-Tetrachloroethane	5.80		ppbv	5.00		116	70-130	2.09	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.83		ppbv	5.00		117	70-130	3.31	25	
1,1,2-Trichloroethane	5.96		ppbv	5.00		119	70-130	3.24	25	
1,1-Dichloroethane	6.20		ppbv	5.00		124	70-130	3.11	25	
1,1-Dichloroethylene	6.48		ppbv	5.00		130	70-130	13.5	25	
1,2,4-Trimethylbenzene	5.77		ppbv	5.00		115	70-130	2.81	25	
1,2-Dibromoethane (EDB)	5.66		ppbv	5.00		113	70-130	1.60	25	
1,2-Dichlorobenzene	5.51		ppbv	5.00		110	70-130	4.07	25	
1,2-Dichloroethane	5.89		ppbv	5.00		118	70-130	0.340	25	
1,2-Dichloropropane	6.21		ppbv	5.00		124	70-130	2.12	25	
1,2-Dichlorotetrafluoroethane	5.73		ppbv	5.00		115	70-130	3.01	25	
1,3,5-Trimethylbenzene	5.75		ppbv	5.00		115	70-130	3.18	25	
1,3-Butadiene	5.72		ppbv	5.00		114	70-130	2.84	25	
1,3-Dichlorobenzene	5.40		ppbv	5.00		108	70-130	3.20	25	
1,4-Dichlorobenzene	5.37		ppbv	5.00		107	70-130	3.80	25	
1,4-Dioxane	6.01		ppbv	5.00		120	70-130	2.02	25	
2-Butanone (MEK)	5.51		ppbv	5.00		110	70-130	2.02	25	
2-Chlorotoluene	5.90		ppbv	5.00		118	70-130	4.15	25	
2-Hexanone (MBK)	6.38		ppbv	5.00		128	70-130	2.38	25	
4-Methyl-2-pentanone (MIBK)	5.96		ppbv	5.00		119	70-130	2.21	25	
Allyl chloride	6.09		ppbv	5.00		122	70-130	3.34	25	
Benzene	6.21		ppbv	5.00		124	70-130	2.12	25	
Benzyl Chloride	5.43		ppbv	5.00		109	70-130	3.75	25	
Bromoform	5.69		ppbv	5.00		114	70-130	3.58	25	
Bromomethane	5.64		ppbv	5.00		113	70-130	1.97	25	
Carbon Disulfide	6.00		ppbv	5.00		120	70-130	3.05	25	
Carbon Tetrachloride	5.93		ppbv	5.00		119	70-130	2.39	25	

ENTHALPY ANALYTICAL

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1528 - No Prep VOC Air										
LCS Dup (BID1528-BSD1)				Prepared & Analyzed: 04/29/2025						
Chlorobenzene	5.86		ppbv	5.00		117	70-130	2.94	25	
Chloroethane	5.78		ppbv	5.00		116	70-130	2.99	25	
Chloroform	6.14		ppbv	5.00		123	70-130	2.64	25	
Chloromethane	5.48		ppbv	5.00		110	70-130	1.29	25	
cis-1,2-Dichloroethylene	5.96		ppbv	5.00		119	70-130	2.21	25	
cis-1,3-Dichloropropene	6.11		ppbv	5.00		122	70-130	2.49	25	
Cyclohexane	5.86		ppbv	5.00		117	70-130	2.77	25	
Dibromochloromethane	5.94		ppbv	5.00		119	70-130	2.73	25	
Dichlorodifluoromethane	5.26		ppbv	5.00		105	70-130	3.48	25	
Ethyl acetate	6.19		ppbv	5.00		124	70-130	3.45	25	
Ethylbenzene	6.02		ppbv	5.00		120	70-130	2.52	25	
Heptane	6.50		ppbv	5.00		130	70-130	1.24	25	
Hexachlorobutadiene	4.77		ppbv	5.00		95.4	60-140	6.05	25	
Hexane	6.70		ppbv	5.00		134	70-130	3.80	25	L
Isopropylbenzene	5.77		ppbv	5.00		115	70-130	3.17	25	
m+p-Xylenes	11.9		ppbv	10.0		119	70-130	2.91	25	
Methyl methacrylate	6.09		ppbv	5.00		122	70-130	3.17	25	
Methylene chloride	6.46		ppbv	5.00		129	70-130	1.56	25	
Methyl-t-butyl ether (MTBE)	5.93		ppbv	5.00		119	70-130	2.91	25	
Naphthalene	4.88		ppbv	5.00		97.6	60-140	6.12	25	
o-Xylene	5.71		ppbv	5.00		114	70-130	1.95	25	
Propylene	6.23		ppbv	5.00		125	70-130	6.98	25	
Styrene	5.86		ppbv	5.00		117	70-130	3.65	25	
TBA	5.57		ppbv	5.00		111	70-130	1.99	25	
Tetrachloroethylene (PCE)	5.65		ppbv	5.00		113	70-130	0.889	25	
Tetrahydrofuran	6.44		ppbv	5.00		129	70-130	2.36	25	
Toluene	6.00		ppbv	5.00		120	70-130	3.74	25	
trans-1,2-Dichloroethylene	5.91		ppbv	5.00		118	70-130	2.92	25	
trans-1,3-Dichloropropene	6.17		ppbv	5.00		123	70-130	3.46	25	
Trichloroethylene	5.95		ppbv	5.00		119	70-130	3.07	25	
Trichlorofluoromethane	5.87		ppbv	5.00		117	70-130	2.59	25	
Vinyl acetate	6.22		ppbv	5.00		124	70-130	3.60	25	
Vinyl bromide	5.95		ppbv	5.00		119	70-130	3.59	25	
Vinyl chloride	5.75		ppbv	5.00		115	70-130	4.81	25	

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Certificate of Analysis

Final Report

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1528 - No Prep VOC Air										
LCS Dup (BID1528-BSD1)				Prepared & Analyzed: 04/29/2025						
Surr: 4-Bromofluorobenzene (Surr)	*4.82*		ppbv	*5.00*		*96.4*	*70-130*			
Batch BID1601 - No Prep VOC Air										
Blank (BID1601-BLK1)				Prepared & Analyzed: 04/30/2025						
1,1,1-Trichloroethane	<	0.50	ppbv							
1,1,1,2-Tetrachloroethane	<	0.50	ppbv							
1,1,2,2-Tetrachloroethane	<	0.50	ppbv							
1,1,2-Trichloro-1,2,2-trifluoroethane	<	0.50	ppbv							
1,1,2-Trichloroethane	<	0.50	ppbv							
1,1-Dichloroethane	<	0.50	ppbv							
1,1-Dichloroethylene	<	0.50	ppbv							
1,2,4-Trimethylbenzene	<	0.50	ppbv							
1,2-Dibromoethane (EDB)	<	0.50	ppbv							
1,2-Dichlorobenzene	<	0.50	ppbv							
1,2-Dichloroethane	<	0.50	ppbv							
1,2-Dichloropropane	<	0.50	ppbv							
1,2-Dichlorotetrafluoroethane	<	0.50	ppbv							
1,3,5-Trimethylbenzene	<	0.50	ppbv							
1,3-Butadiene	<	0.50	ppbv							
1,3-Dichlorobenzene	<	0.50	ppbv							
1,4-Dichlorobenzene	<	0.50	ppbv							
1,4-Dioxane	<	0.50	ppbv							
2-Butanone (MEK)	<	0.50	ppbv							
2-Chlorotoluene	<	0.50	ppbv							
2-Hexanone (MBK)	<	0.50	ppbv							
4-Methyl-2-pentanone (MIBK)	<	0.50	ppbv							
Allyl chloride	<	0.50	ppbv							
Benzene	<	0.20	ppbv							
Benzyl Chloride	<	0.50	ppbv							
Bromoform	<	0.50	ppbv							
Bromomethane	<	0.50	ppbv							
Carbon Disulfide	<	0.50	ppbv							

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Certificate of Analysis

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result		Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1601 - No Prep VOC Air											
Blank (BID1601-BLK1)					Prepared & Analyzed: 04/30/2025						
Carbon Tetrachloride		<	0.50	ppbv							
Chlorobenzene		<	0.50	ppbv							
Chloroethane		<	0.50	ppbv							
Chloroform		<	0.20	ppbv							
Chloromethane		<	0.50	ppbv							
cis-1,2-Dichloroethylene		<	0.50	ppbv							
cis-1,3-Dichloropropene		<	0.50	ppbv							
Cyclohexane		<	0.50	ppbv							
Dibromochloromethane		<	0.50	ppbv							
Dichlorodifluoromethane		<	0.50	ppbv							
Ethyl acetate		<	0.50	ppbv							
Ethylbenzene		<	0.50	ppbv							
Heptane		<	0.50	ppbv							
Hexachlorobutadiene		<	0.50	ppbv							
Hexane		<	0.50	ppbv							
Isopropylbenzene		<	0.50	ppbv							
m+p-Xylenes		<	1.00	ppbv							
Methyl methacrylate		<	0.50	ppbv							
Methylene chloride		<	1.00	ppbv							
Methyl-t-butyl ether (MTBE)		<	0.50	ppbv							
Naphthalene		<	0.20	ppbv							
o-Xylene		<	0.50	ppbv							
Propylene		<	0.16	ppbv							
Styrene		<	0.50	ppbv							
TBA		<	0.50	ppbv							
Tetrachloroethylene (PCE)		<	0.50	ppbv							
Tetrahydrofuran		<	0.50	ppbv							
Toluene		<	0.50	ppbv							
trans-1,2-Dichloroethylene		<	0.50	ppbv							
trans-1,3-Dichloropropene		<	0.50	ppbv							
Trichloroethylene		<	0.20	ppbv							
Trichlorofluoromethane		<	0.50	ppbv							
Vinyl acetate		<	0.50	ppbv							
Vinyl bromide		<	0.50	ppbv							

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1601 - No Prep VOC Air										
Blank (BID1601-BLK1)					Prepared & Analyzed: 04/30/2025					
Vinyl chloride	<	0.50	ppbv							
Xylenes, Total	<	1.50	ppbv							
Surr: 4-Bromofluorobenzene (Surr)	*4.59*		ppbv	*5.00*		*91.8*	*80-120*			
LCS (BID1601-BS1)					Prepared & Analyzed: 04/30/2025					
1,1,1-Trichloroethane	5.67		ppbv	5.00		113	70-130			
1,1,1,2-Tetrachloroethane	5.66		ppbv	5.00		113	70-130			
1,1,2,2-Tetrachloroethane	5.45		ppbv	5.00		109	70-130			
1,1,2-Trichloro-1,2,2-trifluoroethane	5.54		ppbv	5.00		111	70-130			
1,1,2-Trichloroethane	5.62		ppbv	5.00		112	70-130			
1,1-Dichloroethane	5.92		ppbv	5.00		118	70-130			
1,1-Dichloroethylene	5.98		ppbv	5.00		120	70-130			
1,2,4-Trimethylbenzene	5.52		ppbv	5.00		110	70-130			
1,2-Dibromoethane (EDB)	5.38		ppbv	5.00		108	70-130			
1,2-Dichlorobenzene	5.18		ppbv	5.00		104	70-130			
1,2-Dichloroethane	5.57		ppbv	5.00		111	70-130			
1,2-Dichloropropane	5.91		ppbv	5.00		118	70-130			
1,2-Dichlorotetrafluoroethane	5.29		ppbv	5.00		106	70-130			
1,3,5-Trimethylbenzene	5.35		ppbv	5.00		107	70-130			
1,3-Butadiene	5.31		ppbv	5.00		106	70-130			
1,3-Dichlorobenzene	5.10		ppbv	5.00		102	70-130			
1,4-Dichlorobenzene	5.02		ppbv	5.00		100	70-130			
1,4-Dioxane	5.74		ppbv	5.00		115	70-130			
2-Butanone (MEK)	5.28		ppbv	5.00		106	70-130			
2-Chlorotoluene	5.47		ppbv	5.00		109	70-130			
2-Hexanone (MBK)	6.15		ppbv	5.00		123	70-130			
4-Methyl-2-pentanone (MIBK)	5.47		ppbv	5.00		109	70-130			
Allyl chloride	5.79		ppbv	5.00		116	70-130			
Benzene	5.85		ppbv	5.00		117	70-130			
Benzyl Chloride	5.09		ppbv	5.00		102	70-130			
Bromoform	5.27		ppbv	5.00		105	70-130			
Bromomethane	5.31		ppbv	5.00		106	70-130			
Carbon Disulfide	5.71		ppbv	5.00		114	70-130			

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1601 - No Prep VOC Air										
LCS (BID1601-BS1)				Prepared & Analyzed: 04/30/2025						
Carbon Tetrachloride	5.55		ppbv	5.00		111	70-130			
Chlorobenzene	5.56		ppbv	5.00		111	70-130			
Chloroethane	5.37		ppbv	5.00		107	70-130			
Chloroform	5.82		ppbv	5.00		116	70-130			
Chloromethane	5.08		ppbv	5.00		102	70-130			
cis-1,2-Dichloroethylene	5.69		ppbv	5.00		114	70-130			
cis-1,3-Dichloropropene	5.75		ppbv	5.00		115	70-130			
Cyclohexane	5.57		ppbv	5.00		111	70-130			
Dibromochloromethane	5.57		ppbv	5.00		111	70-130			
Dichlorodifluoromethane	4.79		ppbv	5.00		95.8	70-130			
Ethyl acetate	6.09		ppbv	5.00		122	70-130			
Ethylbenzene	5.62		ppbv	5.00		112	70-130			
Heptane	6.18		ppbv	5.00		124	70-130			
Hexachlorobutadiene	4.59		ppbv	5.00		91.8	60-140			
Hexane	6.33		ppbv	5.00		127	70-130			
Isopropylbenzene	5.41		ppbv	5.00		108	70-130			
m+p-Xylenes	11.0		ppbv	10.0		110	70-130			
Methyl methacrylate	5.68		ppbv	5.00		114	70-130			
Methylene chloride	6.27		ppbv	5.00		125	70-130			
Methyl-t-butyl ether (MTBE)	5.67		ppbv	5.00		113	70-130			
Naphthalene	4.65		ppbv	5.00		93.0	60-140			
o-Xylene	5.28		ppbv	5.00		106	70-130			
Propylene	5.59		ppbv	5.00		112	70-130			
Styrene	5.40		ppbv	5.00		108	70-130			
TBA	5.41		ppbv	5.00		108	70-130			
Tetrachloroethylene (PCE)	5.30		ppbv	5.00		106	70-130			
Tetrahydrofuran	6.09		ppbv	5.00		122	70-130			
Toluene	5.59		ppbv	5.00		112	70-130			
trans-1,2-Dichloroethylene	5.57		ppbv	5.00		111	70-130			
trans-1,3-Dichloropropene	5.72		ppbv	5.00		114	70-130			
Trichloroethylene	5.62		ppbv	5.00		112	70-130			
Trichlorofluoromethane	5.59		ppbv	5.00		112	70-130			
Vinyl acetate	6.13		ppbv	5.00		123	70-130			
Vinyl bromide	5.62		ppbv	5.00		112	70-130			

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1601 - No Prep VOC Air										
LCS (BID1601-BS1)					Prepared & Analyzed: 04/30/2025					
Vinyl chloride	5.30		ppbv	5.00		106	70-130			
Surr: 4-Bromofluorobenzene (Surr)	*4.81*		ppbv	*5.00*		*96.2*	*70-130*			
LCS Dup (BID1601-BSD1)					Prepared & Analyzed: 04/30/2025					
1,1,1-Trichloroethane	5.76		ppbv	5.00		115	70-130	1.57	25	
1,1,1,2-Tetrachloroethane	5.77		ppbv	5.00		115	70-130	1.92	25	
1,1,2,2-Tetrachloroethane	5.66		ppbv	5.00		113	70-130	3.78	25	
1,1,2-Trichloro-1,2,2-trifluoroethane	5.68		ppbv	5.00		114	70-130	2.50	25	
1,1,2-Trichloroethane	5.72		ppbv	5.00		114	70-130	1.76	25	
1,1-Dichloroethane	6.05		ppbv	5.00		121	70-130	2.17	25	
1,1-Dichloroethylene	6.36		ppbv	5.00		127	70-130	6.16	25	
1,2,4-Trimethylbenzene	5.65		ppbv	5.00		113	70-130	2.33	25	
1,2-Dibromoethane (EDB)	5.46		ppbv	5.00		109	70-130	1.48	25	
1,2-Dichlorobenzene	5.25		ppbv	5.00		105	70-130	1.34	25	
1,2-Dichloroethane	5.69		ppbv	5.00		114	70-130	2.13	25	
1,2-Dichloropropane	5.98		ppbv	5.00		120	70-130	1.18	25	
1,2-Dichlorotetrafluoroethane	5.88		ppbv	5.00		118	70-130	10.6	25	
1,3,5-Trimethylbenzene	5.53		ppbv	5.00		111	70-130	3.31	25	
1,3-Butadiene	5.78		ppbv	5.00		116	70-130	8.48	25	
1,3-Dichlorobenzene	5.20		ppbv	5.00		104	70-130	1.94	25	
1,4-Dichlorobenzene	5.11		ppbv	5.00		102	70-130	1.78	25	
1,4-Dioxane	5.77		ppbv	5.00		115	70-130	0.521	25	
2-Butanone (MEK)	5.54		ppbv	5.00		111	70-130	4.81	25	
2-Chlorotoluene	5.63		ppbv	5.00		113	70-130	2.88	25	
2-Hexanone (MBK)	6.31		ppbv	5.00		126	70-130	2.57	25	
4-Methyl-2-pentanone (MIBK)	5.57		ppbv	5.00		111	70-130	1.81	25	
Allyl chloride	5.89		ppbv	5.00		118	70-130	1.71	25	
Benzene	6.05		ppbv	5.00		121	70-130	3.36	25	
Benzyl Chloride	5.18		ppbv	5.00		104	70-130	1.75	25	
Bromoform	5.42		ppbv	5.00		108	70-130	2.81	25	
Bromomethane	5.75		ppbv	5.00		115	70-130	7.96	25	
Carbon Disulfide	5.89		ppbv	5.00		118	70-130	3.10	25	
Carbon Tetrachloride	5.70		ppbv	5.00		114	70-130	2.67	25	

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Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1601 - No Prep VOC Air										
LCS Dup (BID1601-BSD1)				Prepared & Analyzed: 04/30/2025						
Chlorobenzene	5.67		ppbv	5.00		113	70-130	1.96	25	
Chloroethane	5.86		ppbv	5.00		117	70-130	8.73	25	
Chloroform	5.98		ppbv	5.00		120	70-130	2.71	25	
Chloromethane	5.67		ppbv	5.00		113	70-130	11.0	25	
cis-1,2-Dichloroethylene	5.90		ppbv	5.00		118	70-130	3.62	25	
cis-1,3-Dichloropropene	5.78		ppbv	5.00		116	70-130	0.520	25	
Cyclohexane	5.65		ppbv	5.00		113	70-130	1.43	25	
Dibromochloromethane	5.73		ppbv	5.00		115	70-130	2.83	25	
Dichlorodifluoromethane	5.49		ppbv	5.00		110	70-130	13.6	25	
Ethyl acetate	5.96		ppbv	5.00		119	70-130	2.16	25	
Ethylbenzene	5.82		ppbv	5.00		116	70-130	3.50	25	
Heptane	6.25		ppbv	5.00		125	70-130	1.13	25	
Hexachlorobutadiene	4.67		ppbv	5.00		93.4	60-140	1.73	25	
Hexane	6.51		ppbv	5.00		130	70-130	2.80	25	L
Isopropylbenzene	5.54		ppbv	5.00		111	70-130	2.37	25	
m+p-Xylenes	11.2		ppbv	10.0		112	70-130	2.16	25	
Methyl methacrylate	5.88		ppbv	5.00		118	70-130	3.46	25	
Methylene chloride	6.38		ppbv	5.00		128	70-130	1.74	25	
Methyl-t-butyl ether (MTBE)	5.77		ppbv	5.00		115	70-130	1.75	25	
Naphthalene	4.71		ppbv	5.00		94.2	60-140	1.28	25	
o-Xylene	5.51		ppbv	5.00		110	70-130	4.26	25	
Propylene	5.57		ppbv	5.00		111	70-130	0.358	25	
Styrene	5.59		ppbv	5.00		112	70-130	3.46	25	
TBA	5.39		ppbv	5.00		108	70-130	0.370	25	
Tetrachloroethylene (PCE)	5.46		ppbv	5.00		109	70-130	2.97	25	
Tetrahydrofuran	6.29		ppbv	5.00		126	70-130	3.23	25	
Toluene	5.74		ppbv	5.00		115	70-130	2.65	25	
trans-1,2-Dichloroethylene	5.74		ppbv	5.00		115	70-130	3.01	25	
trans-1,3-Dichloropropene	5.83		ppbv	5.00		117	70-130	1.90	25	
Trichloroethylene	5.71		ppbv	5.00		114	70-130	1.59	25	
Trichlorofluoromethane	5.82		ppbv	5.00		116	70-130	4.03	25	
Vinyl acetate	6.21		ppbv	5.00		124	70-130	1.30	25	
Vinyl bromide	5.92		ppbv	5.00		118	70-130	5.20	25	
Vinyl chloride	5.78		ppbv	5.00		116	70-130	8.66	25	

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Final Report

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BID1601 - No Prep VOC Air										
LCS Dup (BID1601-BSD1)				Prepared & Analyzed: 04/30/2025						
Surr: 4-Bromofluorobenzene (Surr)	*4.81*		ppbv	*5.00*		*96.2*	*70-130*			

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Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
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Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0059 - No Prep VOC GC Air										
Blank (BIE0059-BLK1)					Prepared & Analyzed: 04/30/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Carbon Monoxide	<	0.001	Vol%							
LCS (BIE0059-BS1)					Prepared & Analyzed: 04/30/2025					
Methane	9810		ppmv	10000		98.1	80-120			
Carbon dioxide	9710		ppmv	10000		97.1	80-120			
Oxygen (O2)	2000		ppmv	2000		99.9	80-120			
Hydrogen (H2)	465		ppmv	500		93.0	80-120			
Nitrogen (N2)	4830		ppmv	5000		96.6	80-120			
Carbon Monoxide	508		ppmv	500		102	80-120			
Duplicate (BIE0059-DUP1)				**Source: 25D1774-01**	Prepared & Analyzed: 04/30/2025					
Methane	59.7	0.45	Vol%		59.5			0.396	5	
Carbon dioxide	34.5	0.45	Vol%		34.4			0.223	5	
Oxygen (O2)	<	0.45	Vol%		0.50			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	<	9.00	Vol%		9.07			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0059-DUP2)				**Source: 25D1774-02**	Prepared & Analyzed: 04/30/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	9.62	0.45	Vol%		9.64			0.295	5	
Oxygen (O2)	9.23	0.45	Vol%		9.24			0.133	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	77.6	9.00	Vol%		77.4			0.303	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0059 - No Prep VOC GC Air										
Duplicate (BIE0059-DUP3)				**Source: 25D1774-03**	Prepared & Analyzed: 04/30/2025					
Methane	62.8	0.45	Vol%		62.7			0.203	5	
Carbon dioxide	38.0	0.45	Vol%		38.0			0.0996	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0059-DUP4)				**Source: 25D1774-04**	Prepared & Analyzed: 04/30/2025					
Methane	55.9	0.45	Vol%		55.9			0.0309	5	
Carbon dioxide	30.9	0.45	Vol%		30.8			0.245	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	14.1	9.00	Vol%		14.1			0.0220	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0059-DUP5)				**Source: 25D1774-05**	Prepared & Analyzed: 04/30/2025					
Methane	62.2	0.45	Vol%		62.0			0.293	5	
Carbon dioxide	38.2	0.45	Vol%		38.0			0.500	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0059-DUP6)				**Source: 25D1774-06**	Prepared & Analyzed: 04/30/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	0.87	0.45	Vol%		0.87			0.630	5	
Oxygen (O2)	20.7	0.45	Vol%		20.7			0.130	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	75.5	9.00	Vol%		75.5			0.0972	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0059 - No Prep VOC GC Air										
Duplicate (BIE0059-DUP7)				**Source: 25D1774-07**	Prepared & Analyzed: 04/30/2025					
Methane	65.6	0.45	Vol%		65.6			0.0338	5	
Carbon dioxide	35.5	0.45	Vol%		35.5			0.0287	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0059-DUP8)				**Source: 25D1774-08**	Prepared & Analyzed: 04/30/2025					
Methane	16.8	0.45	Vol%		16.8			0.193	5	
Carbon dioxide	23.0	0.45	Vol%		22.9			0.223	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	58.7	9.00	Vol%		58.7			0.0372	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0059-DUP9)				**Source: 25D1774-09**	Prepared & Analyzed: 04/30/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	1.44	0.45	Vol%		1.44			0.295	5	
Oxygen (O2)	20.4	0.45	Vol%		20.3			0.0768	5	
Nitrogen (N2)	75.4	9.00	Vol%		75.3			0.0802	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0059-DUPA)				**Source: 25D1774-11**	Prepared & Analyzed: 04/30/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	11.2	0.45	Vol%		11.1			0.441	5	
Oxygen (O2)	6.61	0.45	Vol%		6.61			0.0498	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	79.1	9.00	Vol%		78.7			0.533	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0059 - No Prep VOC GC Air										
Duplicate (BIE0059-DUPB)				**Source: 25D1774-12**	Prepared & Analyzed: 05/01/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	2.40	0.45	Vol%		2.40			0.00104	5	
Oxygen (O2)	17.7	0.45	Vol%		17.7			0.147	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	75.9	9.00	Vol%		76.0			0.0920	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Batch BIE0066 - No Prep VOC GC Air										
Blank (BIE0066-BLK1)					Prepared & Analyzed: 05/01/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Carbon Monoxide	<	0.001	Vol%							
LCS (BIE0066-BS1)					Prepared & Analyzed: 05/01/2025					
Methane	9790		ppmv	10000		97.9	80-120			
Carbon dioxide	9710		ppmv	10000		97.1	80-120			
Oxygen (O2)	1990		ppmv	2000		99.7	80-120			
Hydrogen (H2)	510		ppmv	500		102	80-120			
Nitrogen (N2)	4790		ppmv	5000		95.9	80-120			
Carbon Monoxide	510		ppmv	500		102	80-120			
Duplicate (BIE0066-DUP1)				**Source: 25D1774-10**	Prepared & Analyzed: 05/01/2025					
Methane	<	0.90	Vol%		<0.90			NA	5	
Carbon dioxide	5.62	0.90	Vol%		5.62			0.126	5	
Oxygen (O2)	14.8	0.90	Vol%		14.9			1.23	5	
Hydrogen (H2)	<	0.36	Vol%		<0.36			NA	5	
Nitrogen (N2)	78.0	18.0	Vol%		78.3			0.358	5	
Carbon Monoxide	<	0.02	Vol%		<0.02			NA	5	

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Final Report

Laboratory Order ID 25D1774

Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 18, 2025 8:00
Date Issued: May 9, 2025 17:01

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0066 - No Prep VOC GC Air										
Duplicate (BIE0066-DUP2)				**Source: 25D1774-13**	Prepared & Analyzed: 05/01/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	0.49	0.45	Vol%		0.49			1.19	5	
Oxygen (O2)	20.7	0.45	Vol%		20.8			0.357	5	
Hydrogen (H2)	<	0.18	Vol%		0.18			NA	5	
Nitrogen (N2)	74.7	9.00	Vol%		74.9			0.212	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0066-DUP3)				**Source: 25D1774-14**	Prepared & Analyzed: 05/01/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	0.63	0.45	Vol%		0.63			1.04	5	
Oxygen (O2)	20.8	0.45	Vol%		20.7			0.754	5	
Nitrogen (N2)	75.4	9.00	Vol%		75.0			0.456	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0066-DUP4)				**Source: 25D1774-15**	Prepared & Analyzed: 05/01/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	0.78	0.45	Vol%		0.79			0.413	5	
Oxygen (O2)	20.7	0.45	Vol%		20.7			0.0989	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	75.1	9.00	Vol%		75.1			0.0616	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0066-DUP5)				**Source: 25D1774-16**	Prepared & Analyzed: 05/01/2025					
Methane	33.7	0.45	Vol%		33.6			0.335	5	
Carbon dioxide	25.5	0.45	Vol%		25.5			0.312	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	40.0	9.00	Vol%		39.9			0.348	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 18, 2025 8:00
Date Issued: May 9, 2025 17:01

Submitted To: Connor Hicks

Project Number: 23050459

Client Site I.D.: Cliffdale LF

Purchase Order:

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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0066 - No Prep VOC GC Air										
Duplicate (BIE0066-DUP6)				**Source: 25D1774-17**	Prepared & Analyzed: 05/01/2025					
Methane	63.8	0.90	Vol%		63.6			0.411	5	
Carbon dioxide	37.6	0.90	Vol%		37.4			0.734	5	
Oxygen (O2)	<	0.90	Vol%		<0.90			NA	5	
Nitrogen (N2)	<	18.0	Vol%		<18.0			NA	5	
Hydrogen (H2)	<	0.36	Vol%		<0.36			NA	5	
Carbon Monoxide	<	0.02	Vol%		<0.02			NA	5	
Duplicate (BIE0066-DUP7)				**Source: 25D1774-18**	Prepared & Analyzed: 05/01/2025					
Methane	24.2	0.90	Vol%		24.3			0.112	5	
Carbon dioxide	13.0	0.90	Vol%		13.1			0.501	5	
Oxygen (O2)	15.1	0.90	Vol%		15.1			0.0319	5	
Nitrogen (N2)	53.7	18.0	Vol%		53.8			0.261	5	
Hydrogen (H2)	<	0.36	Vol%		<0.36			NA	5	
Carbon Monoxide	<	0.02	Vol%		<0.02			NA	5	
Duplicate (BIE0066-DUP8)				**Source: 25D1774-19**	Prepared & Analyzed: 05/01/2025					
Methane	2.20	0.45	Vol%		2.23			1.35	5	
Carbon dioxide	19.1	0.45	Vol%		19.0			0.177	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Nitrogen (N2)	76.2	9.00	Vol%		76.2			0.0395	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0066-DUP9)				**Source: 25D1774-20**	Prepared & Analyzed: 05/01/2025					
Methane	64.3	0.90	Vol%		64.2			0.0990	5	
Carbon dioxide	36.9	0.90	Vol%		36.9			0.0153	5	
Oxygen (O2)	<	0.90	Vol%		<0.90			NA	5	
Nitrogen (N2)	<	18.0	Vol%		<18.0			NA	5	
Hydrogen (H2)	<	0.36	Vol%		<0.36			NA	5	
Carbon Monoxide	<	0.02	Vol%		<0.02			NA	5	

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Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0066 - No Prep VOC GC Air										
Duplicate (BIE0066-DUPA)				**Source: 25D1774-21**	Prepared & Analyzed: 05/01/2025					
Methane	62.4	0.45	Vol%		62.3			0.123	5	
Carbon dioxide	35.3	0.45	Vol%		35.3			0.170	5	
Oxygen (O2)	0.97	0.45	Vol%		0.99			1.45	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0066-DUPB)				**Source: 25D1774-23**	Prepared & Analyzed: 05/01/2025					
Methane	61.1	0.45	Vol%		61.0			0.231	5	
Carbon dioxide	35.7	0.45	Vol%		35.5			0.589	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0066-DUPC)				**Source: 25D1774-24**	Prepared & Analyzed: 05/02/2025					
Methane	65.2	0.45	Vol%		65.3			0.150	5	
Carbon dioxide	35.1	0.45	Vol%		35.1			0.201	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0066-DUPD)				**Source: 25D2519-01**	Prepared & Analyzed: 05/02/2025					
Methane	27.5	0.15	Vol%		27.4			0.0474	5	
Carbon dioxide	39.2	0.15	Vol%		39.2			0.0621	5	
Oxygen (O2)	0.41	0.15	Vol%		0.42			0.576	5	
Hydrogen (H2)	28.0	0.06	Vol%		27.9			0.165	5	
Nitrogen (N2)	<	3.00	Vol%		<3.00			NA	5	
Carbon Monoxide	0.05	0.003	Vol%		0.05			0.848	5	

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0066 - No Prep VOC GC Air										
Duplicate (BIE0066-DUPE)			**Source: 25D2519-02**		Prepared & Analyzed: 05/02/2025					
Methane	36.6	0.15	Vol%		36.6			0.116	5	
Carbon dioxide	43.4	0.15	Vol%		43.4			0.221	5	
Oxygen (O2)	<	0.15	Vol%		<0.15			NA	5	
Hydrogen (H2)	16.0	0.06	Vol%		15.9			0.596	5	
Nitrogen (N2)	<	3.00	Vol%		<3.00			NA	5	
Carbon Monoxide	0.03	0.003	Vol%		0.03			1.21	5	
Duplicate (BIE0066-DUPF)			**Source: 25D2519-03**		Prepared & Analyzed: 05/02/2025					
Methane	37.6	0.15	Vol%		37.6			0.0562	5	
Carbon dioxide	38.5	0.15	Vol%		38.3			0.460	5	
Oxygen (O2)	<	0.15	Vol%		<0.15			NA	5	
Hydrogen (H2)	13.6	0.06	Vol%		13.5			0.326	5	
Nitrogen (N2)	5.70	3.00	Vol%		5.69			0.249	5	
Carbon Monoxide	0.01	0.003	Vol%		0.01			5.00	5	
Duplicate (BIE0066-DUPG)			**Source: 25D2519-04**		Prepared & Analyzed: 05/02/2025					
Methane	31.2	0.15	Vol%		31.1			0.311	5	
Carbon dioxide	32.4	0.15	Vol%		32.3			0.245	5	
Oxygen (O2)	<	0.15	Vol%		<0.15			NA	5	
Hydrogen (H2)	33.4	0.06	Vol%		33.4			0.138	5	
Nitrogen (N2)	<	3.00	Vol%		<3.00			NA	5	
Carbon Monoxide	0.02	0.003	Vol%		0.02			2.76	5	
Duplicate (BIE0066-DUPH)			**Source: 25D2519-05**		Prepared & Analyzed: 05/02/2025					
Methane	49.0	0.15	Vol%		49.2			0.435	5	
Carbon dioxide	38.2	0.15	Vol%		38.2			0.0274	5	
Oxygen (O2)	<	0.15	Vol%		<0.15			NA	5	
Nitrogen (N2)	<	3.00	Vol%		<3.00			NA	5	
Hydrogen (H2)	6.80	0.06	Vol%		6.86			0.778	5	
Carbon Monoxide	0.01	0.003	Vol%		0.01			7.48	5	P

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Client Name: S&ME - Raleigh
3201 Spring Forest Road

Raleigh, NC 27616

Date Received: April 18, 2025 8:00
Date Issued: May 9, 2025 17:01

Submitted To: Connor Hicks
Client Site I.D.: Cliffdale LF

Project Number: 23050459
Purchase Order:

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0144 - No Prep VOC GC Air										
Blank (BIE0144-BLK1)					Prepared & Analyzed: 05/05/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Carbon Monoxide	<	0.001	Vol%							
LCS (BIE0144-BS1)					Prepared & Analyzed: 05/05/2025					
Methane	9770		ppmv	10000		97.7	80-120			
Carbon dioxide	9650		ppmv	10000		96.5	80-120			
Oxygen (O2)	1990		ppmv	2000		99.7	80-120			
Hydrogen (H2)	576		ppmv	500		115	80-120			
Nitrogen (N2)	4790		ppmv	5000		95.8	80-120			
Carbon Monoxide	505		ppmv	500		101	80-120			
Duplicate (BIE0144-DUP1)				**Source: 25D2273-01**	Prepared & Analyzed: 05/05/2025					
Methane	46.2	0.45	Vol%		46.3			0.132	5	
Carbon dioxide	32.9	0.45	Vol%		32.8			0.235	5	
Oxygen (O2)	1.46	0.45	Vol%		1.47			0.439	5	
Nitrogen (N2)	11.6	9.00	Vol%		11.6			0.0508	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0144-DUP2)				**Source: 25D2273-02**	Prepared & Analyzed: 05/05/2025					
Methane	50.7	0.45	Vol%		50.7			0.0380	5	
Carbon dioxide	35.7	0.45	Vol%		35.9			0.363	5	
Oxygen (O2)	0.99	0.45	Vol%		1.01			1.81	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	10.2	9.00	Vol%		10.3			0.824	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0144 - No Prep VOC GC Air										
Duplicate (BIE0144-DUP3)			**Source: 25D2276-01**		Prepared & Analyzed: 05/05/2025					
Methane	29.5	0.45	Vol%		29.6			0.117	5	
Carbon dioxide	32.7	0.45	Vol%		32.7			0.000700	5	
Oxygen (O2)	1.71	0.45	Vol%		1.72			0.324	5	
Nitrogen (N2)	11.7	9.00	Vol%		11.7			0.128	5	
Hydrogen (H2)	16.6	0.18	Vol%		16.6			0.0169	5	
Carbon Monoxide	0.009	0.009	Vol%		0.01			8.95	5	P
Duplicate (BIE0144-DUP4)			**Source: 25D2276-02**		Prepared & Analyzed: 05/05/2025					
Methane	27.4	0.45	Vol%		27.3			0.136	5	
Carbon dioxide	36.1	0.45	Vol%		36.1			0.103	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	27.8	0.18	Vol%		27.8			0.147	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	0.02	0.009	Vol%		0.02			1.82	5	
Duplicate (BIE0144-DUP5)			**Source: 25D2276-03**		Prepared & Analyzed: 05/05/2025					
Methane	18.1	0.45	Vol%		18.1			0.304	5	
Carbon dioxide	37.2	0.45	Vol%		37.1			0.350	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Hydrogen (H2)	37.7	0.18	Vol%		37.7			0.200	5	
Carbon Monoxide	0.02	0.009	Vol%		0.02			3.96	5	
Duplicate (BIE0144-DUP6)			**Source: 25E0128-01**		Prepared & Analyzed: 05/05/2025					
Methane	43.7	0.15	Vol%		43.6			0.156	5	
Carbon dioxide	35.8	0.15	Vol%		35.6			0.432	5	
Oxygen (O2)	<	0.15	Vol%		<0.15			NA	5	
Hydrogen (H2)	17.4	0.06	Vol%		17.2			0.718	5	
Nitrogen (N2)	<	3.00	Vol%		<3.00			NA	5	
Carbon Monoxide	0.01	0.003	Vol%		0.01			3.75	5	

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0328 - No Prep VOC GC Air										
Blank (BIE0328-BLK1)					Prepared & Analyzed: 05/06/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Carbon Monoxide	<	0.001	Vol%							
LCS (BIE0328-BS1)					Prepared & Analyzed: 05/06/2025					
Methane	9860		ppmv	10000		98.6	80-120			
Carbon dioxide	9680		ppmv	10000		96.8	80-120			
Oxygen (O2)	2000		ppmv	2000		99.9	80-120			
Nitrogen (N2)	4820		ppmv	5000		96.4	80-120			
Hydrogen (H2)	557		ppmv	500		111	80-120			
Carbon Monoxide	503		ppmv	500		101	80-120			
Duplicate (BIE0328-DUP1)				**Source: 25D1774-25**	Prepared & Analyzed: 05/06/2025					
Methane	64.5	0.90	Vol%		64.4			0.162	5	
Carbon dioxide	36.2	0.90	Vol%		35.9			0.810	5	
Oxygen (O2)	<	0.90	Vol%		<0.90			NA	5	
Hydrogen (H2)	<	0.36	Vol%		<0.36			NA	5	
Nitrogen (N2)	<	18.0	Vol%		<18.0			NA	5	
Carbon Monoxide	<	0.02	Vol%		<0.02			NA	5	
Duplicate (BIE0328-DUP2)				**Source: 25D1774-26**	Prepared & Analyzed: 05/06/2025					
Methane	58.4	0.90	Vol%		58.4			0.0147	5	
Carbon dioxide	31.7	0.90	Vol%		31.6			0.268	5	
Oxygen (O2)	8.24	0.90	Vol%		8.18			0.696	5	
Nitrogen (N2)	29.2	18.0	Vol%		29.3			0.0129	5	
Hydrogen (H2)	<	0.36	Vol%		<0.36			NA	5	
Carbon Monoxide	<	0.02	Vol%		<0.02			NA	5	

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Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0328 - No Prep VOC GC Air										
Duplicate (BIE0328-DUP3)				**Source: 25D1774-27**	Prepared & Analyzed: 05/06/2025					
Methane	52.2	0.45	Vol%		52.2			0.0793	5	
Carbon dioxide	25.2	0.45	Vol%		25.3			0.333	5	
Oxygen (O2)	5.36	0.45	Vol%		5.35			0.131	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	19.1	9.00	Vol%		19.1			0.100	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0328-DUP4)				**Source: 25D1774-28**	Prepared & Analyzed: 05/06/2025					
Methane	<	0.45	Vol%		<0.45			NA	5	
Carbon dioxide	3.51	0.45	Vol%		3.52			0.329	5	
Oxygen (O2)	17.1	0.45	Vol%		17.1			0.0163	5	
Nitrogen (N2)	76.2	9.00	Vol%		76.2			0.0371	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0328-DUP5)				**Source: 25D1774-29**	Prepared & Analyzed: 05/06/2025					
Methane	28.5	0.90	Vol%		28.4			0.291	5	
Carbon dioxide	3.33	0.90	Vol%		3.34			0.505	5	
Oxygen (O2)	8.60	0.90	Vol%		8.68			0.891	5	
Nitrogen (N2)	59.3	18.0	Vol%		59.5			0.334	5	
Hydrogen (H2)	<	0.36	Vol%		<0.36			NA	5	
Carbon Monoxide	<	0.02	Vol%		<0.02			NA	5	
Duplicate (BIE0328-DUP6)				**Source: 25D1774-30**	Prepared & Analyzed: 05/06/2025					
Methane	57.9	0.45	Vol%		57.9			0.0476	5	
Carbon dioxide	26.9	0.45	Vol%		26.8			0.168	5	
Oxygen (O2)	2.42	0.45	Vol%		2.33			3.55	5	
Nitrogen (N2)	14.4	9.00	Vol%		14.4			0.140	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

ENTHALPY ANALYTICAL

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Certificate of Analysis

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Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0328 - No Prep VOC GC Air										
Duplicate (BIE0328-DUP7)			**Source: 25D1774-31**		Prepared & Analyzed: 05/06/2025					
Methane	28.4	0.45	Vol%		28.4			0.0347	5	
Carbon dioxide	3.28	0.45	Vol%		3.27			0.469	5	
Oxygen (O2)	8.32	0.45	Vol%		8.38			0.700	5	
Nitrogen (N2)	58.3	9.00	Vol%		58.2			0.150	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Batch BIE0333 - No Prep VOC GC Air										
Blank (BIE0333-BLK1)					Prepared & Analyzed: 05/07/2025					
Methane	<	0.05	Vol%							
Carbon dioxide	<	0.05	Vol%							
Oxygen (O2)	<	0.05	Vol%							
Nitrogen (N2)	<	1.00	Vol%							
Hydrogen (H2)	<	0.02	Vol%							
Carbon Monoxide	<	0.001	Vol%							
LCS (BIE0333-BS1)					Prepared & Analyzed: 05/07/2025					
Methane	9810		ppmv	10000		98.1	80-120			
Carbon dioxide	9660		ppmv	10000		96.6	80-120			
Oxygen (O2)	2020		ppmv	2000		101	80-120			
Hydrogen (H2)	540		ppmv	500		108	80-120			
Nitrogen (N2)	4820		ppmv	5000		96.5	80-120			
Carbon Monoxide	501		ppmv	500		100	80-120			
Duplicate (BIE0333-DUP1)			**Source: 25D2374-01**		Prepared & Analyzed: 05/07/2025					
Methane	58.7	0.45	Vol%		58.7			0.0499	5	
Carbon dioxide	36.7	0.45	Vol%		36.8			0.188	5	
Oxygen (O2)	0.49	0.45	Vol%		0.51			3.18	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Client Site I.D.:	Cliffdale LF	Purchase Order:	

Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0333 - No Prep VOC GC Air										
Duplicate (BIE0333-DUP2)				**Source: 25D2374-02**	Prepared & Analyzed: 05/07/2025					
Methane	48.3	0.45	Vol%		48.2			0.330	5	
Carbon dioxide	28.6	0.45	Vol%		28.6			0.0406	5	
Oxygen (O2)	3.20	0.45	Vol%		3.20			0.0759	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	11.4	9.00	Vol%		11.4			0.0701	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0333-DUP3)				**Source: 25D2374-03**	Prepared & Analyzed: 05/07/2025					
Methane	57.8	0.45	Vol%		57.8			0.145	5	
Carbon dioxide	39.6	0.45	Vol%		39.5			0.373	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0333-DUP4)				**Source: 25D2374-04**	Prepared & Analyzed: 05/07/2025					
Methane	55.9	0.45	Vol%		55.8			0.211	5	
Carbon dioxide	39.1	0.45	Vol%		39.0			0.161	5	
Oxygen (O2)	0.51	0.45	Vol%		0.52			0.716	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	
Duplicate (BIE0333-DUP5)				**Source: 25D2374-06**	Prepared & Analyzed: 05/07/2025					
Methane	57.6	0.45	Vol%		57.6			0.0873	5	
Carbon dioxide	40.4	0.45	Vol%		40.2			0.454	5	
Oxygen (O2)	0.45	0.45	Vol%		0.47			3.50	5	
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Hydrogen (H2)	<	0.18	Vol%		<0.18			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Volatile Organic Compounds by GC/TCD - Unadjusted, as received basis - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0333 - No Prep VOC GC Air										
Duplicate (BIE0333-DUP6)				**Source: 25D2374-07**	Prepared & Analyzed: 05/07/2025					
Methane	59.3	0.45	Vol%		59.3			0.00463	5	
Carbon dioxide	39.7	0.45	Vol%		39.5			0.427	5	
Oxygen (O2)	<	0.45	Vol%		<0.45			NA	5	
Hydrogen (H2)	0.33	0.18	Vol%		0.25			25.5	5	P
Nitrogen (N2)	<	9.00	Vol%		<9.00			NA	5	
Carbon Monoxide	<	0.009	Vol%		<0.009			NA	5	

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Sulfur Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0239 - No Prep VOC Air										
Blank (BIE0239-BLK1)					Prepared & Analyzed: 05/06/2025					
Hydrogen Sulfide	<	10.0	ppbv							
Surr: 1,4-Difluorobenzene (Surr)	*19.9*		ppbv	*20.0*		*99.6*	*80-120*			
LCS (BIE0239-BS1)					Prepared & Analyzed: 05/06/2025					
Carbon Disulfide	25.3		ppbv	20.4		124	70-130			
Hydrogen Sulfide	23.1		ppbv	18.4		126	70-130			
1-Propanethiol	23.5		ppbv	20.2		116	70-130			
2-Propanethiol	22.9		ppbv	20.4		112	70-130			
Carbonyl sulfide	23.5		ppbv	20.4		115	70-130			
Dimethyl sulfide	23.5		ppbv	19.6		120	70-130			
Ethyl mercaptan	21.1		ppbv	19.8		106	70-130			
Methyl mercaptan	22.1		ppbv	20.2		110	70-130			
Surr: 1,4-Difluorobenzene (Surr)	*19.6*		ppbv	*20.0*		*98.0*	*70-130*			
LCS Dup (BIE0239-BSD1)					Prepared & Analyzed: 05/06/2025					
Carbon Disulfide	25.5		ppbv	20.4		125	70-130	0.788	25	
Hydrogen Sulfide	23.8		ppbv	18.4		129	70-130	2.90	25	
1-Propanethiol	23.6		ppbv	20.2		117	70-130	0.340	25	
2-Propanethiol	23.0		ppbv	20.4		113	70-130	0.218	25	
Carbonyl sulfide	24.3		ppbv	20.4		119	70-130	3.26	25	
Dimethyl sulfide	23.9		ppbv	19.6		122	70-130	1.56	25	
Ethyl mercaptan	21.7		ppbv	19.8		110	70-130	2.90	25	
Methyl mercaptan	22.8		ppbv	20.2		113	70-130	2.98	25	
Surr: 1,4-Difluorobenzene (Surr)	*20.0*		ppbv	*20.0*		*100*	*70-130*			
Batch BIE0376 - No Prep VOC Air										
Blank (BIE0376-BLK1)					Prepared & Analyzed: 05/08/2025					
Hydrogen Sulfide	<	10.0	ppbv							
Surr: 1,4-Difluorobenzene (Surr)	*19.9*		ppbv	*20.0*		*99.4*	*80-120*			

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Sulfur Volatile Organic Compounds by GCMS - Quality Control

Enthalpy Analytical

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Qual
Batch BIE0376 - No Prep VOC Air										
LCS (BIE0376-BS1)					Prepared & Analyzed: 05/08/2025					
Carbon Disulfide	22.3		ppbv	20.4		109	70-130			
Hydrogen Sulfide	20.0		ppbv	18.4		109	70-130			
1-Propanethiol	20.9		ppbv	20.2		104	70-130			
2-Propanethiol	19.1		ppbv	20.4		93.8	70-130			
Carbonyl sulfide	21.0		ppbv	20.4		103	70-130			
Dimethyl sulfide	20.7		ppbv	19.6		105	70-130			
Ethyl mercaptan	19.4		ppbv	19.8		97.8	70-130			
Methyl mercaptan	20.4		ppbv	20.2		101	70-130			
Surr: 1,4-Difluorobenzene (Surr)	*19.7*		ppbv	*20.0*		*98.7*	*70-130*			
LCS Dup (BIE0376-BSD1)					Prepared & Analyzed: 05/08/2025					
Carbon Disulfide	22.2		ppbv	20.4		109	70-130	0.629	25	
Hydrogen Sulfide	19.3		ppbv	18.4		105	70-130	3.72	25	
1-Propanethiol	20.8		ppbv	20.2		103	70-130	0.816	25	
2-Propanethiol	18.8		ppbv	20.4		92.2	70-130	1.69	25	
Carbonyl sulfide	20.7		ppbv	20.4		101	70-130	1.34	25	
Dimethyl sulfide	20.7		ppbv	19.6		106	70-130	0.242	25	
Ethyl mercaptan	19.3		ppbv	19.8		97.6	70-130	0.207	25	
Methyl mercaptan	20.0		ppbv	20.2		99.0	70-130	1.83	25	
Surr: 1,4-Difluorobenzene (Surr)	*19.5*		ppbv	*20.0*		*97.3*	*70-130*			

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Certified Analytes included in this Report

Analyte	Certifications
EPA 3C in Air	
Methane	VELAP
Oxygen (O2)	VELAP
Nitrogen (N2)	VELAP
EPA TO-15 in Air	
1,1,1-Trichloroethane	VELAP
1,1,1,2-Tetrachloroethane	VELAP
1,1,2,2-Tetrachloroethane	VELAP
1,1,2-Trichloro-1,2,2-trifluoroethane	VELAP
1,1,2-Trichloroethane	VELAP
1,1-Dichloroethane	VELAP
1,1-Dichloroethylene	VELAP
1,2,4-Trimethylbenzene	VELAP
1,2-Dibromoethane (EDB)	VELAP
1,2-Dichlorobenzene	VELAP
1,2-Dichloroethane	VELAP
1,2-Dichloropropane	VELAP
1,2-Dichlorotetrafluoroethane	VELAP
1,3,5-Trimethylbenzene	VELAP
1,3-Butadiene	VELAP
1,3-Dichlorobenzene	VELAP
1,4-Dichlorobenzene	VELAP
1,4-Dioxane	VELAP
2-Butanone (MEK)	VELAP
2-Chlorotoluene	VELAP
2-Hexanone (MBK)	VELAP
4-Methyl-2-pentanone (MIBK)	VELAP
Allyl chloride	VELAP
Benzene	VELAP
Benzyl Chloride	VELAP
Bromoform	VELAP
Bromomethane	VELAP
Carbon Disulfide	VELAP
Carbon Tetrachloride	VELAP
Chlorobenzene	VELAP
Chloroethane	VELAP
Chloroform	VELAP
Chloromethane	VELAP
cis-1,2-Dichloroethylene	VELAP
cis-1,3-Dichloropropene	VELAP
Cyclohexane	VELAP
Dibromochloromethane	VELAP
Dichlorodifluoromethane	VELAP
Ethyl acetate	VELAP
Ethylbenzene	VELAP
Heptane	VELAP
Hexachlorobutadiene	VELAP
Hexane	VELAP
Isopropylbenzene	VELAP
m+p-Xylenes	VELAP
Methyl methacrylate	VELAP
Methylene chloride	VELAP
Methyl-t-butyl ether (MTBE)	VELAP
Naphthalene	VELAP
o-Xylene	VELAP
Propylene	VELAP
Styrene	VELAP
TBA	VELAP
Tetrachloroethylene (PCE)	VELAP
Tetrahydrofuran	VELAP
Toluene	VELAP
trans-1,2-Dichloroethylene	VELAP
trans-1,3-Dichloropropene	VELAP
Trichloroethylene	VELAP
Trichlorofluoromethane	VELAP
Vinyl acetate	VELAP
Vinyl bromide	VELAP
Vinyl chloride	VELAP
Xylenes, Total	VELAP

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Code	Description	Laboratory ID	Expires
DURSC-NCDEQ	NCDEQ Durham Service Center	703	12/31/2025
DURSC-NCDHHS	NCDHHS Durham Service Center	37918	07/31/2025
MdDOE	Maryland DE Drinking Water	341	12/31/2025
NCDEQ	North Carolina DEQ	495	12/31/2025
NCDHHS	North Carolina Department of Health and Human	51714	07/31/2025
PADEP	NELAP-Pennsylvania Certificate #009	68-03503	10/31/2025
SCDHEC	South Carolina Dept of Health and Environmental	93016	06/14/2025
TXCEQ	Texas Comm on Environmental Quality #T10470	T104704576	05/31/2025
VELAP	NELAP-Virginia Certificate #13307	460021	06/14/2025
WVDEP	West Virginia DEP Cert ID: WV-C25-00063	350	11/30/2025

Qualifiers and Definitions

J	The reported result is an estimated value.
L	LCS recovery is outside of established acceptance limits
P	Duplicate analysis does not meet the acceptance criteria for precision
RPD	Relative Percent Difference
Qual	Qualifers
-RE	Denotes sample was re-analyzed
PF	Preparation Factor
MDL	Method Detection Limit
LOQ	Limit of Quantitation
ppbv	parts per billion by volume
TIC	Tentatively Identified Compounds are compounds that are identified by comparing the analyte mass spectral pattern with the NIST spectral library. A TIC spectral match is reported when the pattern is at least 75% consistent with the published pattern. Compound concentrations are estimated and are calculated using an internal standard response factor of 1.
	All EPA method 3C results are reported as normalized values when the sum total of all evaluated constituents is outside ± 10% of the absolute.

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale CF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 23050459
PHONE #: 919 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	PWS I.D. #:

Turn Around Time: Circle (10) 5 Days or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other_____

WO: 063-25C-0020

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGP-37	13288	3Hr	41718	6	BC250321	30	7.4"	4/14/25	1150	30	71	4/14/25	1410	6	80	SG	x	x	x
2)	~~SGP-38~~ SGP-39	16661	3Hr	44632	6	BC250321	30	9.2"	4/15/25	1040	29	71	4/15/25	1400	5	75	SG	x	x	x
3)	SGP-36	20098	3Hr	47526	6	BC250321	30	7.6"	4/14/25	1120	30	70	4/14/25	1312	5	78	SG	x	x	x
4)	SGP-35	20255	3Hr	49325	6	BC250321	30	2.4"	4/14/25	1055	28	68	4/14/25	1245	4	76	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
	4/15/25 1700	BVO	4/17/25 920
~~RELINQUISHED:~~ BVO	~~DATE / TIME~~ 4-16-25 1600	~~RECEIVED:~~	~~DATE / TIME~~
RELINQUISHED: AWS	DATE / TIME	RECEIVED:	DATE / TIME 4/18/25 0800

QC Data Package: Level I ☐ Level II ☐ Level III ☐

LAB USE ONLY: 58x 3-Hour flow controllers

310 Observed Temp °C: 19.0

noise Correction Factor °C: 0.0

no seal Corrected Temp °C: 19.0

25D1774

S&ME - NC **25D1774**

Cliffdale LF RI-10-12

Recd: 04/18/2025 Due: 05/02/2025

v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 23a2419
PHONE #: 919 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO / PWS I.D. #:
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: (10) **5 Days** or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGP-22	14091	3Hr	38753	6	BC250325	30	5.4"	4/11/25	1120	29	55	4/11/25	1400	5	60	SG	x	x	x
2)	SGP-30	17207	3Hr	46897	6	BC250325	30	6.2"	4/14/25	0915	30	61	4/14/25	1215	5	74	SG	x	x	x
3)	SGP-23	20060	3Hr	48094	6	BC250325	30	5.8"	4/11/25	1100	30	55	4/11/25	1340	5	60	SG	x	x	x
4)	SGP-21	20122	3Hr	49327	6	BC250325	30	6.0"	4/11/25	1200	30	55	4/11/25	1500	5	60	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	QC Data Package
	4/15/25 1700	BUO	4.17.25 920	Level I ☐
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	Level II ☐
BUO	4.17.25 1600			Level III ☐
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	
AW3			4/18/25 0800	

LAB USE ONLY: 58x 3-Hour flow controllers

Observed Temp °C: 19.0 310
Correction Factor °C: 0.0 No Seal
Corrected Temp °C: 19.0 no ice

S&ME - NC **25D1774**
Cliffdale LF RI-10-12
Recd: 04/18/2025 Due: 05/02/2025

v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: 2 Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 230545-9
PHONE #: 919 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO / PWS I.D. #:
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: (10) 5 Days or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

WO: 063-25C-0020

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	~~SGI-40~~ Bad Threads	~~14095~~	~~3Hr~~	~~49315~~	6	BC250328	30		4/15/25			74					SG	x	x	x
2)	SGI-40	16524	3Hr	49511 *	6	BC250328	30	5.2"	4/15/25	1120	29	74	4/15/25	1410	4	75	SG	x	x	x
3)	Pmp-66	20071	3Hr	49519 *	6	BC250328	30	11.8"	4/15/25	[illegible]	29	71	4/15/25	X	5	75	SG	x	x	x
4)	SGI-42	20260	3Hr	50712 *	6	BC250328	30	7.0"	4/15/25	1145	29	75	4/15/25	1410	5	75	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
[signature]	4/15/25 1700	BUD	4.17.25 920
~~RELINQUISHED:~~ BUD	~~DATE / TIME~~ 4.17.25 1600	~~RECEIVED:~~	~~DATE / TIME~~
RELINQUISHED: AWS	DATE / TIME	RECEIVED: [signature]	DATE / TIME 4/18/25 0800

QC Data Package: Level I ☐ Level II ☐ Level III ☐

LAB USE ONLY: 58x 3-Hour flow controllers

310
Observed Temp °C: 19.0
no ice
Correction Factor °C: 0.0
no seal
Corrected Temp °C: 19.0

S&ME - NC **25D1774**
Cliffdale LF RI-10-12
Recd: 04/18/2025 Due: 05/02/2025
v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 23050454
PHONE #: 919 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO — PWS I.D. #:
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: (10) **5 Days** or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGI-44	10522	3Hr	20574	6	BC250324	30	5.0"	4/15/25	1215	26	75	4/15/25	1440	5	75	SG	x	x	x
2)	SGP-47	20114	3Hr	48092	6	BC250324	30	8.0"	4/15/25	1310	29	75	4/15/25	1500	5	75	SG	x	x	x
3)	SGP-48	20120	3Hr	48100	6	BC250324	30	8.6"	4/15/25	1345	28	75	4/15/25	1600	5	75	SG	x	x	x
4)	SGI-46	20259	3Hr	49516	6	BC250318	30	6.8"	4/15/25	1235	30	75	4/15/25	1520	5	75	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
	4/15/25 1700	BUO	4.17.25 920
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
BUO 4.17.25	1600		
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
AWS			4/18/25 0800

QC Data Package
Level I ☐
Level II ☐
Level III ☐

LAB USE ONLY: 58x 3-Hour flow controllers

310
Observed Temp °C: 19.0
noted
Correction Factor °C: 0.0
noseal
Corrected Temp °C: 19.0

25D1774

S&ME - NC 25D1774
Cliffdale LF RI-10-12
Recd: 04/18/2025 Due: 05/02/2025
v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 25D1774-9
PHONE #: 919 329 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO / PWS I.D. #:
SAMPLER NAME (PRINT): [illegible]	SAMPLER SIGNATURE: Connor Hicks	**Turn Around Time:** Circle: (10) **5 Days** or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Size (L)	Cleaning Batch ID	LAB Outgoing Canister Vacuum (in Hg)	LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGP-29	10516	3Hr	46743 *	6	BC250326	30	6.2"	4/10/25	1115	30		4/10/25	1400	5		SG	x	x	x
2)	SGP-27	10523	3Hr	49346 *	6	BC250326	30	7.0"	4/10/25	1025	24		4/10/25	1245	5		SG	x	x	x
3)	SGI-26	20072	3Hr	49515 *	6	BC250326	30	6.2"	4/10/25	1130	30		4/10/25	1300	5		SG	x	x	x
4)	SGP-28	20258	3Hr	50958 *	6	BC250326	30	7.4"	4/10/25	1045	30		4/10/25	1320	5		SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	QC Data Package
[illegible]	4/10/25 17a	BUD	4.17.25 920	Level I ☐
~~RELINQUISHED:~~ BUD 4.17.25	~~DATE / TIME~~ 1600	~~RECEIVED:~~	~~DATE / TIME~~	Level II ☐
RELINQUISHED: AWS	DATE / TIME	RECEIVED: [illegible] 4/18/25 0800	DATE / TIME	Level III ☐

LAB USE ONLY: 58x 3-Hour flow controllers

Observed Temp °C: 19.0 310 noise
Correction Factor °C: 0.0 nosea
Corrected Temp °C: 19.0

S&ME - NC **25D1774**
Cliffdale LF RI-10-12
Recd: 04/18/2025 Due: 05/02/2025

v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 230504.9
PHONE #: 919 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	PWS I.D. #:

Turn Around Time: Circle: (10) 5 Days or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGI-18	10518	3Hr	44623	6	BC250320	30	7.4"	4/10/25	430	30	50	4/10/25	1230	5	60	SG	x	x	x
2)	Duplicate-03	10527	3Hr	48086	6	BC250320	30	6.0"	4/10/25	X	30	50	4/10/25	X	5	60	SG	x	x	x
3)	SGP-20	20228	3Hr	50711	6	BC250320	30	Do not analyze	4/10/25	Did not sample			4/10/25	Regulator broken			SG	x	x	x
4)	SGP-19	20256	3Hr	50954	6	BC250320	30	10.2"	4/10/25	445	30	50	4/10/25	1200	5	60	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
[signature]	4/10/25 1700	BVO	4.17.25 920
RELINQUISHED: BVO 4.17.25	DATE / TIME 1600	RECEIVED:	DATE / TIME
RELINQUISHED: [signature]	DATE / TIME	RECEIVED: [signature]	DATE / TIME 4/18/25 0800

QC Data Package
Level I ☐
Level II ☐
Level III ☐

LAB USE ONLY: 58x 3-Hour flow controllers

Observed Temp °C: 19.0 (30 none)
Correction Factor °C: 0.0 (none)
Corrected Temp °C: 19.0

25D1774

S&ME - NC **25D1774**
Cliffdale LF RI-10-12
Recd: 04/18/2025 Due: 05/02/2025

v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 23050454
PHONE #: 414 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO / PWS I.D. #:
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: (10) 5 Days or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	Duplicate-04	14197	3Hr	31333 *	6	BC250326	30	5.2"	4/11/25	X	30	55	4/11/25	X	5	60	SG	x	x	x
2)	SGP-20	17211	3Hr	36452 *	6	BC250326	30	5.8"	4/11/25	945	30	55	4/11/25	1230	5	60	SG	x	x	x
3)	SGI-25	20079	3Hr	41608 *	6	BC250326	30	9.4"	4/11/25	1000	25	55	4/11/25	1230	5	60	SG	x	x	x
4)	SGP-24	20217	3Hr	41726 *	6	BC250326	30	6.0"	4/11/25	1020	29	55	4/11/25	1300	5	60	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	QC Data Package	LAB USE ONLY: 58x 3-Hour flow controllers
	4/11/25 1700	BVO	~~4.17.25~~ 4/18/25 920	Level I ☐	
~~RELINQUISHED:~~ BVO	~~DATE / TIME~~ 4.17.25 1600	~~RECEIVED:~~	~~DATE / TIME~~	Level II ☐	
RELINQUISHED: AWS	DATE / TIME	RECEIVED:	DATE / TIME 4/18/25 0800	Level III ☐	

310
Observed Temp °C: 19.0
noice
Correction Factor °C: 0.0
noseal
Corrected Temp °C: 19.0

25D1774

S&ME - NC 25D1774
Cliffdale LF RI-10-12
Recd: 04/18/2025 Due: 05/02/2025

v130325002

063-25C-0020.xls

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME: Cliffdale LF
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER: 23050098
PHONE #: 914 327 0352	INVOICE PHONE #:	P.O. #:
FAX #:	EMAIL: connorhicks@smeinc.com	Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO — PWS I.D. #:
SAMPLER NAME (PRINT): Connor Hicks	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: (10) **5 Days** or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other SG

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)	SGP-33	16059	3Hr	39976	6	BC250331	30	3.8"	4/14/25	1015	30	66	4/14/25	1222	4	75	SG	x	x	x
2)	SGP-31	16523	3Hr	47666	6	BC250331	30	6.6"	4/14/25	0940	29	61	4/14/25	1225	5	75	SG	x	x	x
3)	SGP-34	20118	3Hr	49288	6	BC250331	30	5.6"	4/14/25	1030	29	67	4/14/25	1230	2	76	SG	x	x	x
4)	DUP-05	20251	3Hr	50710	6	BC250331	30	7.4"	4/14/25	0940	29	61	4/14/25	1225	5	75	SG	x	x	x

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	QC Data Package
	4/15/25 1700	BVO	4.17.25 920	Level I ☐
RELINQUISHED: BVO	DATE / TIME 4.17.25 1600	RECEIVED:	DATE / TIME	Level II ☐
RELINQUISHED: AWS	DATE / TIME	RECEIVED:	DATE / TIME 4/18/25 0800	Level III ☐

LAB USE ONLY: 58x 3-Hour flow controllers

310
Observed Temp °C: 19.0
noice
Correction Factor °C: 0.0
noseal
Corrected Temp °C: 19.0

S&ME - NC 25D1774
Cliffdale LF RI-10-12
Recd: 04/18/2025 Due: 05/02/2025
v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME:
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER:
PHONE #:	INVOICE PHONE #:	P.O. #:
FAX #: EMAIL: connorhicks@smeinc.com		Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO — PWS I.D. #:
SAMPLER NAME (PRINT):	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: **10** **5 Days** or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other_____

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)		10113	3Hr	20591 ✓	6	BC250327	30										SG	X	X	X
2)		16522	3Hr	43903 ✓	6	BC250327	30										SG	X	X	X
3)		20089	3Hr	48102 ✓	6	BC250327	30										SG	X	X	X
4)		20126	3Hr	49330 ✓	6	BC250327	30										SG	X	X	X

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME
AWS		[signature]	4/18/25 0800
~~RELINQUISHED:~~	~~DATE / TIME~~	~~RECEIVED:~~	~~DATE / TIME~~
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME

QC Data Package
Level I ☐
Level II ☐
Level III ☐

LAB USE ONLY: 58x 3-Hour flow controllers

S&ME - NC
Cliffdale LF RI-10-12
25D1774
Recd: 04/18/2025 Due: 05/02/2025

310 Observed Temp °C: 19.0
Correction Factor °C: none 0.0
Corrected Temp °C: normal 19.0

v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS

CHAIN OF CUSTODY **Equipment Must be Returned By: 5/5/25**

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME:
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER:
PHONE #:	INVOICE PHONE #:	P.O. #:
FAX #: EMAIL: connorhicks@smeinc.com		Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO — PWS I.D. #:
SAMPLER NAME (PRINT):	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: **10** **5 Days** or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other_____ **063-25C-0020** **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (In Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (In Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)		16670	3Hr	✓ 48095	6	BC250320	30										SG	x	x	x
2)		20254	3Hr	✓ 49522	6	BC250331	30										SG	x	x	x
3)																				
4)																				

RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	QC Data Package
AWS		[signature]	4/18/25 0800	Level I ☐
~~RELINQUISHED:~~	~~DATE / TIME~~	~~RECEIVED:~~	~~DATE / TIME~~	Level II ☐
RELINQUISHED:	DATE / TIME	RECEIVED:	DATE / TIME	Level III ☐

LAB USE ONLY: 58x 3-Hour flow controllers

310 Observed Temp °C: 19.0

Correction Factor °C: 0.0

Corrected Temp °C: 19.0

S&ME - NC **25D1774**

Cliffdale LF RI-10-12

Recd: 04/18/2025 Due: 05/02/2025

v130325002

ENTHALPY ANALYTICAL

AIR ANALYSIS
CHAIN OF CUSTODY

Equipment Must be Returned By: 5/5/25

COMPANY NAME: **S&ME**	INVOICE TO: **Same**	PROJECT NAME/Quote #:
CONTACT: **Connor Hicks**	INVOICE CONTACT:	SITE NAME:
ADDRESS: **3201 Spring Forest Rd, Raleigh NC**	INVOICE ADDRESS:	PROJECT NUMBER:
PHONE #:	INVOICE PHONE #:	P.O. #:
FAX #: EMAIL: connorhicks@smeinc.com		Pretreatment Program:
Is sample for compliance reporting? YES NO	**Regulatory State:**	Is sample from a chlorinated supply? YES NO — PWS I.D. #:
SAMPLER NAME (PRINT):	SAMPLER SIGNATURE:	**Turn Around Time:** Circle: **10** **5 Days** or __ Day

Matrix Codes: AA=Indoor/Ambient Air SG=Soil Gas LV=Landfill/Vent Gas OT=Other_____

063-25C-0020 **WO:**

	CLIENT SAMPLE I.D.	Regulator Info: Flow Controller ID	Regulator Info: Cal Flow (mL/min)	Canister Information: Canister ID	Canister Information: Size (L)	Canister Information: Cleaning Batch ID	Canister Information: LAB Outgoing Canister Vacuum (in Hg)	Canister Information: LAB Receiving Canister Vacuum (in Hg)	Sampling Start Information: Barometric Pres. (in Hg): Start Date	Start Time (24hr clock)	Initial Canister Vacuum (in Hg)	Starting Sample Temp °F	Sampling Stop Information: Barometric Pres. (in Hg): Stop Date	Stop Time (24hr clock)	Final Canister Vacuum (in Hg)	Ending Sample Temp °F	Matrix (See Codes)	ANALYSIS: TO-15	Sulfurs (H2S)	3C
1)		10534	3Hr	50952 ✓	6	BC250325	30										SG	x	x	x
2)		16660	3Hr	50953 ✓	6	BC250325	30										SG	x	x	x
3)		17205	3Hr	50955 ✓	6	BC250325	30										SG	x	x	x
4)		20225	3Hr	50956 ✓	6	BC250325	30										SG	x	x	x

RELINQUISHED: AWS DATE / TIME	RECEIVED: 4/21/25 DATE / TIME	QC Data Package	LAB USE ONLY: 58x 3-Hour flow controllers
RELINQUISHED: DATE / TIME	RECEIVED: DATE / TIME	Level I ☐	
RELINQUISHED: DATE / TIME	RECEIVED: DATE / TIME	Level II ☐	
		Level III ☐	

310 noice noseal

Observed Temp °C: 20.9

Correction Factor °C: 0.0

Corrected Temp °C: 20.9

S&ME - NC **25D1774**

Cliffdale LF RI-10-12

Recd: 04/18/2025 Due: 05/02/2025

v130325002

063-25C-0020.xls

1941 Reymet Road ● Richmond, Virginia 23237 ● Tel: (804)-358-8295 Fax: (804)-358-8297

Certificate of Analysis

Final Report

Laboratory Order ID 25D1774

Client Name:	S&ME - Raleigh 3201 Spring Forest Road Raleigh, NC 27616	Date Received: Date Issued:	April 18, 2025 8:00 May 9, 2025 17:01
Submitted To:	Connor Hicks	Project Number:	23050459
Client Site I.D.:	Cliffdale LF	Purchase Order:	

Sample Conditions Checklist

Samples Received at:	**19.00°C**
How were samples received?	AWS Courier
Were Custody Seals used?	No
Are the custody papers filled out completely and correctly?	Yes
Do all bottle labels agree with custody papers?	Yes
Is the temperature blank or representative sample within acceptable limits or received on ice, and recently taken?	Yes
Are all samples within holding time for requested laboratory tests?	Yes
Is a sufficient amount of sample provided to perform the tests included?	Yes
Are all samples in appropriate containers for the analyses requested?	Yes
Were volatile organic containers received?	No
Are all volatile organic and TOX containers free of headspace?	NA
Is a trip blank provided for each VOC sample set? VOC sample sets include EPA8011, EPA504, EPA8260, EPA624, EPA8015 GRO, EPA8021, and EPA524.	NA
Are all samples received appropriately preserved? Note that metals containers do not require field preservation but lab preservation may delay analysis. In addition, field parameters are always received outside holding time and will be marked accordingly.	Yes

Work Order Comments

Some of the canisters were received 4/18/25 0800 however, the chain was received 4/21/25 1201 by Danielle Jones. HEG 4/22/25 1820

S&ME, Inc.
Quality Assurance and Quality Control
Laboratory Data Review

Project Name	Cumberland County/Cliffdale Landfill
S&ME Project No.	23050459
Date of Review	May 15, 2025

1.0 Project Identification

Project Description	Groundwater Sampling
Project Location	7583 Lowell Haris Road, Fayetteville, Cumberland County, North Carolina
NCDEQ ID	NCD980502900
PRLF Task Order(s)	2900RI-12

2.0 Laboratory Information

Primary Laboratory Name	Eurofins Environment Testing (The laboratory states its N.C. certification - 41 status for all analytes tested, within the "Accreditations & Locations" Section of their report.)
Location	104 Woodwinds Industrial Court, Suite A, Cary NC 27511
Eurofins Lab Report IDs, and Sample Collection Dates	Job Number 752-31789-1, Sampled on 4/16/25

3.0 Chain of Custody and Log-in Review(s)

COC Item	Yes	No	Comments
COC Signed by All Parties	X		
Correct Project No. on COC	X		
Cooler Temperature in Compliance	X		
Samples Received Within Holding Time	X		
Samples Received in Acceptable Condition	X		

QA/QC Samples Received in Acceptable Condition	X		Duplicate samples were collected and analyzed for the one day of sampling activity.

4.0 Laboratory Quality Control Review

QC Item	Yes	No	Comments
Samples Analyzed Outside of Holding Time		X	
Matrix Spike and Matrix Spike Duplicate Included in Analysis	X		
Method Blank Included in Analysis	X		
Surrogate Recovery Monitored	X		
Were Any Samples Reported as Rejected		X	
QC Qualifiers Identified	X		Reference definitions of qualifiers in the Glossary section of Laboratory Report. Qualification details are presented below, organized by Method:
According to the Eurofins lab report, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control were within established criteria and addressed, or properly qualified within the sample results. The laboratory affirmed by signature that all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data were identified by the laboratory, and that no information or data were knowingly withheld that would affect the quality of the data.			

5.0 Data Review Summary

S&ME has reviewed the analytical results for the samples collected and submitted to the laboratory for quality and validity. Quality control and assurance concerns have been discussed within the report, and accuracy and precision were determined by an evaluation of the laboratory control spike recovery and laboratory duplicate analysis, respectively. It should be noted that a trip blank was inadvertently not submitted within the cooler delivered to the laboratory. S&ME did not identify significant qualitative or quantitative limitations associated with the laboratory analytical results. Therefore, the laboratory data appears suitable for its intended use.	
Reviewed By	Connor Hicks

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Thomas Raymond
S&ME Inc
3201 Spring Forest Road
Raleigh, North Carolina 27616

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JOB DESCRIPTION

Cliffdale Landfill

JOB NUMBER

752-31789-1

Eurofins Raleigh
104 Woodwinds Industrial Court
Suite A
Cary NC 27511

See page two for job notes and contact information.

my EOL

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Southeast, LLC Project Manager.

Authorization

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Authorized for release by
Chad Bechtold, Project Manager
Chad.Bechtold@et.eurofinsus.com
(813)690-3563

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Definitions/Glossary

Client: S&ME Inc
Job ID: 752-31789-1
Project/Site: Cliffdale Landfill

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time. This does not meet regulatory requirements.
H3	Sample was received and analyzed past holding time. This does not meet regulatory requirements.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job Narrative
752-31789-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

- Matrix QC may not be reported if insufficient sample is provided or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt
The samples were received on 4/18/2025 11:24 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 3.0°C.

GC/MS VOA
Method 8260D: The result for Naphthalene is suspected to be carryover for sample: MW-5 (752-31789-3). Reanalysis was performed outside of holding time. The original analysis is reported as primary and the reanalysis is reported as secondary.

Method 8260D: The Trip Blank (752-31789-9) contained 2-Butanone (MEK) and Chloromethane between the method detection limit and the reporting limit. Reanalysis was performed with concurring results.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA
Method 8270E_QQQ: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for preparation batch 400-706646 and analytical batch 400-707862 recovered outside control limits for the following analytes: 2-Chloronaphthalene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 8270E_QQQ: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with preparation batch 400-706646 and analytical batch 400-707862: Diethyl phthalate, Dimethyl phthalate and Di-n-butyl phthalate. The recoveries are within the marginal exceedance limits/allowances and qualified results have been reported accordingly.

Method 8270E_QQQ: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 400-706646 and analytical batch 400-707862 recovered outside control limits for the following analyte: Benzaldehyde. However, the LCS and LCSD recoveries met acceptance criteria for this compund.

Method 8270E_QQQ: One or two of six surrogate recoveries for the following sample was outside control limits: MW-3 (752-31789-2). The high recoveries are attributable to matrix interference; therefore, the data has been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

HPLC/IC
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 353.2_Nitrite: The following samples were received with less than one shift (8 hours) remaining on a test with a holding time of 48 hours. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: MW-3 (752-31789-2), MW-5 (752-31789-3) and Dup-01 (752-31789-8). The sample MW-1 (752-31789-1) was received past the method holding time for Nitrite analysis.

Job ID: 752-31789-1 (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-1 — Lab Sample ID: 752-31789-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dichlorobenzene	0.969	J	1.00	0.640	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	4.66		1.00	0.710	ug/L	1		8260D	Total/NA
1,4-Dioxane	0.745		0.314	0.314	ug/L	1		8270E SIM ID	Total/NA
Caprolactam	14.2		9.77	2.35	ug/L	1		8270E	Total/NA
Sulfate	3.92		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	25.8		3.00	0.860	ug/L	1		6020B	Total Recoverable
Barium	15.3		5.00	0.890	ug/L	1		6020B	Total Recoverable
Chromium	2.85	J	5.00	1.20	ug/L	1		6020B	Total Recoverable
Cobalt	0.460	J	0.500	0.220	ug/L	1		6020B	Total Recoverable
Copper	2.07	J	5.00	1.08	ug/L	1		6020B	Total Recoverable
Lead	0.215	J	2.50	0.210	ug/L	1		6020B	Total Recoverable
Manganese	68.3		5.00	2.20	ug/L	1		6020B	Total Recoverable
Nickel	0.585	J	5.00	0.420	ug/L	1		6020B	Total Recoverable
Selenium	1.03	J B	2.50	0.990	ug/L	1		6020B	Total Recoverable
Vanadium	8.32	J	10.0	0.630	ug/L	1		6020B	Total Recoverable
Zinc	22.7		20.0	2.80	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	22.6	F1	5.00	2.00	mg/L	100		350.1	Total/NA
Nitrate Nitrite as N	0.168		0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.168		0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-3 — Lab Sample ID: 752-31789-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	11.3		1.00	0.500	ug/L	1		8260D	Total/NA
Chlorobenzene	15.1		1.00	0.420	ug/L	1		8260D	Total/NA
1,2-Dichlorobenzene	0.586	J	1.00	0.500	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	5.45		1.00	0.640	ug/L	1		8260D	Total/NA
Ethylbenzene	5.68		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	3.06		1.00	0.530	ug/L	1		8260D	Total/NA
Isopropyl ether	0.750	J	1.00	0.740	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	1.80		1.00	0.710	ug/L	1		8260D	Total/NA
Methyl tert-butyl ether	0.261	J	1.00	0.220	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	21.4		5.00	3.00	ug/L	1		8260D	Total/NA
Naphthalene	51.2		5.00	3.00	ug/L	1		8260D	Total/NA
N-Propylbenzene	2.49		1.00	0.690	ug/L	1		8260D	Total/NA
Toluene	2.22		1.00	0.900	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	3.39		1.00	0.820	ug/L	1		8260D	Total/NA
1,3,5-Trimethylbenzene	1.75		1.00	0.560	ug/L	1		8260D	Total/NA
Xylenes, Total	23.0		10.0	6.00	ug/L	1		8260D	Total/NA
1,4-Dioxane	30.5		0.293	0.293	ug/L	1		8270E SIM ID	Total/NA
2-Methylnaphthalene	5.28	J	9.62	0.779	ug/L	1		8270E	Total/NA
4-Chloro-3-methylphenol	12.5		9.62	0.702	ug/L	1		8270E	Total/NA
Benzaldehyde	2.22	J *1	9.62	0.644	ug/L	1		8270E	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-3 (Continued)

Lab Sample ID: 752-31789-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Caprolactam	19.4		9.62	2.31	ug/L	1		8270E	Total/NA
Diethyl phthalate	15.3	*-	9.62	3.85	ug/L	1		8270E	Total/NA
Di-n-butyl phthalate	4.66	J *-	9.62	3.85	ug/L	1		8270E	Total/NA
Naphthalene	37.9		9.62	0.721	ug/L	1		8270E	Total/NA
N-Nitrosodiphenylamine	1.26	J	9.62	0.183	ug/L	1		8270E	Total/NA
Phenol	1.08	J	9.62	0.654	ug/L	1		8270E	Total/NA
Sulfate	2.88		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	1.53	J	3.00	0.860	ug/L	1		6020B	Total Recoverable
Barium	79.6		5.00	0.890	ug/L	1		6020B	Total Recoverable
Cadmium	0.220	J	0.500	0.0780	ug/L	1		6020B	Total Recoverable
Chromium	3.85	J	5.00	1.20	ug/L	1		6020B	Total Recoverable
Cobalt	3.59		0.500	0.220	ug/L	1		6020B	Total Recoverable
Copper	2.23	J	5.00	1.08	ug/L	1		6020B	Total Recoverable
Lead	8.13		2.50	0.210	ug/L	1		6020B	Total Recoverable
Manganese	69.7		5.00	2.20	ug/L	1		6020B	Total Recoverable
Nickel	13.4		5.00	0.420	ug/L	1		6020B	Total Recoverable
Vanadium	2.31	J	10.0	0.630	ug/L	1		6020B	Total Recoverable
Zinc	25.7		20.0	2.80	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	230		25.0	10.0	mg/L	500		350.1	Total/NA
Nitrate Nitrite as N	0.0669	J	0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.0669	J	0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-5

Lab Sample ID: 752-31789-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.04		1.00	0.500	ug/L	1		8260D	Total/NA
Chlorobenzene	6.31		1.00	0.420	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	14.2		1.00	0.640	ug/L	1		8260D	Total/NA
1,2-Dichloropropane	1.30		1.00	0.500	ug/L	1		8260D	Total/NA
Ethylbenzene	1.01		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	1.22		1.00	0.530	ug/L	1		8260D	Total/NA
Methyl tert-butyl ether	0.322	J	1.00	0.220	ug/L	1		8260D	Total/NA
Naphthalene	3.91	J	5.00	3.00	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	1.47		1.00	0.820	ug/L	1		8260D	Total/NA
Caprolactam	9.07	J	9.71	2.33	ug/L	1		8270E	Total/NA
Sulfate	4.10		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	7.03		3.00	0.860	ug/L	1		6020B	Total Recoverable
Barium	206		5.00	0.890	ug/L	1		6020B	Total Recoverable
Beryllium	1.16		0.500	0.200	ug/L	1		6020B	Total Recoverable
Cadmium	0.355	J	0.500	0.0780	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 752-31789-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	10.6		5.00	1.20	ug/L	1		6020B	Total Recoverable
Cobalt	2.87		0.500	0.220	ug/L	1		6020B	Total Recoverable
Copper	7.20		5.00	1.08	ug/L	1		6020B	Total Recoverable
Lead	20.7		2.50	0.210	ug/L	1		6020B	Total Recoverable
Manganese	440		5.00	2.20	ug/L	1		6020B	Total Recoverable
Nickel	27.5		5.00	0.420	ug/L	1		6020B	Total Recoverable
Selenium	1.57	J B	2.50	0.990	ug/L	1		6020B	Total Recoverable
Vanadium	53.0		10.0	0.630	ug/L	1		6020B	Total Recoverable
Zinc	1120		20.0	2.80	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	0.0303	J	0.0500	0.0200	mg/L	1		350.1	Total/NA

Client Sample ID: MW-6 — Lab Sample ID: 752-31789-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	10.1	J	25.0	10.0	ug/L	1		8260D	Total/NA
Benzene	4.85		1.00	0.500	ug/L	1		8260D	Total/NA
Chlorobenzene	3.00		1.00	0.420	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	15.8		1.00	0.200	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	5.98		1.00	0.640	ug/L	1		8260D	Total/NA
Ethylbenzene	11.6		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	0.816	J	1.00	0.530	ug/L	1		8260D	Total/NA
Isopropyl ether	1.43		1.00	0.740	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	0.730	J	1.00	0.710	ug/L	1		8260D	Total/NA
Methyl tert-butyl ether	0.349	J	1.00	0.220	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	6.79		5.00	3.00	ug/L	1		8260D	Total/NA
o-Xylene	5.85		5.00	3.00	ug/L	1		8260D	Total/NA
Toluene	1.25		1.00	0.900	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	1.88		1.00	0.500	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	1.15		1.00	0.820	ug/L	1		8260D	Total/NA
Vinyl chloride	0.946	J	1.00	0.500	ug/L	1		8260D	Total/NA
Xylenes, Total	12.6		10.0	6.00	ug/L	1		8260D	Total/NA
1,1'-Biphenyl	0.464	J	9.84	0.413	ug/L	1		8270E	Total/NA
2,4-Dimethylphenol	1.11	J	9.84	0.236	ug/L	1		8270E	Total/NA
4-Chloro-3-methylphenol	1.51	J	9.84	0.718	ug/L	1		8270E	Total/NA
Caprolactam	24.3		9.84	2.36	ug/L	1		8270E	Total/NA
Naphthalene	0.878	J	9.84	0.738	ug/L	1		8270E	Total/NA
N-Nitrosodiphenylamine	1.88	J	9.84	0.187	ug/L	1		8270E	Total/NA
Phenol	0.715	J	9.84	0.669	ug/L	1		8270E	Total/NA

Client Sample ID: MW-7 — Lab Sample ID: 752-31789-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.39		1.00	0.500	ug/L	1		8260D	Total/NA
Chlorobenzene	9.71		1.00	0.420	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	2.60		1.00	0.640	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-7 (Continued)

Lab Sample ID: 752-31789-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	3.91		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	2.20		1.00	0.530	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	1.04		1.00	0.710	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	5.82		5.00	3.00	ug/L	1		8260D	Total/NA
Naphthalene	13.5		5.00	3.00	ug/L	1		8260D	Total/NA
N-Propylbenzene	2.04		1.00	0.690	ug/L	1		8260D	Total/NA
Toluene	1.08		1.00	0.900	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	0.945	J	1.00	0.820	ug/L	1		8260D	Total/NA
Xylenes, Total	7.30	J	10.0	6.00	ug/L	1		8260D	Total/NA
1,4-Dioxane	0.583		0.291	0.291	ug/L	1		8270E SIM ID	Total/NA
2-Methylnaphthalene	0.839	J	9.80	0.794	ug/L	1		8270E	Total/NA
4-Chloro-3-methylphenol	3.23	J	9.80	0.716	ug/L	1		8270E	Total/NA
Caprolactam	8.21	J	9.80	2.35	ug/L	1		8270E	Total/NA
Naphthalene	10.7		9.80	0.735	ug/L	1		8270E	Total/NA
N-Nitrosodiphenylamine	1.77	J	9.80	0.186	ug/L	1		8270E	Total/NA
Phenol	0.699	J	9.80	0.667	ug/L	1		8270E	Total/NA
Sulfate	1.16		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	0.880	J	3.00	0.860	ug/L	1		6020B	Total Recoverable
Barium	381		5.00	0.890	ug/L	1		6020B	Total Recoverable
Cadmium	0.170	J	0.500	0.0780	ug/L	1		6020B	Total Recoverable
Chromium	2.07	J	5.00	1.20	ug/L	1		6020B	Total Recoverable
Cobalt	1.35		0.500	0.220	ug/L	1		6020B	Total Recoverable
Copper	2.15	J	5.00	1.08	ug/L	1		6020B	Total Recoverable
Lead	11.2		2.50	0.210	ug/L	1		6020B	Total Recoverable
Manganese	1150		5.00	2.20	ug/L	1		6020B	Total Recoverable
Nickel	3.35	J	5.00	0.420	ug/L	1		6020B	Total Recoverable
Vanadium	1.29	J	10.0	0.630	ug/L	1		6020B	Total Recoverable
Zinc	228		20.0	2.80	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	33.8		2.57	1.03	mg/L	51.429		350.1	Total/NA
Nitrate Nitrite as N	0.0963	J	0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.0963	J	0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-8

Lab Sample ID: 752-31789-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.24		1.00	0.500	ug/L	1		8260D	Total/NA
Chlorobenzene	1.75		1.00	0.420	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	0.824	J	1.00	0.640	ug/L	1		8260D	Total/NA
1,4-Dioxane	20.5		0.311	0.311	ug/L	1		8270E SIM ID	Total/NA
3 & 4 Methylphenol	21.9	I	19.5	4.48	ug/L	1		8270E	Total/NA
4-Chloro-3-methylphenol	5.95	J	9.74	0.711	ug/L	1		8270E	Total/NA
Caprolactam	9.61	J	9.74	2.34	ug/L	1		8270E	Total/NA
Naphthalene	0.838	J	9.74	0.731	ug/L	1		8270E	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-8 (Continued) — Lab Sample ID: 752-31789-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
N-Nitrosodiphenylamine	0.607	J	9.74	0.185	ug/L	1		8270E	Total/NA
Phenol	8.88	J	9.74	0.662	ug/L	1		8270E	Total/NA
Sulfate	6.49		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	4.55		3.00	0.860	ug/L	1		6020B	Total Recoverable
Barium	239		5.00	0.890	ug/L	1		6020B	Total Recoverable
Chromium	2.87	J	5.00	1.20	ug/L	1		6020B	Total Recoverable
Cobalt	1.87		0.500	0.220	ug/L	1		6020B	Total Recoverable
Lead	0.705	J	2.50	0.210	ug/L	1		6020B	Total Recoverable
Manganese	245		5.00	2.20	ug/L	1		6020B	Total Recoverable
Nickel	7.35		5.00	0.420	ug/L	1		6020B	Total Recoverable
Vanadium	7.53	J	10.0	0.630	ug/L	1		6020B	Total Recoverable
Zinc	14.2	J	20.0	2.80	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	100		4.50	1.80	mg/L	90		350.1	Total/NA
Nitrate Nitrite as N	0.0928	J	0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.0928	J	0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: MW-9 — Lab Sample ID: 752-31789-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.99		1.00	0.500	ug/L	1		8260D	Total/NA
Chlorobenzene	8.56		1.00	0.420	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	1.48		1.00	0.640	ug/L	1		8260D	Total/NA
Isopropylbenzene	1.05		1.00	0.530	ug/L	1		8260D	Total/NA
Naphthalene	6.56		5.00	3.00	ug/L	1		8260D	Total/NA
1,4-Dioxane	5.85		0.322	0.322	ug/L	1		8270E SIM ID	Total/NA
4-Chloro-3-methylphenol	5.74	J	9.90	0.723	ug/L	1		8270E	Total/NA
Caprolactam	8.31	J	9.90	2.38	ug/L	1		8270E	Total/NA
Naphthalene	5.18	J	9.90	0.743	ug/L	1		8270E	Total/NA
N-Nitrosodiphenylamine	2.49	J	9.90	0.188	ug/L	1		8270E	Total/NA
Sulfate	2.11		1.00	0.390	mg/L	1		9056A	Total/NA
Arsenic	6.03		3.00	0.860	ug/L	1		6020B	Total Recoverable
Barium	111		5.00	0.890	ug/L	1		6020B	Total Recoverable
Cobalt	0.610		0.500	0.220	ug/L	1		6020B	Total Recoverable
Manganese	137		5.00	2.20	ug/L	1		6020B	Total Recoverable
Nickel	1.10	J	5.00	0.420	ug/L	1		6020B	Total Recoverable
Vanadium	6.27	J	10.0	0.630	ug/L	1		6020B	Total Recoverable
Zinc	6.55	J	20.0	2.80	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	42.4		2.57	1.03	mg/L	51.429		350.1	Total/NA
Nitrate Nitrite as N	0.0980	J	0.100	0.0410	mg/L	1		353.2	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-9 (Continued) — Lab Sample ID: 752-31789-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nitrate as N	0.0980	J	0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: Dup-01 — Lab Sample ID: 752-31789-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	10.8		1.00	0.500	ug/L	1		8260D	Total/NA
Chlorobenzene	14.2		1.00	0.420	ug/L	1		8260D	Total/NA
1,2-Dichlorobenzene	0.562	J	1.00	0.500	ug/L	1		8260D	Total/NA
1,4-Dichlorobenzene	5.34		1.00	0.640	ug/L	1		8260D	Total/NA
Ethylbenzene	5.28		1.00	0.500	ug/L	1		8260D	Total/NA
Isopropylbenzene	2.83		1.00	0.530	ug/L	1		8260D	Total/NA
Isopropyl ether	0.793	J	1.00	0.740	ug/L	1		8260D	Total/NA
4-Isopropyltoluene	1.63		1.00	0.710	ug/L	1		8260D	Total/NA
m-Xylene & p-Xylene	19.8		5.00	3.00	ug/L	1		8260D	Total/NA
Naphthalene	50.0		5.00	3.00	ug/L	1		8260D	Total/NA
N-Propylbenzene	2.34		1.00	0.690	ug/L	1		8260D	Total/NA
Toluene	1.85		1.00	0.900	ug/L	1		8260D	Total/NA
1,2,4-Trimethylbenzene	3.15		1.00	0.820	ug/L	1		8260D	Total/NA
1,3,5-Trimethylbenzene	1.66		1.00	0.560	ug/L	1		8260D	Total/NA
Xylenes, Total	21.2		10.0	6.00	ug/L	1		8260D	Total/NA
1,4-Dioxane	30.6		0.300	0.300	ug/L	1		8270E SIM ID	Total/NA
2-Methylnaphthalene	5.35	J	9.77	0.792	ug/L	1		8270E	Total/NA
4-Chloro-3-methylphenol	12.6		9.77	0.713	ug/L	1		8270E	Total/NA
Benzaldehyde	2.28	J *1	9.77	0.655	ug/L	1		8270E	Total/NA
Caprolactam	17.5		9.77	2.35	ug/L	1		8270E	Total/NA
Diethyl phthalate	16.0	*-	9.77	3.91	ug/L	1		8270E	Total/NA
Di-n-butyl phthalate	4.67	J *-	9.77	3.91	ug/L	1		8270E	Total/NA
Naphthalene	37.7		9.77	0.733	ug/L	1		8270E	Total/NA
N-Nitrosodiphenylamine	1.27	J	9.77	0.186	ug/L	1		8270E	Total/NA
Phenol	1.07	J	9.77	0.664	ug/L	1		8270E	Total/NA
Sulfate	2.91		1.00	0.390	mg/L	1		9056A	Total/NA
Antimony	0.340	J	5.00	0.340	ug/L	1		6020B	Total Recoverable
Arsenic	1.64	J	3.00	0.860	ug/L	1		6020B	Total Recoverable
Barium	80.4		5.00	0.890	ug/L	1		6020B	Total Recoverable
Cadmium	0.190	J	0.500	0.0780	ug/L	1		6020B	Total Recoverable
Chromium	3.78	J	5.00	1.20	ug/L	1		6020B	Total Recoverable
Cobalt	3.52		0.500	0.220	ug/L	1		6020B	Total Recoverable
Copper	3.64	J	5.00	1.08	ug/L	1		6020B	Total Recoverable
Lead	9.11		2.50	0.210	ug/L	1		6020B	Total Recoverable
Manganese	67.3		5.00	2.20	ug/L	1		6020B	Total Recoverable
Nickel	13.7		5.00	0.420	ug/L	1		6020B	Total Recoverable
Vanadium	1.70	J	10.0	0.630	ug/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: Dup-01 (Continued)

Lab Sample ID: 752-31789-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	26.4		20.0	2.80	ug/L	1		6020B	Total Recoverable
Ammonia (as N)	217		25.0	10.0	mg/L	500		350.1	Total/NA
Nitrate Nitrite as N	0.0783	J	0.100	0.0410	mg/L	1		353.2	Total/NA
Nitrate as N	0.0783	J	0.100	0.0250	mg/L	1		Nitrate by calc	Total/NA

Client Sample ID: Trip Blank

Lab Sample ID: 752-31789-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	5.45	J	25.0	2.60	ug/L	1		8260D	Total/NA
Chloromethane	0.703	J	1.00	0.400	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-1

Date Collected: 04/16/25 10:20
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-1

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 14:50	1
Benzene	ND		1.00	0.500	ug/L			04/30/25 14:50	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 14:50	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 14:50	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 14:50	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 14:50	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 14:50	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 14:50	1
Chlorobenzene	ND		1.00	0.420	ug/L			04/30/25 14:50	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 14:50	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 14:50	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 14:50	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 14:50	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 14:50	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 14:50	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 14:50	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 14:50	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 14:50	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 14:50	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 14:50	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			04/30/25 14:50	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 14:50	1
1,4-Dichlorobenzene	**0.969**	**J**	1.00	0.640	ug/L			04/30/25 14:50	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 14:50	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 14:50	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 14:50	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 14:50	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 14:50	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 14:50	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 14:50	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 14:50	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 14:50	1
Ethylbenzene	ND		1.00	0.500	ug/L			04/30/25 14:50	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 14:50	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 14:50	1
Hexane	ND		1.00	0.960	ug/L			04/30/25 14:50	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 14:50	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 14:50	1
Isopropylbenzene	ND		1.00	0.530	ug/L			04/30/25 14:50	1
Isopropyl ether	ND		1.00	0.740	ug/L			04/30/25 14:50	1
4-Isopropyltoluene	**4.66**		1.00	0.710	ug/L			04/30/25 14:50	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 14:50	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 14:50	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			04/30/25 14:50	1
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			04/30/25 14:50	1
Naphthalene	ND		5.00	3.00	ug/L			04/30/25 14:50	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 14:50	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 14:50	1
N-Propylbenzene	ND		1.00	0.690	ug/L			04/30/25 14:50	1

Client Sample ID: MW-1
Date Collected: 04/16/25 10:20
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 14:50	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 14:50	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 14:50	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 14:50	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 14:50	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 14:50	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 14:50	1
Toluene	ND		1.00	0.900	ug/L			04/30/25 14:50	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 14:50	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 14:50	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 14:50	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 14:50	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 14:50	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 14:50	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 14:50	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 14:50	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 14:50	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 14:50	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 14:50	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			04/30/25 14:50	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			04/30/25 14:50	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 14:50	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 14:50	1
Xylenes, Total	ND		10.0	6.00	ug/L			04/30/25 14:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*56 - 136*		*04/30/25 14:50*	*1*
Dibromofluoromethane	*93*		*79 - 130*		*04/30/25 14:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*59 - 146*		*04/30/25 14:50*	*1*
Toluene-d8 (Surr)	*101*		*64 - 132*		*04/30/25 14:50*	*1*

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.745**		0.314	0.314	ug/L		04/23/25 16:43	04/28/25 18:40	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*22*		*10 - 140*	*04/23/25 16:43*	*04/28/25 18:40*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.77	0.410	ug/L		04/22/25 13:34	05/05/25 15:35	1
2,4,5-Trichlorophenol	ND		9.77	0.528	ug/L		04/22/25 13:34	05/05/25 15:35	1
2,4,6-Trichlorophenol	ND		9.77	1.07	ug/L		04/22/25 13:34	05/05/25 15:35	1
2,4-Dichlorophenol	ND		9.77	0.557	ug/L		04/22/25 13:34	05/05/25 15:35	1
2,4-Dimethylphenol	ND		9.77	0.235	ug/L		04/22/25 13:34	05/05/25 15:35	1
2,4-Dinitrophenol	ND		29.3	4.57	ug/L		04/22/25 13:34	05/05/25 15:35	1
2,4-Dinitrotoluene	ND		9.77	0.635	ug/L		04/22/25 13:34	05/05/25 15:35	1
2,6-Dinitrotoluene	ND		9.77	0.283	ug/L		04/22/25 13:34	05/05/25 15:35	1
2-Chloronaphthalene	ND	*+	9.77	0.371	ug/L		04/22/25 13:34	05/05/25 15:35	1
2-Chlorophenol	ND		9.77	0.821	ug/L		04/22/25 13:34	05/05/25 15:35	1
2-Methylnaphthalene	ND		9.77	0.792	ug/L		04/22/25 13:34	05/05/25 15:35	1

Client Sample ID: MW-1
Date Collected: 04/16/25 10:20
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-1
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		9.77	0.743	ug/L		04/22/25 13:34	05/05/25 15:35	1
2-Nitroaniline	ND		9.77	1.34	ug/L		04/22/25 13:34	05/05/25 15:35	1
2-Nitrophenol	ND		9.77	1.14	ug/L		04/22/25 13:34	05/05/25 15:35	1
3 & 4 Methylphenol	ND		19.5	4.50	ug/L		04/22/25 13:34	05/05/25 15:35	1
3,3'-Dichlorobenzidine	ND		10.7	0.401	ug/L		04/22/25 13:34	05/05/25 15:35	1
3-Nitroaniline	ND		9.77	0.928	ug/L		04/22/25 13:34	05/05/25 15:35	1
4,6-Dinitro-2-methylphenol	ND		9.77	1.93	ug/L		04/22/25 13:34	05/05/25 15:35	1
4-Bromophenyl phenyl ether	ND		9.77	0.127	ug/L		04/22/25 13:34	05/05/25 15:35	1
4-Chloro-3-methylphenol	ND		9.77	0.713	ug/L		04/22/25 13:34	05/05/25 15:35	1
4-Chloroaniline	ND		9.77	0.274	ug/L		04/22/25 13:34	05/05/25 15:35	1
4-Chlorophenyl phenyl ether	ND		9.77	0.235	ug/L		04/22/25 13:34	05/05/25 15:35	1
4-Nitroaniline	ND		9.77	3.42	ug/L		04/22/25 13:34	05/05/25 15:35	1
4-Nitrophenol	ND		9.77	2.68	ug/L		04/22/25 13:34	05/05/25 15:35	1
Acenaphthene	ND		9.77	0.616	ug/L		04/22/25 13:34	05/05/25 15:35	1
Acenaphthylene	ND		9.77	0.743	ug/L		04/22/25 13:34	05/05/25 15:35	1
Acetophenone	ND		9.77	3.13	ug/L		04/22/25 13:34	05/05/25 15:35	1
Anthracene	ND		9.77	0.889	ug/L		04/22/25 13:34	05/05/25 15:35	1
Atrazine	ND		9.77	1.10	ug/L		04/22/25 13:34	05/05/25 15:35	1
Benzaldehyde	ND	*1	9.77	0.655	ug/L		04/22/25 13:34	05/05/25 15:35	1
Benzo[a]anthracene	ND		9.77	0.977	ug/L		04/22/25 13:34	05/05/25 15:35	1
Benzo[a]pyrene	ND		9.77	1.07	ug/L		04/22/25 13:34	05/05/25 15:35	1
Benzo[b]fluoranthene	ND		9.77	1.17	ug/L		04/22/25 13:34	05/05/25 15:35	1
Benzo[g,h,i]perylene	ND		9.77	1.47	ug/L		04/22/25 13:34	05/05/25 15:35	1
Benzo[k]fluoranthene	ND		9.77	1.47	ug/L		04/22/25 13:34	05/05/25 15:35	1
bis (2-chloroisopropyl) ether	ND		9.77	0.909	ug/L		04/22/25 13:34	05/05/25 15:35	1
Bis(2-chloroethoxy)methane	ND		9.77	0.332	ug/L		04/22/25 13:34	05/05/25 15:35	1
Bis(2-chloroethyl)ether	ND		9.77	0.713	ug/L		04/22/25 13:34	05/05/25 15:35	1
Bis(2-ethylhexyl) phthalate	ND		9.77	3.91	ug/L		04/22/25 13:34	05/05/25 15:35	1
Butyl benzyl phthalate	ND		9.77	3.91	ug/L		04/22/25 13:34	05/05/25 15:35	1
Caprolactam	**14.2**		9.77	2.35	ug/L		04/22/25 13:34	05/05/25 15:35	1
Carbazole	ND		9.77	0.313	ug/L		04/22/25 13:34	05/05/25 15:35	1
Chrysene	ND		9.77	1.17	ug/L		04/22/25 13:34	05/05/25 15:35	1
Dibenz(a,h)anthracene	ND		9.77	1.27	ug/L		04/22/25 13:34	05/05/25 15:35	1
Dibenzofuran	ND		9.77	0.625	ug/L		04/22/25 13:34	05/05/25 15:35	1
Diethyl phthalate	ND	*-	9.77	3.91	ug/L		04/22/25 13:34	05/05/25 15:35	1
Dimethyl phthalate	ND	*-	9.77	3.91	ug/L		04/22/25 13:34	05/05/25 15:35	1
Di-n-butyl phthalate	ND	*-	9.77	3.91	ug/L		04/22/25 13:34	05/05/25 15:35	1
Di-n-octyl phthalate	ND		9.77	3.91	ug/L		04/22/25 13:34	05/05/25 15:35	1
Fluoranthene	ND		9.77	0.616	ug/L		04/22/25 13:34	05/05/25 15:35	1
Fluorene	ND		9.77	0.655	ug/L		04/22/25 13:34	05/05/25 15:35	1
Hexachlorobenzene	ND		9.77	0.244	ug/L		04/22/25 13:34	05/05/25 15:35	1
Hexachlorobutadiene	ND		9.77	0.537	ug/L		04/22/25 13:34	05/05/25 15:35	1
Hexachlorocyclopentadiene	ND		19.5	0.313	ug/L		04/22/25 13:34	05/05/25 15:35	1
Hexachloroethane	ND		9.77	0.518	ug/L		04/22/25 13:34	05/05/25 15:35	1
Indeno[1,2,3-cd]pyrene	ND		9.77	1.07	ug/L		04/22/25 13:34	05/05/25 15:35	1
Isophorone	ND		9.77	0.782	ug/L		04/22/25 13:34	05/05/25 15:35	1
Naphthalene	ND		9.77	0.733	ug/L		04/22/25 13:34	05/05/25 15:35	1
Nitrobenzene	ND		9.77	0.586	ug/L		04/22/25 13:34	05/05/25 15:35	1
N-Nitrosodi-n-propylamine	ND		9.77	0.322	ug/L		04/22/25 13:34	05/05/25 15:35	1

Client Sample ID: MW-1
Date Collected: 04/16/25 10:20
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-1
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	ND		9.77	0.186	ug/L		04/22/25 13:34	05/05/25 15:35	1
Pentachlorophenol	ND		9.77	2.74	ug/L		04/22/25 13:34	05/05/25 15:35	1
Phenanthrene	ND		9.77	0.723	ug/L		04/22/25 13:34	05/05/25 15:35	1
Phenol	ND		9.77	0.664	ug/L		04/22/25 13:34	05/05/25 15:35	1
Pyrene	ND		9.77	0.616	ug/L		04/22/25 13:34	05/05/25 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*89*		*10 - 150*	*04/22/25 13:34*	*05/05/25 15:35*	*1*
2-Fluorobiphenyl (Surr)	*90*		*15 - 150*	*04/22/25 13:34*	*05/05/25 15:35*	*1*
2-Fluorophenol (Surr)	*112*		*10 - 150*	*04/22/25 13:34*	*05/05/25 15:35*	*1*
Nitrobenzene-d5 (Surr)	*96*		*50 - 150*	*04/22/25 13:34*	*05/05/25 15:35*	*1*
Phenol-d5 (Surr)	*131*		*10 - 150*	*04/22/25 13:34*	*05/05/25 15:35*	*1*
Terphenyl-d14 (Surr)	*79*		*43 - 147*	*04/22/25 13:34*	*05/05/25 15:35*	*1*

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**3.92**		1.00	0.390	mg/L			04/23/25 01:22	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	0.340	ug/L		04/21/25 08:36	04/22/25 08:43	1
Arsenic	**25.8**		3.00	0.860	ug/L		04/21/25 08:36	04/22/25 08:43	1
Barium	**15.3**		5.00	0.890	ug/L		04/21/25 08:36	04/22/25 08:43	1
Beryllium	ND		0.500	0.200	ug/L		04/21/25 08:36	04/22/25 08:43	1
Cadmium	ND		0.500	0.0780	ug/L		04/21/25 08:36	04/22/25 08:43	1
Chromium	**2.85**	**J**	5.00	1.20	ug/L		04/21/25 08:36	04/22/25 08:43	1
Cobalt	**0.460**	**J**	0.500	0.220	ug/L		04/21/25 08:36	04/22/25 08:43	1
Copper	**2.07**	**J**	5.00	1.08	ug/L		04/21/25 08:36	04/22/25 08:43	1
Lead	**0.215**	**J**	2.50	0.210	ug/L		04/21/25 08:36	04/22/25 08:43	1
Manganese	**68.3**		5.00	2.20	ug/L		04/21/25 08:36	04/22/25 08:43	1
Nickel	**0.585**	**J**	5.00	0.420	ug/L		04/21/25 08:36	04/22/25 08:43	1
Selenium	**1.03**	**J B**	2.50	0.990	ug/L		04/21/25 08:36	04/22/25 08:43	1
Silver	ND		1.00	0.390	ug/L		04/21/25 08:36	04/22/25 08:43	1
Thallium	ND		1.00	0.260	ug/L		04/21/25 08:36	04/22/25 08:43	1
Vanadium	**8.32**	**J**	10.0	0.630	ug/L		04/21/25 08:36	04/22/25 08:43	1
Zinc	**22.7**		20.0	2.80	ug/L		04/21/25 08:36	04/22/25 08:43	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.0800	ug/L		04/21/25 11:38	04/21/25 16:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	**22.6**	**F1**	5.00	2.00	mg/L			04/24/25 10:17	100
Nitrate Nitrite as N (EPA 353.2)	**0.168**		0.100	0.0410	mg/L			04/22/25 10:52	1
Nitrite as N (EPA 353.2)	ND	H H3	0.100	0.0168	mg/L			04/18/25 15:12	1
Nitrate as N (SM Nitrate by calc)	**0.168**		0.100	0.0250	mg/L			04/21/25 16:19	1

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-3

Date Collected: 04/16/25 11:50
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-2

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 15:14	1
Benzene	**11.3**		1.00	0.500	ug/L			04/30/25 15:14	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 15:14	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 15:14	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 15:14	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 15:14	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 15:14	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 15:14	1
Chlorobenzene	**15.1**		1.00	0.420	ug/L			04/30/25 15:14	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 15:14	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 15:14	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 15:14	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 15:14	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 15:14	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 15:14	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 15:14	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 15:14	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 15:14	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 15:14	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 15:14	1
1,2-Dichlorobenzene	**0.586**	**J**	1.00	0.500	ug/L			04/30/25 15:14	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 15:14	1
1,4-Dichlorobenzene	**5.45**		1.00	0.640	ug/L			04/30/25 15:14	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 15:14	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 15:14	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 15:14	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 15:14	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 15:14	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 15:14	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 15:14	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 15:14	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 15:14	1
Ethylbenzene	**5.68**		1.00	0.500	ug/L			04/30/25 15:14	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 15:14	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 15:14	1
Hexane	ND		1.00	0.960	ug/L			04/30/25 15:14	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 15:14	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 15:14	1
Isopropylbenzene	**3.06**		1.00	0.530	ug/L			04/30/25 15:14	1
Isopropyl ether	**0.750**	**J**	1.00	0.740	ug/L			04/30/25 15:14	1
4-Isopropyltoluene	**1.80**		1.00	0.710	ug/L			04/30/25 15:14	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 15:14	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 15:14	1
Methyl tert-butyl ether	**0.261**	**J**	1.00	0.220	ug/L			04/30/25 15:14	1
m-Xylene & p-Xylene	**21.4**		5.00	3.00	ug/L			04/30/25 15:14	1
Naphthalene	**51.2**		5.00	3.00	ug/L			04/30/25 15:14	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 15:14	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 15:14	1
N-Propylbenzene	**2.49**		1.00	0.690	ug/L			04/30/25 15:14	1

Client Sample ID: MW-3
Date Collected: 04/16/25 11:50
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 15:14	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 15:14	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 15:14	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 15:14	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 15:14	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 15:14	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 15:14	1
Toluene	**2.22**		1.00	0.900	ug/L			04/30/25 15:14	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 15:14	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 15:14	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 15:14	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 15:14	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 15:14	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 15:14	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 15:14	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 15:14	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 15:14	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 15:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 15:14	1
1,2,4-Trimethylbenzene	**3.39**		1.00	0.820	ug/L			04/30/25 15:14	1
1,3,5-Trimethylbenzene	**1.75**		1.00	0.560	ug/L			04/30/25 15:14	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 15:14	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 15:14	1
Xylenes, Total	**23.0**		10.0	6.00	ug/L			04/30/25 15:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*56 - 136*		*04/30/25 15:14*	*1*
Dibromofluoromethane	*91*		*79 - 130*		*04/30/25 15:14*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*59 - 146*		*04/30/25 15:14*	*1*
Toluene-d8 (Surr)	*102*		*64 - 132*		*04/30/25 15:14*	*1*

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**30.5**		0.293	0.293	ug/L		04/23/25 16:43	04/28/25 19:01	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*25*		*10 - 140*	*04/23/25 16:43*	*04/28/25 19:01*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.62	0.404	ug/L		04/22/25 13:34	05/05/25 16:05	1
2,4,5-Trichlorophenol	ND		9.62	0.519	ug/L		04/22/25 13:34	05/05/25 16:05	1
2,4,6-Trichlorophenol	ND		9.62	1.05	ug/L		04/22/25 13:34	05/05/25 16:05	1
2,4-Dichlorophenol	ND		9.62	0.548	ug/L		04/22/25 13:34	05/05/25 16:05	1
2,4-Dimethylphenol	ND		9.62	0.231	ug/L		04/22/25 13:34	05/05/25 16:05	1
2,4-Dinitrophenol	ND		28.8	4.50	ug/L		04/22/25 13:34	05/05/25 16:05	1
2,4-Dinitrotoluene	ND		9.62	0.625	ug/L		04/22/25 13:34	05/05/25 16:05	1
2,6-Dinitrotoluene	ND		9.62	0.279	ug/L		04/22/25 13:34	05/05/25 16:05	1
2-Chloronaphthalene	ND	*+	9.62	0.365	ug/L		04/22/25 13:34	05/05/25 16:05	1
2-Chlorophenol	ND		9.62	0.808	ug/L		04/22/25 13:34	05/05/25 16:05	1
2-Methylnaphthalene	**5.28**	**J**	9.62	0.779	ug/L		04/22/25 13:34	05/05/25 16:05	1

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-3

Date Collected: 04/16/25 11:50
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-2

Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		9.62	0.731	ug/L		04/22/25 13:34	05/05/25 16:05	1
2-Nitroaniline	ND		9.62	1.32	ug/L		04/22/25 13:34	05/05/25 16:05	1
2-Nitrophenol	ND		9.62	1.13	ug/L		04/22/25 13:34	05/05/25 16:05	1
3 & 4 Methylphenol	ND		19.2	4.42	ug/L		04/22/25 13:34	05/05/25 16:05	1
3,3'-Dichlorobenzidine	ND		10.6	0.394	ug/L		04/22/25 13:34	05/05/25 16:05	1
3-Nitroaniline	ND		9.62	0.913	ug/L		04/22/25 13:34	05/05/25 16:05	1
4,6-Dinitro-2-methylphenol	ND		9.62	1.89	ug/L		04/22/25 13:34	05/05/25 16:05	1
4-Bromophenyl phenyl ether	ND		9.62	0.125	ug/L		04/22/25 13:34	05/05/25 16:05	1
4-Chloro-3-methylphenol	**12.5**		9.62	0.702	ug/L		04/22/25 13:34	05/05/25 16:05	1
4-Chloroaniline	ND		9.62	0.269	ug/L		04/22/25 13:34	05/05/25 16:05	1
4-Chlorophenyl phenyl ether	ND		9.62	0.231	ug/L		04/22/25 13:34	05/05/25 16:05	1
4-Nitroaniline	ND		9.62	3.37	ug/L		04/22/25 13:34	05/05/25 16:05	1
4-Nitrophenol	ND		9.62	2.63	ug/L		04/22/25 13:34	05/05/25 16:05	1
Acenaphthene	ND		9.62	0.606	ug/L		04/22/25 13:34	05/05/25 16:05	1
Acenaphthylene	ND		9.62	0.731	ug/L		04/22/25 13:34	05/05/25 16:05	1
Acetophenone	ND		9.62	3.08	ug/L		04/22/25 13:34	05/05/25 16:05	1
Anthracene	ND		9.62	0.875	ug/L		04/22/25 13:34	05/05/25 16:05	1
Atrazine	ND		9.62	1.09	ug/L		04/22/25 13:34	05/05/25 16:05	1
Benzaldehyde	**2.22**	**J *1**	9.62	0.644	ug/L		04/22/25 13:34	05/05/25 16:05	1
Benzo[a]anthracene	ND		9.62	0.962	ug/L		04/22/25 13:34	05/05/25 16:05	1
Benzo[a]pyrene	ND		9.62	1.06	ug/L		04/22/25 13:34	05/05/25 16:05	1
Benzo[b]fluoranthene	ND		9.62	1.15	ug/L		04/22/25 13:34	05/05/25 16:05	1
Benzo[g,h,i]perylene	ND		9.62	1.44	ug/L		04/22/25 13:34	05/05/25 16:05	1
Benzo[k]fluoranthene	ND		9.62	1.44	ug/L		04/22/25 13:34	05/05/25 16:05	1
bis (2-chloroisopropyl) ether	ND		9.62	0.894	ug/L		04/22/25 13:34	05/05/25 16:05	1
Bis(2-chloroethoxy)methane	ND		9.62	0.327	ug/L		04/22/25 13:34	05/05/25 16:05	1
Bis(2-chloroethyl)ether	ND		9.62	0.702	ug/L		04/22/25 13:34	05/05/25 16:05	1
Bis(2-ethylhexyl) phthalate	ND		9.62	3.85	ug/L		04/22/25 13:34	05/05/25 16:05	1
Butyl benzyl phthalate	ND		9.62	3.85	ug/L		04/22/25 13:34	05/05/25 16:05	1
Caprolactam	**19.4**		9.62	2.31	ug/L		04/22/25 13:34	05/05/25 16:05	1
Carbazole	ND		9.62	0.308	ug/L		04/22/25 13:34	05/05/25 16:05	1
Chrysene	ND		9.62	1.15	ug/L		04/22/25 13:34	05/05/25 16:05	1
Dibenz(a,h)anthracene	ND		9.62	1.25	ug/L		04/22/25 13:34	05/05/25 16:05	1
Dibenzofuran	ND		9.62	0.615	ug/L		04/22/25 13:34	05/05/25 16:05	1
Diethyl phthalate	**15.3**	***-**	9.62	3.85	ug/L		04/22/25 13:34	05/05/25 16:05	1
Dimethyl phthalate	ND	*-	9.62	3.85	ug/L		04/22/25 13:34	05/05/25 16:05	1
Di-n-butyl phthalate	**4.66**	**J *-**	9.62	3.85	ug/L		04/22/25 13:34	05/05/25 16:05	1
Di-n-octyl phthalate	ND		9.62	3.85	ug/L		04/22/25 13:34	05/05/25 16:05	1
Fluoranthene	ND		9.62	0.606	ug/L		04/22/25 13:34	05/05/25 16:05	1
Fluorene	ND		9.62	0.644	ug/L		04/22/25 13:34	05/05/25 16:05	1
Hexachlorobenzene	ND		9.62	0.240	ug/L		04/22/25 13:34	05/05/25 16:05	1
Hexachlorobutadiene	ND		9.62	0.529	ug/L		04/22/25 13:34	05/05/25 16:05	1
Hexachlorocyclopentadiene	ND		19.2	0.308	ug/L		04/22/25 13:34	05/05/25 16:05	1
Hexachloroethane	ND		9.62	0.510	ug/L		04/22/25 13:34	05/05/25 16:05	1
Indeno[1,2,3-cd]pyrene	ND		9.62	1.06	ug/L		04/22/25 13:34	05/05/25 16:05	1
Isophorone	ND		9.62	0.769	ug/L		04/22/25 13:34	05/05/25 16:05	1
Naphthalene	**37.9**		9.62	0.721	ug/L		04/22/25 13:34	05/05/25 16:05	1
Nitrobenzene	ND		9.62	0.577	ug/L		04/22/25 13:34	05/05/25 16:05	1
N-Nitrosodi-n-propylamine	ND		9.62	0.317	ug/L		04/22/25 13:34	05/05/25 16:05	1

Client Sample ID: MW-3
Date Collected: 04/16/25 11:50
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-2
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	**1.26**	**J**	9.62	0.183	ug/L		04/22/25 13:34	05/05/25 16:05	1
Pentachlorophenol	ND		9.62	2.69	ug/L		04/22/25 13:34	05/05/25 16:05	1
Phenanthrene	ND		9.62	0.712	ug/L		04/22/25 13:34	05/05/25 16:05	1
Phenol	**1.08**	**J**	9.62	0.654	ug/L		04/22/25 13:34	05/05/25 16:05	1
Pyrene	ND		9.62	0.606	ug/L		04/22/25 13:34	05/05/25 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*123*		*10 - 150*	*04/22/25 13:34*	*05/05/25 16:05*	*1*
2-Fluorobiphenyl (Surr)	*84*		*15 - 150*	*04/22/25 13:34*	*05/05/25 16:05*	*1*
2-Fluorophenol (Surr)	*161*	*S1+*	*10 - 150*	*04/22/25 13:34*	*05/05/25 16:05*	*1*
Nitrobenzene-d5 (Surr)	*96*		*50 - 150*	*04/22/25 13:34*	*05/05/25 16:05*	*1*
Phenol-d5 (Surr)	*255*	*S1+*	*10 - 150*	*04/22/25 13:34*	*05/05/25 16:05*	*1*
Terphenyl-d14 (Surr)	*85*		*43 - 147*	*04/22/25 13:34*	*05/05/25 16:05*	*1*

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**2.88**		1.00	0.390	mg/L			04/23/25 01:31	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	0.340	ug/L		04/21/25 08:36	04/22/25 08:29	1
Arsenic	**1.53**	**J**	3.00	0.860	ug/L		04/21/25 08:36	04/22/25 08:29	1
Barium	**79.6**		5.00	0.890	ug/L		04/21/25 08:36	04/22/25 08:29	1
Beryllium	ND		0.500	0.200	ug/L		04/21/25 08:36	04/22/25 08:29	1
Cadmium	**0.220**	**J**	0.500	0.0780	ug/L		04/21/25 08:36	04/22/25 08:29	1
Chromium	**3.85**	**J**	5.00	1.20	ug/L		04/21/25 08:36	04/22/25 08:29	1
Cobalt	**3.59**		0.500	0.220	ug/L		04/21/25 08:36	04/22/25 08:29	1
Copper	**2.23**	**J**	5.00	1.08	ug/L		04/21/25 08:36	04/22/25 08:29	1
Lead	**8.13**		2.50	0.210	ug/L		04/21/25 08:36	04/22/25 08:29	1
Manganese	**69.7**		5.00	2.20	ug/L		04/21/25 08:36	04/22/25 08:29	1
Nickel	**13.4**		5.00	0.420	ug/L		04/21/25 08:36	04/22/25 08:29	1
Selenium	ND		2.50	0.990	ug/L		04/21/25 08:36	04/22/25 08:29	1
Silver	ND		1.00	0.390	ug/L		04/21/25 08:36	04/22/25 08:29	1
Thallium	ND		1.00	0.260	ug/L		04/21/25 08:36	04/22/25 08:29	1
Vanadium	**2.31**	**J**	10.0	0.630	ug/L		04/21/25 08:36	04/22/25 08:29	1
Zinc	**25.7**		20.0	2.80	ug/L		04/21/25 08:36	04/22/25 08:29	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.0800	ug/L		04/21/25 11:38	04/21/25 16:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	**230**		25.0	10.0	mg/L			04/24/25 10:22	500
Nitrate Nitrite as N (EPA 353.2)	**0.0669**	**J**	0.100	0.0410	mg/L			04/22/25 10:54	1
Nitrite as N (EPA 353.2)	ND	H	0.100	0.0168	mg/L			04/18/25 15:13	1
Nitrate as N (SM Nitrate by calc)	**0.0669**	**J**	0.100	0.0250	mg/L			04/21/25 16:19	1

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-5

Date Collected: 04/16/25 13:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-3

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 15:38	1
Benzene	**5.04**		1.00	0.500	ug/L			04/30/25 15:38	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 15:38	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 15:38	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 15:38	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 15:38	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 15:38	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 15:38	1
Chlorobenzene	**6.31**		1.00	0.420	ug/L			04/30/25 15:38	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 15:38	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 15:38	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 15:38	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 15:38	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 15:38	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 15:38	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 15:38	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 15:38	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 15:38	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 15:38	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 15:38	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			04/30/25 15:38	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 15:38	1
1,4-Dichlorobenzene	**14.2**		1.00	0.640	ug/L			04/30/25 15:38	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 15:38	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 15:38	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 15:38	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 15:38	1
1,2-Dichloropropane	**1.30**		1.00	0.500	ug/L			04/30/25 15:38	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 15:38	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 15:38	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 15:38	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 15:38	1
Ethylbenzene	**1.01**		1.00	0.500	ug/L			04/30/25 15:38	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 15:38	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 15:38	1
Hexane	ND		1.00	0.960	ug/L			04/30/25 15:38	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 15:38	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 15:38	1
Isopropylbenzene	**1.22**		1.00	0.530	ug/L			04/30/25 15:38	1
Isopropyl ether	ND		1.00	0.740	ug/L			04/30/25 15:38	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			04/30/25 15:38	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 15:38	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 15:38	1
Methyl tert-butyl ether	**0.322**	**J**	1.00	0.220	ug/L			04/30/25 15:38	1
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			04/30/25 15:38	1
Naphthalene	**3.91**	**J**	5.00	3.00	ug/L			04/30/25 15:38	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 15:38	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 15:38	1
N-Propylbenzene	ND		1.00	0.690	ug/L			04/30/25 15:38	1

Client Sample ID: MW-5
Date Collected: 04/16/25 13:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 15:38	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 15:38	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 15:38	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 15:38	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 15:38	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 15:38	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 15:38	1
Toluene	ND		1.00	0.900	ug/L			04/30/25 15:38	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 15:38	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 15:38	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 15:38	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 15:38	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 15:38	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 15:38	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 15:38	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 15:38	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 15:38	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 15:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 15:38	1
1,2,4-Trimethylbenzene	**1.47**		1.00	0.820	ug/L			04/30/25 15:38	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			04/30/25 15:38	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 15:38	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 15:38	1
Xylenes, Total	ND		10.0	6.00	ug/L			04/30/25 15:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*56 - 136*		*04/30/25 15:38*	*1*
Dibromofluoromethane	*93*		*79 - 130*		*04/30/25 15:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*90*		*59 - 146*		*04/30/25 15:38*	*1*
Toluene-d8 (Surr)	*100*		*64 - 132*		*04/30/25 15:38*	*1*

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.369	0.369	ug/L		04/23/25 16:43	04/28/25 19:23	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*25*		*10 - 140*	*04/23/25 16:43*	*04/28/25 19:23*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.71	0.408	ug/L		04/22/25 13:34	05/05/25 16:36	1
2,4,5-Trichlorophenol	ND		9.71	0.524	ug/L		04/22/25 13:34	05/05/25 16:36	1
2,4,6-Trichlorophenol	ND		9.71	1.06	ug/L		04/22/25 13:34	05/05/25 16:36	1
2,4-Dichlorophenol	ND		9.71	0.553	ug/L		04/22/25 13:34	05/05/25 16:36	1
2,4-Dimethylphenol	ND		9.71	0.233	ug/L		04/22/25 13:34	05/05/25 16:36	1
2,4-Dinitrophenol	ND		29.1	4.54	ug/L		04/22/25 13:34	05/05/25 16:36	1
2,4-Dinitrotoluene	ND		9.71	0.631	ug/L		04/22/25 13:34	05/05/25 16:36	1
2,6-Dinitrotoluene	ND		9.71	0.282	ug/L		04/22/25 13:34	05/05/25 16:36	1
2-Chloronaphthalene	ND	*+	9.71	0.369	ug/L		04/22/25 13:34	05/05/25 16:36	1
2-Chlorophenol	ND		9.71	0.816	ug/L		04/22/25 13:34	05/05/25 16:36	1
2-Methylnaphthalene	ND		9.71	0.786	ug/L		04/22/25 13:34	05/05/25 16:36	1

Client Sample ID: MW-5
Date Collected: 04/16/25 13:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-3
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylphenol	ND		9.71	0.738	ug/L		04/22/25 13:34	05/05/25 16:36	1
2-Nitroaniline	ND		9.71	1.33	ug/L		04/22/25 13:34	05/05/25 16:36	1
2-Nitrophenol	ND		9.71	1.14	ug/L		04/22/25 13:34	05/05/25 16:36	1
3 & 4 Methylphenol	ND		19.4	4.47	ug/L		04/22/25 13:34	05/05/25 16:36	1
3,3'-Dichlorobenzidine	ND		10.7	0.398	ug/L		04/22/25 13:34	05/05/25 16:36	1
3-Nitroaniline	ND		9.71	0.922	ug/L		04/22/25 13:34	05/05/25 16:36	1
4,6-Dinitro-2-methylphenol	ND		9.71	1.91	ug/L		04/22/25 13:34	05/05/25 16:36	1
4-Bromophenyl phenyl ether	ND		9.71	0.126	ug/L		04/22/25 13:34	05/05/25 16:36	1
4-Chloro-3-methylphenol	ND		9.71	0.709	ug/L		04/22/25 13:34	05/05/25 16:36	1
4-Chloroaniline	ND		9.71	0.272	ug/L		04/22/25 13:34	05/05/25 16:36	1
4-Chlorophenyl phenyl ether	ND		9.71	0.233	ug/L		04/22/25 13:34	05/05/25 16:36	1
4-Nitroaniline	ND		9.71	3.40	ug/L		04/22/25 13:34	05/05/25 16:36	1
4-Nitrophenol	ND		9.71	2.66	ug/L		04/22/25 13:34	05/05/25 16:36	1
Acenaphthene	ND		9.71	0.612	ug/L		04/22/25 13:34	05/05/25 16:36	1
Acenaphthylene	ND		9.71	0.738	ug/L		04/22/25 13:34	05/05/25 16:36	1
Acetophenone	ND		9.71	3.11	ug/L		04/22/25 13:34	05/05/25 16:36	1
Anthracene	ND		9.71	0.883	ug/L		04/22/25 13:34	05/05/25 16:36	1
Atrazine	ND		9.71	1.10	ug/L		04/22/25 13:34	05/05/25 16:36	1
Benzaldehyde	ND	*1	9.71	0.650	ug/L		04/22/25 13:34	05/05/25 16:36	1
Benzo[a]anthracene	ND		9.71	0.971	ug/L		04/22/25 13:34	05/05/25 16:36	1
Benzo[a]pyrene	ND		9.71	1.07	ug/L		04/22/25 13:34	05/05/25 16:36	1
Benzo[b]fluoranthene	ND		9.71	1.17	ug/L		04/22/25 13:34	05/05/25 16:36	1
Benzo[g,h,i]perylene	ND		9.71	1.46	ug/L		04/22/25 13:34	05/05/25 16:36	1
Benzo[k]fluoranthene	ND		9.71	1.46	ug/L		04/22/25 13:34	05/05/25 16:36	1
bis (2-chloroisopropyl) ether	ND		9.71	0.903	ug/L		04/22/25 13:34	05/05/25 16:36	1
Bis(2-chloroethoxy)methane	ND		9.71	0.330	ug/L		04/22/25 13:34	05/05/25 16:36	1
Bis(2-chloroethyl)ether	ND		9.71	0.709	ug/L		04/22/25 13:34	05/05/25 16:36	1
Bis(2-ethylhexyl) phthalate	ND		9.71	3.88	ug/L		04/22/25 13:34	05/05/25 16:36	1
Butyl benzyl phthalate	ND		9.71	3.88	ug/L		04/22/25 13:34	05/05/25 16:36	1
Caprolactam	**9.07**	**J**	9.71	2.33	ug/L		04/22/25 13:34	05/05/25 16:36	1
Carbazole	ND		9.71	0.311	ug/L		04/22/25 13:34	05/05/25 16:36	1
Chrysene	ND		9.71	1.17	ug/L		04/22/25 13:34	05/05/25 16:36	1
Dibenz(a,h)anthracene	ND		9.71	1.26	ug/L		04/22/25 13:34	05/05/25 16:36	1
Dibenzofuran	ND		9.71	0.621	ug/L		04/22/25 13:34	05/05/25 16:36	1
Diethyl phthalate	ND	*-	9.71	3.88	ug/L		04/22/25 13:34	05/05/25 16:36	1
Dimethyl phthalate	ND	*-	9.71	3.88	ug/L		04/22/25 13:34	05/05/25 16:36	1
Di-n-butyl phthalate	ND	*-	9.71	3.88	ug/L		04/22/25 13:34	05/05/25 16:36	1
Di-n-octyl phthalate	ND		9.71	3.88	ug/L		04/22/25 13:34	05/05/25 16:36	1
Fluoranthene	ND		9.71	0.612	ug/L		04/22/25 13:34	05/05/25 16:36	1
Fluorene	ND		9.71	0.650	ug/L		04/22/25 13:34	05/05/25 16:36	1
Hexachlorobenzene	ND		9.71	0.243	ug/L		04/22/25 13:34	05/05/25 16:36	1
Hexachlorobutadiene	ND		9.71	0.534	ug/L		04/22/25 13:34	05/05/25 16:36	1
Hexachlorocyclopentadiene	ND		19.4	0.311	ug/L		04/22/25 13:34	05/05/25 16:36	1
Hexachloroethane	ND		9.71	0.515	ug/L		04/22/25 13:34	05/05/25 16:36	1
Indeno[1,2,3-cd]pyrene	ND		9.71	1.07	ug/L		04/22/25 13:34	05/05/25 16:36	1
Isophorone	ND		9.71	0.777	ug/L		04/22/25 13:34	05/05/25 16:36	1
Naphthalene	ND		9.71	0.728	ug/L		04/22/25 13:34	05/05/25 16:36	1
Nitrobenzene	ND		9.71	0.583	ug/L		04/22/25 13:34	05/05/25 16:36	1
N-Nitrosodi-n-propylamine	ND		9.71	0.320	ug/L		04/22/25 13:34	05/05/25 16:36	1

Client Sample ID: MW-5

Date Collected: 04/16/25 13:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-3

Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiphenylamine	ND		9.71	0.184	ug/L		04/22/25 13:34	05/05/25 16:36	1
Pentachlorophenol	ND		9.71	2.72	ug/L		04/22/25 13:34	05/05/25 16:36	1
Phenanthrene	ND		9.71	0.718	ug/L		04/22/25 13:34	05/05/25 16:36	1
Phenol	ND		9.71	0.660	ug/L		04/22/25 13:34	05/05/25 16:36	1
Pyrene	ND		9.71	0.612	ug/L		04/22/25 13:34	05/05/25 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*88*		*10 - 150*	*04/22/25 13:34*	*05/05/25 16:36*	*1*
2-Fluorobiphenyl (Surr)	*87*		*15 - 150*	*04/22/25 13:34*	*05/05/25 16:36*	*1*
2-Fluorophenol (Surr)	*105*		*10 - 150*	*04/22/25 13:34*	*05/05/25 16:36*	*1*
Nitrobenzene-d5 (Surr)	*99*		*50 - 150*	*04/22/25 13:34*	*05/05/25 16:36*	*1*
Phenol-d5 (Surr)	*133*		*10 - 150*	*04/22/25 13:34*	*05/05/25 16:36*	*1*
Terphenyl-d14 (Surr)	*85*		*43 - 147*	*04/22/25 13:34*	*05/05/25 16:36*	*1*

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**4.10**		1.00	0.390	mg/L			04/23/25 01:39	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	0.340	ug/L		04/21/25 08:36	04/22/25 08:31	1
Arsenic	**7.03**		3.00	0.860	ug/L		04/21/25 08:36	04/22/25 08:31	1
Barium	**206**		5.00	0.890	ug/L		04/21/25 08:36	04/22/25 08:31	1
Beryllium	**1.16**		0.500	0.200	ug/L		04/21/25 08:36	04/22/25 08:31	1
Cadmium	**0.355**	**J**	0.500	0.0780	ug/L		04/21/25 08:36	04/22/25 08:31	1
Chromium	**10.6**		5.00	1.20	ug/L		04/21/25 08:36	04/22/25 08:31	1
Cobalt	**2.87**		0.500	0.220	ug/L		04/21/25 08:36	04/22/25 08:31	1
Copper	**7.20**		5.00	1.08	ug/L		04/21/25 08:36	04/22/25 08:31	1
Lead	**20.7**		2.50	0.210	ug/L		04/21/25 08:36	04/22/25 08:31	1
Manganese	**440**		5.00	2.20	ug/L		04/21/25 08:36	04/22/25 08:31	1
Nickel	**27.5**		5.00	0.420	ug/L		04/21/25 08:36	04/22/25 08:31	1
Selenium	**1.57**	**J B**	2.50	0.990	ug/L		04/21/25 08:36	04/22/25 08:31	1
Silver	ND		1.00	0.390	ug/L		04/21/25 08:36	04/22/25 08:31	1
Thallium	ND		1.00	0.260	ug/L		04/21/25 08:36	04/22/25 08:31	1
Vanadium	**53.0**		10.0	0.630	ug/L		04/21/25 08:36	04/22/25 08:31	1
Zinc	**1120**		20.0	2.80	ug/L		04/21/25 08:36	04/22/25 08:31	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.0800	ug/L		04/21/25 11:38	04/21/25 16:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	**0.0303**	**J**	0.0500	0.0200	mg/L			04/24/25 12:36	1
Nitrate Nitrite as N (EPA 353.2)	ND		0.100	0.0410	mg/L			04/22/25 10:54	1
Nitrite as N (EPA 353.2)	ND	H	0.100	0.0168	mg/L			04/18/25 15:14	1
Nitrate as N (SM Nitrate by calc)	ND		0.100	0.0250	mg/L			04/21/25 16:19	1

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-6

Date Collected: 04/16/25 14:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-4

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**10.1**	**J**	25.0	10.0	ug/L			04/30/25 16:03	1
Benzene	**4.85**		1.00	0.500	ug/L			04/30/25 16:03	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 16:03	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 16:03	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 16:03	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 16:03	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 16:03	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 16:03	1
Chlorobenzene	**3.00**		1.00	0.420	ug/L			04/30/25 16:03	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 16:03	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 16:03	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 16:03	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 16:03	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 16:03	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 16:03	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 16:03	1
cis-1,2-Dichloroethene	**15.8**		1.00	0.200	ug/L			04/30/25 16:03	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 16:03	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 16:03	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 16:03	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			04/30/25 16:03	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 16:03	1
1,4-Dichlorobenzene	**5.98**		1.00	0.640	ug/L			04/30/25 16:03	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 16:03	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 16:03	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 16:03	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 16:03	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:03	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:03	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:03	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 16:03	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 16:03	1
Ethylbenzene	**11.6**		1.00	0.500	ug/L			04/30/25 16:03	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 16:03	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 16:03	1
Hexane	ND		1.00	0.960	ug/L			04/30/25 16:03	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 16:03	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 16:03	1
Isopropylbenzene	**0.816**	**J**	1.00	0.530	ug/L			04/30/25 16:03	1
Isopropyl ether	**1.43**		1.00	0.740	ug/L			04/30/25 16:03	1
4-Isopropyltoluene	**0.730**	**J**	1.00	0.710	ug/L			04/30/25 16:03	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 16:03	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 16:03	1
Methyl tert-butyl ether	**0.349**	**J**	1.00	0.220	ug/L			04/30/25 16:03	1
m-Xylene & p-Xylene	**6.79**		5.00	3.00	ug/L			04/30/25 16:03	1
Naphthalene	ND		5.00	3.00	ug/L			04/30/25 16:03	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 16:03	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 16:03	1
N-Propylbenzene	ND		1.00	0.690	ug/L			04/30/25 16:03	1

Client Sample ID: MW-6
Date Collected: 04/16/25 14:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	**5.85**		5.00	3.00	ug/L			04/30/25 16:03	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 16:03	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 16:03	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 16:03	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 16:03	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 16:03	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 16:03	1
Toluene	**1.25**		1.00	0.900	ug/L			04/30/25 16:03	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 16:03	1
trans-1,2-Dichloroethene	**1.88**		1.00	0.500	ug/L			04/30/25 16:03	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 16:03	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 16:03	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 16:03	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 16:03	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 16:03	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 16:03	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 16:03	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 16:03	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 16:03	1
1,2,4-Trimethylbenzene	**1.15**		1.00	0.820	ug/L			04/30/25 16:03	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			04/30/25 16:03	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 16:03	1
Vinyl chloride	**0.946**	**J**	1.00	0.500	ug/L			04/30/25 16:03	1
Xylenes, Total	**12.6**		10.0	6.00	ug/L			04/30/25 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*		*56 - 136*		*04/30/25 16:03*	*1*
Dibromofluoromethane	*93*		*79 - 130*		*04/30/25 16:03*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*59 - 146*		*04/30/25 16:03*	*1*
Toluene-d8 (Surr)	*101*		*64 - 132*		*04/30/25 16:03*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	**0.464**	**J**	9.84	0.413	ug/L		04/22/25 13:34	05/05/25 17:07	1
2,4,5-Trichlorophenol	ND		9.84	0.531	ug/L		04/22/25 13:34	05/05/25 17:07	1
2,4,6-Trichlorophenol	ND		9.84	1.07	ug/L		04/22/25 13:34	05/05/25 17:07	1
2,4-Dichlorophenol	ND		9.84	0.561	ug/L		04/22/25 13:34	05/05/25 17:07	1
2,4-Dimethylphenol	**1.11**	**J**	9.84	0.236	ug/L		04/22/25 13:34	05/05/25 17:07	1
2,4-Dinitrophenol	ND		29.5	4.60	ug/L		04/22/25 13:34	05/05/25 17:07	1
2,4-Dinitrotoluene	ND		9.84	0.639	ug/L		04/22/25 13:34	05/05/25 17:07	1
2,6-Dinitrotoluene	ND		9.84	0.285	ug/L		04/22/25 13:34	05/05/25 17:07	1
2-Chloronaphthalene	ND	*+	9.84	0.374	ug/L		04/22/25 13:34	05/05/25 17:07	1
2-Chlorophenol	ND		9.84	0.826	ug/L		04/22/25 13:34	05/05/25 17:07	1
2-Methylnaphthalene	ND		9.84	0.797	ug/L		04/22/25 13:34	05/05/25 17:07	1
2-Methylphenol	ND		9.84	0.748	ug/L		04/22/25 13:34	05/05/25 17:07	1
2-Nitroaniline	ND		9.84	1.35	ug/L		04/22/25 13:34	05/05/25 17:07	1
2-Nitrophenol	ND		9.84	1.15	ug/L		04/22/25 13:34	05/05/25 17:07	1
3 & 4 Methylphenol	ND		19.7	4.52	ug/L		04/22/25 13:34	05/05/25 17:07	1
3,3'-Dichlorobenzidine	ND		10.8	0.403	ug/L		04/22/25 13:34	05/05/25 17:07	1
3-Nitroaniline	ND		9.84	0.934	ug/L		04/22/25 13:34	05/05/25 17:07	1

Client Sample ID: MW-6
Date Collected: 04/16/25 14:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-4
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,6-Dinitro-2-methylphenol	ND		9.84	1.94	ug/L		04/22/25 13:34	05/05/25 17:07	1
4-Bromophenyl phenyl ether	ND		9.84	0.128	ug/L		04/22/25 13:34	05/05/25 17:07	1
4-Chloro-3-methylphenol	**1.51**	**J**	9.84	0.718	ug/L		04/22/25 13:34	05/05/25 17:07	1
4-Chloroaniline	ND		9.84	0.275	ug/L		04/22/25 13:34	05/05/25 17:07	1
4-Chlorophenyl phenyl ether	ND		9.84	0.236	ug/L		04/22/25 13:34	05/05/25 17:07	1
4-Nitroaniline	ND		9.84	3.44	ug/L		04/22/25 13:34	05/05/25 17:07	1
4-Nitrophenol	ND		9.84	2.70	ug/L		04/22/25 13:34	05/05/25 17:07	1
Acenaphthene	ND		9.84	0.620	ug/L		04/22/25 13:34	05/05/25 17:07	1
Acenaphthylene	ND		9.84	0.748	ug/L		04/22/25 13:34	05/05/25 17:07	1
Acetophenone	ND		9.84	3.15	ug/L		04/22/25 13:34	05/05/25 17:07	1
Anthracene	ND		9.84	0.895	ug/L		04/22/25 13:34	05/05/25 17:07	1
Atrazine	ND		9.84	1.11	ug/L		04/22/25 13:34	05/05/25 17:07	1
Benzaldehyde	ND	*1	9.84	0.659	ug/L		04/22/25 13:34	05/05/25 17:07	1
Benzo[a]anthracene	ND		9.84	0.984	ug/L		04/22/25 13:34	05/05/25 17:07	1
Benzo[a]pyrene	ND		9.84	1.08	ug/L		04/22/25 13:34	05/05/25 17:07	1
Benzo[b]fluoranthene	ND		9.84	1.18	ug/L		04/22/25 13:34	05/05/25 17:07	1
Benzo[g,h,i]perylene	ND		9.84	1.48	ug/L		04/22/25 13:34	05/05/25 17:07	1
Benzo[k]fluoranthene	ND		9.84	1.48	ug/L		04/22/25 13:34	05/05/25 17:07	1
bis (2-chloroisopropyl) ether	ND		9.84	0.915	ug/L		04/22/25 13:34	05/05/25 17:07	1
Bis(2-chloroethoxy)methane	ND		9.84	0.334	ug/L		04/22/25 13:34	05/05/25 17:07	1
Bis(2-chloroethyl)ether	ND		9.84	0.718	ug/L		04/22/25 13:34	05/05/25 17:07	1
Bis(2-ethylhexyl) phthalate	ND		9.84	3.93	ug/L		04/22/25 13:34	05/05/25 17:07	1
Butyl benzyl phthalate	ND		9.84	3.93	ug/L		04/22/25 13:34	05/05/25 17:07	1
Caprolactam	**24.3**		9.84	2.36	ug/L		04/22/25 13:34	05/05/25 17:07	1
Carbazole	ND		9.84	0.315	ug/L		04/22/25 13:34	05/05/25 17:07	1
Chrysene	ND		9.84	1.18	ug/L		04/22/25 13:34	05/05/25 17:07	1
Dibenz(a,h)anthracene	ND		9.84	1.28	ug/L		04/22/25 13:34	05/05/25 17:07	1
Dibenzofuran	ND		9.84	0.630	ug/L		04/22/25 13:34	05/05/25 17:07	1
Diethyl phthalate	ND	*-	9.84	3.93	ug/L		04/22/25 13:34	05/05/25 17:07	1
Dimethyl phthalate	ND	*-	9.84	3.93	ug/L		04/22/25 13:34	05/05/25 17:07	1
Di-n-butyl phthalate	ND	*-	9.84	3.93	ug/L		04/22/25 13:34	05/05/25 17:07	1
Di-n-octyl phthalate	ND		9.84	3.93	ug/L		04/22/25 13:34	05/05/25 17:07	1
Fluoranthene	ND		9.84	0.620	ug/L		04/22/25 13:34	05/05/25 17:07	1
Fluorene	ND		9.84	0.659	ug/L		04/22/25 13:34	05/05/25 17:07	1
Hexachlorobenzene	ND		9.84	0.246	ug/L		04/22/25 13:34	05/05/25 17:07	1
Hexachlorobutadiene	ND		9.84	0.541	ug/L		04/22/25 13:34	05/05/25 17:07	1
Hexachlorocyclopentadiene	ND		19.7	0.315	ug/L		04/22/25 13:34	05/05/25 17:07	1
Hexachloroethane	ND		9.84	0.521	ug/L		04/22/25 13:34	05/05/25 17:07	1
Indeno[1,2,3-cd]pyrene	ND		9.84	1.08	ug/L		04/22/25 13:34	05/05/25 17:07	1
Isophorone	ND		9.84	0.787	ug/L		04/22/25 13:34	05/05/25 17:07	1
Naphthalene	**0.878**	**J**	9.84	0.738	ug/L		04/22/25 13:34	05/05/25 17:07	1
Nitrobenzene	ND		9.84	0.590	ug/L		04/22/25 13:34	05/05/25 17:07	1
N-Nitrosodi-n-propylamine	ND		9.84	0.325	ug/L		04/22/25 13:34	05/05/25 17:07	1
N-Nitrosodiphenylamine	**1.88**	**J**	9.84	0.187	ug/L		04/22/25 13:34	05/05/25 17:07	1
Pentachlorophenol	ND		9.84	2.75	ug/L		04/22/25 13:34	05/05/25 17:07	1
Phenanthrene	ND		9.84	0.728	ug/L		04/22/25 13:34	05/05/25 17:07	1
Phenol	**0.715**	**J**	9.84	0.669	ug/L		04/22/25 13:34	05/05/25 17:07	1
Pyrene	ND		9.84	0.620	ug/L		04/22/25 13:34	05/05/25 17:07	1

Client Sample ID: MW-6

Date Collected: 04/16/25 14:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-4
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*92*		*10 - 150*	*04/22/25 13:34*	*05/05/25 17:07*	*1*
2-Fluorobiphenyl (Surr)	*90*		*15 - 150*	*04/22/25 13:34*	*05/05/25 17:07*	*1*
2-Fluorophenol (Surr)	*106*		*10 - 150*	*04/22/25 13:34*	*05/05/25 17:07*	*1*
Nitrobenzene-d5 (Surr)	*90*		*50 - 150*	*04/22/25 13:34*	*05/05/25 17:07*	*1*
Phenol-d5 (Surr)	*132*		*10 - 150*	*04/22/25 13:34*	*05/05/25 17:07*	*1*
Terphenyl-d14 (Surr)	*86*		*43 - 147*	*04/22/25 13:34*	*05/05/25 17:07*	*1*

Client Sample ID: MW-7

Date Collected: 04/16/25 15:25
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-5
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 16:27	1
Benzene	**5.39**		1.00	0.500	ug/L			04/30/25 16:27	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 16:27	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 16:27	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 16:27	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 16:27	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 16:27	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 16:27	1
Chlorobenzene	**9.71**		1.00	0.420	ug/L			04/30/25 16:27	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 16:27	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 16:27	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 16:27	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 16:27	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 16:27	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 16:27	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 16:27	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 16:27	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 16:27	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 16:27	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 16:27	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			04/30/25 16:27	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 16:27	1
1,4-Dichlorobenzene	**2.60**		1.00	0.640	ug/L			04/30/25 16:27	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 16:27	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 16:27	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 16:27	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 16:27	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:27	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:27	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:27	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 16:27	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 16:27	1
Ethylbenzene	**3.91**		1.00	0.500	ug/L			04/30/25 16:27	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 16:27	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 16:27	1
Hexane	ND		1.00	0.960	ug/L			04/30/25 16:27	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 16:27	1

Client Sample ID: MW-7
Date Collected: 04/16/25 15:25
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-5
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 16:27	1
Isopropylbenzene	**2.20**		1.00	0.530	ug/L			04/30/25 16:27	1
Isopropyl ether	ND		1.00	0.740	ug/L			04/30/25 16:27	1
4-Isopropyltoluene	**1.04**		1.00	0.710	ug/L			04/30/25 16:27	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 16:27	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 16:27	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			04/30/25 16:27	1
m-Xylene & p-Xylene	**5.82**		5.00	3.00	ug/L			04/30/25 16:27	1
Naphthalene	**13.5**		5.00	3.00	ug/L			04/30/25 16:27	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 16:27	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 16:27	1
N-Propylbenzene	**2.04**		1.00	0.690	ug/L			04/30/25 16:27	1
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 16:27	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 16:27	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 16:27	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 16:27	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 16:27	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 16:27	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 16:27	1
Toluene	**1.08**		1.00	0.900	ug/L			04/30/25 16:27	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 16:27	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 16:27	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 16:27	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 16:27	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 16:27	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 16:27	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 16:27	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 16:27	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 16:27	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 16:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 16:27	1
1,2,4-Trimethylbenzene	**0.945**	**J**	1.00	0.820	ug/L			04/30/25 16:27	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			04/30/25 16:27	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 16:27	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 16:27	1
Xylenes, Total	**7.30**	**J**	10.0	6.00	ug/L			04/30/25 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*56 - 136*		*04/30/25 16:27*	*1*
Dibromofluoromethane	*92*		*79 - 130*		*04/30/25 16:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*59 - 146*		*04/30/25 16:27*	*1*
Toluene-d8 (Surr)	*102*		*64 - 132*		*04/30/25 16:27*	*1*

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.583**		0.291	0.291	ug/L		04/23/25 16:43	04/28/25 19:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*19*		*10 - 140*	*04/23/25 16:43*	*04/28/25 19:44*	*1*

Client Sample ID: MW-7
Date Collected: 04/16/25 15:25
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-5
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.80	0.412	ug/L		04/22/25 13:34	05/05/25 17:38	1
2,4,5-Trichlorophenol	ND		9.80	0.529	ug/L		04/22/25 13:34	05/05/25 17:38	1
2,4,6-Trichlorophenol	ND		9.80	1.07	ug/L		04/22/25 13:34	05/05/25 17:38	1
2,4-Dichlorophenol	ND		9.80	0.559	ug/L		04/22/25 13:34	05/05/25 17:38	1
2,4-Dimethylphenol	ND		9.80	0.235	ug/L		04/22/25 13:34	05/05/25 17:38	1
2,4-Dinitrophenol	ND		29.4	4.59	ug/L		04/22/25 13:34	05/05/25 17:38	1
2,4-Dinitrotoluene	ND		9.80	0.637	ug/L		04/22/25 13:34	05/05/25 17:38	1
2,6-Dinitrotoluene	ND		9.80	0.284	ug/L		04/22/25 13:34	05/05/25 17:38	1
2-Chloronaphthalene	ND	*+	9.80	0.373	ug/L		04/22/25 13:34	05/05/25 17:38	1
2-Chlorophenol	ND		9.80	0.824	ug/L		04/22/25 13:34	05/05/25 17:38	1
2-Methylnaphthalene	**0.839**	**J**	9.80	0.794	ug/L		04/22/25 13:34	05/05/25 17:38	1
2-Methylphenol	ND		9.80	0.745	ug/L		04/22/25 13:34	05/05/25 17:38	1
2-Nitroaniline	ND		9.80	1.34	ug/L		04/22/25 13:34	05/05/25 17:38	1
2-Nitrophenol	ND		9.80	1.15	ug/L		04/22/25 13:34	05/05/25 17:38	1
3 & 4 Methylphenol	ND		19.6	4.51	ug/L		04/22/25 13:34	05/05/25 17:38	1
3,3'-Dichlorobenzidine	ND		10.8	0.402	ug/L		04/22/25 13:34	05/05/25 17:38	1
3-Nitroaniline	ND		9.80	0.931	ug/L		04/22/25 13:34	05/05/25 17:38	1
4,6-Dinitro-2-methylphenol	ND		9.80	1.93	ug/L		04/22/25 13:34	05/05/25 17:38	1
4-Bromophenyl phenyl ether	ND		9.80	0.127	ug/L		04/22/25 13:34	05/05/25 17:38	1
4-Chloro-3-methylphenol	**3.23**	**J**	9.80	0.716	ug/L		04/22/25 13:34	05/05/25 17:38	1
4-Chloroaniline	ND		9.80	0.275	ug/L		04/22/25 13:34	05/05/25 17:38	1
4-Chlorophenyl phenyl ether	ND		9.80	0.235	ug/L		04/22/25 13:34	05/05/25 17:38	1
4-Nitroaniline	ND		9.80	3.43	ug/L		04/22/25 13:34	05/05/25 17:38	1
4-Nitrophenol	ND		9.80	2.69	ug/L		04/22/25 13:34	05/05/25 17:38	1
Acenaphthene	ND		9.80	0.618	ug/L		04/22/25 13:34	05/05/25 17:38	1
Acenaphthylene	ND		9.80	0.745	ug/L		04/22/25 13:34	05/05/25 17:38	1
Acetophenone	ND		9.80	3.14	ug/L		04/22/25 13:34	05/05/25 17:38	1
Anthracene	ND		9.80	0.892	ug/L		04/22/25 13:34	05/05/25 17:38	1
Atrazine	ND		9.80	1.11	ug/L		04/22/25 13:34	05/05/25 17:38	1
Benzaldehyde	ND	*1	9.80	0.657	ug/L		04/22/25 13:34	05/05/25 17:38	1
Benzo[a]anthracene	ND		9.80	0.980	ug/L		04/22/25 13:34	05/05/25 17:38	1
Benzo[a]pyrene	ND		9.80	1.08	ug/L		04/22/25 13:34	05/05/25 17:38	1
Benzo[b]fluoranthene	ND		9.80	1.18	ug/L		04/22/25 13:34	05/05/25 17:38	1
Benzo[g,h,i]perylene	ND		9.80	1.47	ug/L		04/22/25 13:34	05/05/25 17:38	1
Benzo[k]fluoranthene	ND		9.80	1.47	ug/L		04/22/25 13:34	05/05/25 17:38	1
bis (2-chloroisopropyl) ether	ND		9.80	0.912	ug/L		04/22/25 13:34	05/05/25 17:38	1
Bis(2-chloroethoxy)methane	ND		9.80	0.333	ug/L		04/22/25 13:34	05/05/25 17:38	1
Bis(2-chloroethyl)ether	ND		9.80	0.716	ug/L		04/22/25 13:34	05/05/25 17:38	1
Bis(2-ethylhexyl) phthalate	ND		9.80	3.92	ug/L		04/22/25 13:34	05/05/25 17:38	1
Butyl benzyl phthalate	ND		9.80	3.92	ug/L		04/22/25 13:34	05/05/25 17:38	1
Caprolactam	**8.21**	**J**	9.80	2.35	ug/L		04/22/25 13:34	05/05/25 17:38	1
Carbazole	ND		9.80	0.314	ug/L		04/22/25 13:34	05/05/25 17:38	1
Chrysene	ND		9.80	1.18	ug/L		04/22/25 13:34	05/05/25 17:38	1
Dibenz(a,h)anthracene	ND		9.80	1.27	ug/L		04/22/25 13:34	05/05/25 17:38	1
Dibenzofuran	ND		9.80	0.627	ug/L		04/22/25 13:34	05/05/25 17:38	1
Diethyl phthalate	ND	*-	9.80	3.92	ug/L		04/22/25 13:34	05/05/25 17:38	1
Dimethyl phthalate	ND	*-	9.80	3.92	ug/L		04/22/25 13:34	05/05/25 17:38	1
Di-n-butyl phthalate	ND	*-	9.80	3.92	ug/L		04/22/25 13:34	05/05/25 17:38	1
Di-n-octyl phthalate	ND		9.80	3.92	ug/L		04/22/25 13:34	05/05/25 17:38	1

Client Sample ID: MW-7
Date Collected: 04/16/25 15:25
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-5
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		9.80	0.618	ug/L		04/22/25 13:34	05/05/25 17:38	1
Fluorene	ND		9.80	0.657	ug/L		04/22/25 13:34	05/05/25 17:38	1
Hexachlorobenzene	ND		9.80	0.245	ug/L		04/22/25 13:34	05/05/25 17:38	1
Hexachlorobutadiene	ND		9.80	0.539	ug/L		04/22/25 13:34	05/05/25 17:38	1
Hexachlorocyclopentadiene	ND		19.6	0.314	ug/L		04/22/25 13:34	05/05/25 17:38	1
Hexachloroethane	ND		9.80	0.520	ug/L		04/22/25 13:34	05/05/25 17:38	1
Indeno[1,2,3-cd]pyrene	ND		9.80	1.08	ug/L		04/22/25 13:34	05/05/25 17:38	1
Isophorone	ND		9.80	0.784	ug/L		04/22/25 13:34	05/05/25 17:38	1
Naphthalene	**10.7**		9.80	0.735	ug/L		04/22/25 13:34	05/05/25 17:38	1
Nitrobenzene	ND		9.80	0.588	ug/L		04/22/25 13:34	05/05/25 17:38	1
N-Nitrosodi-n-propylamine	ND		9.80	0.324	ug/L		04/22/25 13:34	05/05/25 17:38	1
N-Nitrosodiphenylamine	**1.77**	**J**	9.80	0.186	ug/L		04/22/25 13:34	05/05/25 17:38	1
Pentachlorophenol	ND		9.80	2.75	ug/L		04/22/25 13:34	05/05/25 17:38	1
Phenanthrene	ND		9.80	0.725	ug/L		04/22/25 13:34	05/05/25 17:38	1
Phenol	**0.699**	**J**	9.80	0.667	ug/L		04/22/25 13:34	05/05/25 17:38	1
Pyrene	ND		9.80	0.618	ug/L		04/22/25 13:34	05/05/25 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*96*		*10 - 150*	*04/22/25 13:34*	*05/05/25 17:38*	*1*
2-Fluorobiphenyl (Surr)	*89*		*15 - 150*	*04/22/25 13:34*	*05/05/25 17:38*	*1*
2-Fluorophenol (Surr)	*123*		*10 - 150*	*04/22/25 13:34*	*05/05/25 17:38*	*1*
Nitrobenzene-d5 (Surr)	*102*		*50 - 150*	*04/22/25 13:34*	*05/05/25 17:38*	*1*
Phenol-d5 (Surr)	*220*	*S1+*	*10 - 150*	*04/22/25 13:34*	*05/05/25 17:38*	*1*
Terphenyl-d14 (Surr)	*88*		*43 - 147*	*04/22/25 13:34*	*05/05/25 17:38*	*1*

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**1.16**		1.00	0.390	mg/L			04/23/25 01:48	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	0.340	ug/L		04/21/25 08:36	04/22/25 08:20	1
Arsenic	**0.880**	**J**	3.00	0.860	ug/L		04/21/25 08:36	04/22/25 08:20	1
Barium	**381**		5.00	0.890	ug/L		04/21/25 08:36	04/22/25 08:20	1
Beryllium	ND		0.500	0.200	ug/L		04/21/25 08:36	04/22/25 08:20	1
Cadmium	**0.170**	**J**	0.500	0.0780	ug/L		04/21/25 08:36	04/22/25 08:20	1
Chromium	**2.07**	**J**	5.00	1.20	ug/L		04/21/25 08:36	04/22/25 08:20	1
Cobalt	**1.35**		0.500	0.220	ug/L		04/21/25 08:36	04/22/25 08:20	1
Copper	**2.15**	**J**	5.00	1.08	ug/L		04/21/25 08:36	04/22/25 08:20	1
Lead	**11.2**		2.50	0.210	ug/L		04/21/25 08:36	04/22/25 08:20	1
Manganese	**1150**		5.00	2.20	ug/L		04/21/25 08:36	04/22/25 08:20	1
Nickel	**3.35**	**J**	5.00	0.420	ug/L		04/21/25 08:36	04/22/25 08:20	1
Selenium	ND		2.50	0.990	ug/L		04/21/25 08:36	04/22/25 08:20	1
Silver	ND		1.00	0.390	ug/L		04/21/25 08:36	04/22/25 08:20	1
Thallium	ND		1.00	0.260	ug/L		04/21/25 08:36	04/22/25 08:20	1
Vanadium	**1.29**	**J**	10.0	0.630	ug/L		04/21/25 08:36	04/22/25 08:20	1
Zinc	**228**		20.0	2.80	ug/L		04/21/25 08:36	04/22/25 08:20	1

Client Sample ID: MW-7

Lab Sample ID: 752-31789-5

Date Collected: 04/16/25 15:25

Matrix: Water

Date Received: 04/18/25 11:24

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.0800	ug/L		04/21/25 11:38	04/21/25 16:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	**33.8**		2.57	1.03	mg/L			04/24/25 10:29	51.429
Nitrate Nitrite as N (EPA 353.2)	**0.0963**	**J**	0.100	0.0410	mg/L			04/22/25 10:55	1
Nitrite as N (EPA 353.2)	ND	F1	0.100	0.0168	mg/L			04/18/25 15:05	1
Nitrate as N (SM Nitrate by calc)	**0.0963**	**J**	0.100	0.0250	mg/L			04/21/25 16:19	1

Client Sample ID: MW-8

Lab Sample ID: 752-31789-6

Date Collected: 04/16/25 16:15

Matrix: Water

Date Received: 04/18/25 11:24

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 16:51	1
Benzene	**1.24**		1.00	0.500	ug/L			04/30/25 16:51	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 16:51	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 16:51	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 16:51	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 16:51	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 16:51	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 16:51	1
Chlorobenzene	**1.75**		1.00	0.420	ug/L			04/30/25 16:51	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 16:51	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 16:51	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 16:51	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 16:51	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 16:51	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 16:51	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 16:51	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 16:51	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 16:51	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 16:51	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 16:51	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			04/30/25 16:51	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 16:51	1
1,4-Dichlorobenzene	**0.824**	**J**	1.00	0.640	ug/L			04/30/25 16:51	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 16:51	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 16:51	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 16:51	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 16:51	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:51	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:51	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 16:51	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 16:51	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 16:51	1
Ethylbenzene	ND		1.00	0.500	ug/L			04/30/25 16:51	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 16:51	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 16:51	1

Client Sample ID: MW-8
Date Collected: 04/16/25 16:15
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-6
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.00	0.960	ug/L			04/30/25 16:51	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 16:51	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 16:51	1
Isopropylbenzene	ND		1.00	0.530	ug/L			04/30/25 16:51	1
Isopropyl ether	ND		1.00	0.740	ug/L			04/30/25 16:51	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			04/30/25 16:51	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 16:51	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 16:51	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			04/30/25 16:51	1
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			04/30/25 16:51	1
Naphthalene	ND		5.00	3.00	ug/L			04/30/25 16:51	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 16:51	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 16:51	1
N-Propylbenzene	ND		1.00	0.690	ug/L			04/30/25 16:51	1
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 16:51	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 16:51	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 16:51	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 16:51	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 16:51	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 16:51	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 16:51	1
Toluene	ND		1.00	0.900	ug/L			04/30/25 16:51	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 16:51	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 16:51	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 16:51	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 16:51	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 16:51	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 16:51	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 16:51	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 16:51	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 16:51	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 16:51	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 16:51	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			04/30/25 16:51	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			04/30/25 16:51	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 16:51	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 16:51	1
Xylenes, Total	ND		10.0	6.00	ug/L			04/30/25 16:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*105*		*56 - 136*		*04/30/25 16:51*	*1*
Dibromofluoromethane	*92*		*79 - 130*		*04/30/25 16:51*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*59 - 146*		*04/30/25 16:51*	*1*
Toluene-d8 (Surr)	*103*		*64 - 132*		*04/30/25 16:51*	*1*

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**20.5**		0.311	0.311	ug/L		04/23/25 16:43	04/28/25 20:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*22*		*10 - 140*	*04/23/25 16:43*	*04/28/25 20:06*	*1*

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-8

Date Collected: 04/16/25 16:15
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-6

Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.74	0.409	ug/L		04/22/25 13:34	05/05/25 18:09	1
2,4,5-Trichlorophenol	ND		9.74	0.526	ug/L		04/22/25 13:34	05/05/25 18:09	1
2,4,6-Trichlorophenol	ND		9.74	1.06	ug/L		04/22/25 13:34	05/05/25 18:09	1
2,4-Dichlorophenol	ND		9.74	0.555	ug/L		04/22/25 13:34	05/05/25 18:09	1
2,4-Dimethylphenol	ND		9.74	0.234	ug/L		04/22/25 13:34	05/05/25 18:09	1
2,4-Dinitrophenol	ND		29.2	4.56	ug/L		04/22/25 13:34	05/05/25 18:09	1
2,4-Dinitrotoluene	ND		9.74	0.633	ug/L		04/22/25 13:34	05/05/25 18:09	1
2,6-Dinitrotoluene	ND		9.74	0.282	ug/L		04/22/25 13:34	05/05/25 18:09	1
2-Chloronaphthalene	ND	*+	9.74	0.370	ug/L		04/22/25 13:34	05/05/25 18:09	1
2-Chlorophenol	ND		9.74	0.818	ug/L		04/22/25 13:34	05/05/25 18:09	1
2-Methylnaphthalene	ND		9.74	0.789	ug/L		04/22/25 13:34	05/05/25 18:09	1
2-Methylphenol	ND		9.74	0.740	ug/L		04/22/25 13:34	05/05/25 18:09	1
2-Nitroaniline	ND		9.74	1.33	ug/L		04/22/25 13:34	05/05/25 18:09	1
2-Nitrophenol	ND		9.74	1.14	ug/L		04/22/25 13:34	05/05/25 18:09	1
3 & 4 Methylphenol	**21.9**	**I**	19.5	4.48	ug/L		04/22/25 13:34	05/05/25 18:09	1
3,3'-Dichlorobenzidine	ND		10.7	0.399	ug/L		04/22/25 13:34	05/05/25 18:09	1
3-Nitroaniline	ND		9.74	0.925	ug/L		04/22/25 13:34	05/05/25 18:09	1
4,6-Dinitro-2-methylphenol	ND		9.74	1.92	ug/L		04/22/25 13:34	05/05/25 18:09	1
4-Bromophenyl phenyl ether	ND		9.74	0.127	ug/L		04/22/25 13:34	05/05/25 18:09	1
4-Chloro-3-methylphenol	**5.95**	**J**	9.74	0.711	ug/L		04/22/25 13:34	05/05/25 18:09	1
4-Chloroaniline	ND		9.74	0.273	ug/L		04/22/25 13:34	05/05/25 18:09	1
4-Chlorophenyl phenyl ether	ND		9.74	0.234	ug/L		04/22/25 13:34	05/05/25 18:09	1
4-Nitroaniline	ND		9.74	3.41	ug/L		04/22/25 13:34	05/05/25 18:09	1
4-Nitrophenol	ND		9.74	2.67	ug/L		04/22/25 13:34	05/05/25 18:09	1
Acenaphthene	ND		9.74	0.614	ug/L		04/22/25 13:34	05/05/25 18:09	1
Acenaphthylene	ND		9.74	0.740	ug/L		04/22/25 13:34	05/05/25 18:09	1
Acetophenone	ND		9.74	3.12	ug/L		04/22/25 13:34	05/05/25 18:09	1
Anthracene	ND		9.74	0.886	ug/L		04/22/25 13:34	05/05/25 18:09	1
Atrazine	ND		9.74	1.10	ug/L		04/22/25 13:34	05/05/25 18:09	1
Benzaldehyde	ND	*1	9.74	0.653	ug/L		04/22/25 13:34	05/05/25 18:09	1
Benzo[a]anthracene	ND		9.74	0.974	ug/L		04/22/25 13:34	05/05/25 18:09	1
Benzo[a]pyrene	ND		9.74	1.07	ug/L		04/22/25 13:34	05/05/25 18:09	1
Benzo[b]fluoranthene	ND		9.74	1.17	ug/L		04/22/25 13:34	05/05/25 18:09	1
Benzo[g,h,i]perylene	ND		9.74	1.46	ug/L		04/22/25 13:34	05/05/25 18:09	1
Benzo[k]fluoranthene	ND		9.74	1.46	ug/L		04/22/25 13:34	05/05/25 18:09	1
bis (2-chloroisopropyl) ether	ND		9.74	0.906	ug/L		04/22/25 13:34	05/05/25 18:09	1
Bis(2-chloroethoxy)methane	ND		9.74	0.331	ug/L		04/22/25 13:34	05/05/25 18:09	1
Bis(2-chloroethyl)ether	ND		9.74	0.711	ug/L		04/22/25 13:34	05/05/25 18:09	1
Bis(2-ethylhexyl) phthalate	ND		9.74	3.90	ug/L		04/22/25 13:34	05/05/25 18:09	1
Butyl benzyl phthalate	ND		9.74	3.90	ug/L		04/22/25 13:34	05/05/25 18:09	1
Caprolactam	**9.61**	**J**	9.74	2.34	ug/L		04/22/25 13:34	05/05/25 18:09	1
Carbazole	ND		9.74	0.312	ug/L		04/22/25 13:34	05/05/25 18:09	1
Chrysene	ND		9.74	1.17	ug/L		04/22/25 13:34	05/05/25 18:09	1
Dibenz(a,h)anthracene	ND		9.74	1.27	ug/L		04/22/25 13:34	05/05/25 18:09	1
Dibenzofuran	ND		9.74	0.623	ug/L		04/22/25 13:34	05/05/25 18:09	1
Diethyl phthalate	ND	*-	9.74	3.90	ug/L		04/22/25 13:34	05/05/25 18:09	1
Dimethyl phthalate	ND	*-	9.74	3.90	ug/L		04/22/25 13:34	05/05/25 18:09	1
Di-n-butyl phthalate	ND	*-	9.74	3.90	ug/L		04/22/25 13:34	05/05/25 18:09	1
Di-n-octyl phthalate	ND		9.74	3.90	ug/L		04/22/25 13:34	05/05/25 18:09	1

Client Sample ID: MW-8
Date Collected: 04/16/25 16:15
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-6
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		9.74	0.614	ug/L		04/22/25 13:34	05/05/25 18:09	1
Fluorene	ND		9.74	0.653	ug/L		04/22/25 13:34	05/05/25 18:09	1
Hexachlorobenzene	ND		9.74	0.244	ug/L		04/22/25 13:34	05/05/25 18:09	1
Hexachlorobutadiene	ND		9.74	0.536	ug/L		04/22/25 13:34	05/05/25 18:09	1
Hexachlorocyclopentadiene	ND		19.5	0.312	ug/L		04/22/25 13:34	05/05/25 18:09	1
Hexachloroethane	ND		9.74	0.516	ug/L		04/22/25 13:34	05/05/25 18:09	1
Indeno[1,2,3-cd]pyrene	ND		9.74	1.07	ug/L		04/22/25 13:34	05/05/25 18:09	1
Isophorone	ND		9.74	0.779	ug/L		04/22/25 13:34	05/05/25 18:09	1
Naphthalene	**0.838**	**J**	9.74	0.731	ug/L		04/22/25 13:34	05/05/25 18:09	1
Nitrobenzene	ND		9.74	0.584	ug/L		04/22/25 13:34	05/05/25 18:09	1
N-Nitrosodi-n-propylamine	ND		9.74	0.321	ug/L		04/22/25 13:34	05/05/25 18:09	1
N-Nitrosodiphenylamine	**0.607**	**J**	9.74	0.185	ug/L		04/22/25 13:34	05/05/25 18:09	1
Pentachlorophenol	ND		9.74	2.73	ug/L		04/22/25 13:34	05/05/25 18:09	1
Phenanthrene	ND		9.74	0.721	ug/L		04/22/25 13:34	05/05/25 18:09	1
Phenol	**8.88**	**J**	9.74	0.662	ug/L		04/22/25 13:34	05/05/25 18:09	1
Pyrene	ND		9.74	0.614	ug/L		04/22/25 13:34	05/05/25 18:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*87*		*10 - 150*	*04/22/25 13:34*	*05/05/25 18:09*	*1*
2-Fluorobiphenyl (Surr)	*89*		*15 - 150*	*04/22/25 13:34*	*05/05/25 18:09*	*1*
2-Fluorophenol (Surr)	*120*		*10 - 150*	*04/22/25 13:34*	*05/05/25 18:09*	*1*
Nitrobenzene-d5 (Surr)	*104*		*50 - 150*	*04/22/25 13:34*	*05/05/25 18:09*	*1*
Phenol-d5 (Surr)	*228*	*S1+*	*10 - 150*	*04/22/25 13:34*	*05/05/25 18:09*	*1*
Terphenyl-d14 (Surr)	*87*		*43 - 147*	*04/22/25 13:34*	*05/05/25 18:09*	*1*

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**6.49**		1.00	0.390	mg/L			04/23/25 01:56	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	0.340	ug/L		04/21/25 08:36	04/22/25 08:33	1
Arsenic	**4.55**		3.00	0.860	ug/L		04/21/25 08:36	04/22/25 08:33	1
Barium	**239**		5.00	0.890	ug/L		04/21/25 08:36	04/22/25 08:33	1
Beryllium	ND		0.500	0.200	ug/L		04/21/25 08:36	04/22/25 08:33	1
Cadmium	ND		0.500	0.0780	ug/L		04/21/25 08:36	04/22/25 08:33	1
Chromium	**2.87**	**J**	5.00	1.20	ug/L		04/21/25 08:36	04/22/25 08:33	1
Cobalt	**1.87**		0.500	0.220	ug/L		04/21/25 08:36	04/22/25 08:33	1
Copper	ND		5.00	1.08	ug/L		04/21/25 08:36	04/22/25 08:33	1
Lead	**0.705**	**J**	2.50	0.210	ug/L		04/21/25 08:36	04/22/25 08:33	1
Manganese	**245**		5.00	2.20	ug/L		04/21/25 08:36	04/22/25 08:33	1
Nickel	**7.35**		5.00	0.420	ug/L		04/21/25 08:36	04/22/25 08:33	1
Selenium	ND		2.50	0.990	ug/L		04/21/25 08:36	04/22/25 08:33	1
Silver	ND		1.00	0.390	ug/L		04/21/25 08:36	04/22/25 08:33	1
Thallium	ND		1.00	0.260	ug/L		04/21/25 08:36	04/22/25 08:33	1
Vanadium	**7.53**	**J**	10.0	0.630	ug/L		04/21/25 08:36	04/22/25 08:33	1
Zinc	**14.2**	**J**	20.0	2.80	ug/L		04/21/25 08:36	04/22/25 08:33	1

Client Sample ID: MW-8

Lab Sample ID: 752-31789-6

Date Collected: 04/16/25 16:15

Matrix: Water

Date Received: 04/18/25 11:24

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.0800	ug/L		04/21/25 11:38	04/21/25 16:46	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	**100**		4.50	1.80	mg/L			04/24/25 10:31	90
Nitrate Nitrite as N (EPA 353.2)	**0.0928**	**J**	0.100	0.0410	mg/L			04/22/25 10:58	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			04/18/25 15:08	1
Nitrate as N (SM Nitrate by calc)	**0.0928**	**J**	0.100	0.0250	mg/L			04/21/25 16:19	1

Client Sample ID: MW-9

Lab Sample ID: 752-31789-7

Date Collected: 04/16/25 17:30

Matrix: Water

Date Received: 04/18/25 11:24

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 17:16	1
Benzene	**2.99**		1.00	0.500	ug/L			04/30/25 17:16	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 17:16	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 17:16	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 17:16	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 17:16	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 17:16	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 17:16	1
Chlorobenzene	**8.56**		1.00	0.420	ug/L			04/30/25 17:16	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 17:16	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 17:16	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 17:16	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 17:16	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 17:16	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 17:16	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 17:16	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 17:16	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 17:16	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 17:16	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 17:16	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			04/30/25 17:16	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 17:16	1
1,4-Dichlorobenzene	**1.48**		1.00	0.640	ug/L			04/30/25 17:16	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 17:16	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 17:16	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 17:16	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 17:16	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 17:16	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 17:16	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 17:16	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 17:16	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 17:16	1
Ethylbenzene	ND		1.00	0.500	ug/L			04/30/25 17:16	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 17:16	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 17:16	1

Client Sample ID: MW-9

Date Collected: 04/16/25 17:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-7

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.00	0.960	ug/L			04/30/25 17:16	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 17:16	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 17:16	1
Isopropylbenzene	**1.05**		1.00	0.530	ug/L			04/30/25 17:16	1
Isopropyl ether	ND		1.00	0.740	ug/L			04/30/25 17:16	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			04/30/25 17:16	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 17:16	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 17:16	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			04/30/25 17:16	1
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			04/30/25 17:16	1
Naphthalene	**6.56**		5.00	3.00	ug/L			04/30/25 17:16	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 17:16	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 17:16	1
N-Propylbenzene	ND		1.00	0.690	ug/L			04/30/25 17:16	1
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 17:16	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 17:16	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 17:16	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 17:16	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 17:16	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 17:16	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 17:16	1
Toluene	ND		1.00	0.900	ug/L			04/30/25 17:16	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 17:16	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 17:16	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 17:16	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 17:16	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 17:16	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 17:16	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 17:16	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 17:16	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 17:16	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 17:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 17:16	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			04/30/25 17:16	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			04/30/25 17:16	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 17:16	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 17:16	1
Xylenes, Total	ND		10.0	6.00	ug/L			04/30/25 17:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*110*		*56 - 136*		*04/30/25 17:16*	*1*
Dibromofluoromethane	*91*		*79 - 130*		*04/30/25 17:16*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*59 - 146*		*04/30/25 17:16*	*1*
Toluene-d8 (Surr)	*101*		*64 - 132*		*04/30/25 17:16*	*1*

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**5.85**		0.322	0.322	ug/L		04/23/25 16:43	04/28/25 20:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*25*		*10 - 140*	*04/23/25 16:43*	*04/28/25 20:27*	*1*

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-9

Date Collected: 04/16/25 17:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-7

Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.90	0.416	ug/L		04/22/25 13:34	05/05/25 18:40	1
2,4,5-Trichlorophenol	ND		9.90	0.535	ug/L		04/22/25 13:34	05/05/25 18:40	1
2,4,6-Trichlorophenol	ND		9.90	1.08	ug/L		04/22/25 13:34	05/05/25 18:40	1
2,4-Dichlorophenol	ND		9.90	0.564	ug/L		04/22/25 13:34	05/05/25 18:40	1
2,4-Dimethylphenol	ND		9.90	0.238	ug/L		04/22/25 13:34	05/05/25 18:40	1
2,4-Dinitrophenol	ND		29.7	4.63	ug/L		04/22/25 13:34	05/05/25 18:40	1
2,4-Dinitrotoluene	ND		9.90	0.644	ug/L		04/22/25 13:34	05/05/25 18:40	1
2,6-Dinitrotoluene	ND		9.90	0.287	ug/L		04/22/25 13:34	05/05/25 18:40	1
2-Chloronaphthalene	ND	*+	9.90	0.376	ug/L		04/22/25 13:34	05/05/25 18:40	1
2-Chlorophenol	ND		9.90	0.832	ug/L		04/22/25 13:34	05/05/25 18:40	1
2-Methylnaphthalene	ND		9.90	0.802	ug/L		04/22/25 13:34	05/05/25 18:40	1
2-Methylphenol	ND		9.90	0.752	ug/L		04/22/25 13:34	05/05/25 18:40	1
2-Nitroaniline	ND		9.90	1.36	ug/L		04/22/25 13:34	05/05/25 18:40	1
2-Nitrophenol	ND		9.90	1.16	ug/L		04/22/25 13:34	05/05/25 18:40	1
3 & 4 Methylphenol	ND		19.8	4.55	ug/L		04/22/25 13:34	05/05/25 18:40	1
3,3'-Dichlorobenzidine	ND		10.9	0.406	ug/L		04/22/25 13:34	05/05/25 18:40	1
3-Nitroaniline	ND		9.90	0.941	ug/L		04/22/25 13:34	05/05/25 18:40	1
4,6-Dinitro-2-methylphenol	ND		9.90	1.95	ug/L		04/22/25 13:34	05/05/25 18:40	1
4-Bromophenyl phenyl ether	ND		9.90	0.129	ug/L		04/22/25 13:34	05/05/25 18:40	1
4-Chloro-3-methylphenol	**5.74**	**J**	9.90	0.723	ug/L		04/22/25 13:34	05/05/25 18:40	1
4-Chloroaniline	ND		9.90	0.277	ug/L		04/22/25 13:34	05/05/25 18:40	1
4-Chlorophenyl phenyl ether	ND		9.90	0.238	ug/L		04/22/25 13:34	05/05/25 18:40	1
4-Nitroaniline	ND		9.90	3.47	ug/L		04/22/25 13:34	05/05/25 18:40	1
4-Nitrophenol	ND		9.90	2.71	ug/L		04/22/25 13:34	05/05/25 18:40	1
Acenaphthene	ND		9.90	0.624	ug/L		04/22/25 13:34	05/05/25 18:40	1
Acenaphthylene	ND		9.90	0.752	ug/L		04/22/25 13:34	05/05/25 18:40	1
Acetophenone	ND		9.90	3.17	ug/L		04/22/25 13:34	05/05/25 18:40	1
Anthracene	ND		9.90	0.901	ug/L		04/22/25 13:34	05/05/25 18:40	1
Atrazine	ND		9.90	1.12	ug/L		04/22/25 13:34	05/05/25 18:40	1
Benzaldehyde	ND	*1	9.90	0.663	ug/L		04/22/25 13:34	05/05/25 18:40	1
Benzo[a]anthracene	ND		9.90	0.990	ug/L		04/22/25 13:34	05/05/25 18:40	1
Benzo[a]pyrene	ND		9.90	1.09	ug/L		04/22/25 13:34	05/05/25 18:40	1
Benzo[b]fluoranthene	ND		9.90	1.19	ug/L		04/22/25 13:34	05/05/25 18:40	1
Benzo[g,h,i]perylene	ND		9.90	1.49	ug/L		04/22/25 13:34	05/05/25 18:40	1
Benzo[k]fluoranthene	ND		9.90	1.49	ug/L		04/22/25 13:34	05/05/25 18:40	1
bis (2-chloroisopropyl) ether	ND		9.90	0.921	ug/L		04/22/25 13:34	05/05/25 18:40	1
Bis(2-chloroethoxy)methane	ND		9.90	0.337	ug/L		04/22/25 13:34	05/05/25 18:40	1
Bis(2-chloroethyl)ether	ND		9.90	0.723	ug/L		04/22/25 13:34	05/05/25 18:40	1
Bis(2-ethylhexyl) phthalate	ND		9.90	3.96	ug/L		04/22/25 13:34	05/05/25 18:40	1
Butyl benzyl phthalate	ND		9.90	3.96	ug/L		04/22/25 13:34	05/05/25 18:40	1
Caprolactam	**8.31**	**J**	9.90	2.38	ug/L		04/22/25 13:34	05/05/25 18:40	1
Carbazole	ND		9.90	0.317	ug/L		04/22/25 13:34	05/05/25 18:40	1
Chrysene	ND		9.90	1.19	ug/L		04/22/25 13:34	05/05/25 18:40	1
Dibenz(a,h)anthracene	ND		9.90	1.29	ug/L		04/22/25 13:34	05/05/25 18:40	1
Dibenzofuran	ND		9.90	0.634	ug/L		04/22/25 13:34	05/05/25 18:40	1
Diethyl phthalate	ND	*-	9.90	3.96	ug/L		04/22/25 13:34	05/05/25 18:40	1
Dimethyl phthalate	ND	*-	9.90	3.96	ug/L		04/22/25 13:34	05/05/25 18:40	1
Di-n-butyl phthalate	ND	*-	9.90	3.96	ug/L		04/22/25 13:34	05/05/25 18:40	1
Di-n-octyl phthalate	ND		9.90	3.96	ug/L		04/22/25 13:34	05/05/25 18:40	1

Client Sample ID: MW-9

Date Collected: 04/16/25 17:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-7

Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		9.90	0.624	ug/L		04/22/25 13:34	05/05/25 18:40	1
Fluorene	ND		9.90	0.663	ug/L		04/22/25 13:34	05/05/25 18:40	1
Hexachlorobenzene	ND		9.90	0.248	ug/L		04/22/25 13:34	05/05/25 18:40	1
Hexachlorobutadiene	ND		9.90	0.545	ug/L		04/22/25 13:34	05/05/25 18:40	1
Hexachlorocyclopentadiene	ND		19.8	0.317	ug/L		04/22/25 13:34	05/05/25 18:40	1
Hexachloroethane	ND		9.90	0.525	ug/L		04/22/25 13:34	05/05/25 18:40	1
Indeno[1,2,3-cd]pyrene	ND		9.90	1.09	ug/L		04/22/25 13:34	05/05/25 18:40	1
Isophorone	ND		9.90	0.792	ug/L		04/22/25 13:34	05/05/25 18:40	1
Naphthalene	**5.18**	**J**	9.90	0.743	ug/L		04/22/25 13:34	05/05/25 18:40	1
Nitrobenzene	ND		9.90	0.594	ug/L		04/22/25 13:34	05/05/25 18:40	1
N-Nitrosodi-n-propylamine	ND		9.90	0.327	ug/L		04/22/25 13:34	05/05/25 18:40	1
N-Nitrosodiphenylamine	**2.49**	**J**	9.90	0.188	ug/L		04/22/25 13:34	05/05/25 18:40	1
Pentachlorophenol	ND		9.90	2.77	ug/L		04/22/25 13:34	05/05/25 18:40	1
Phenanthrene	ND		9.90	0.733	ug/L		04/22/25 13:34	05/05/25 18:40	1
Phenol	ND		9.90	0.673	ug/L		04/22/25 13:34	05/05/25 18:40	1
Pyrene	ND		9.90	0.624	ug/L		04/22/25 13:34	05/05/25 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*89*		*10 - 150*	*04/22/25 13:34*	*05/05/25 18:40*	*1*
2-Fluorobiphenyl (Surr)	*86*		*15 - 150*	*04/22/25 13:34*	*05/05/25 18:40*	*1*
2-Fluorophenol (Surr)	*109*		*10 - 150*	*04/22/25 13:34*	*05/05/25 18:40*	*1*
Nitrobenzene-d5 (Surr)	*100*		*50 - 150*	*04/22/25 13:34*	*05/05/25 18:40*	*1*
Phenol-d5 (Surr)	*162*	*S1+*	*10 - 150*	*04/22/25 13:34*	*05/05/25 18:40*	*1*
Terphenyl-d14 (Surr)	*87*		*43 - 147*	*04/22/25 13:34*	*05/05/25 18:40*	*1*

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**2.11**		1.00	0.390	mg/L			04/23/25 02:05	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	0.340	ug/L		04/21/25 08:36	04/22/25 08:37	1
Arsenic	**6.03**		3.00	0.860	ug/L		04/21/25 08:36	04/22/25 08:37	1
Barium	**111**		5.00	0.890	ug/L		04/21/25 08:36	04/22/25 08:37	1
Beryllium	ND		0.500	0.200	ug/L		04/21/25 08:36	04/22/25 08:37	1
Cadmium	ND		0.500	0.0780	ug/L		04/21/25 08:36	04/22/25 08:37	1
Chromium	ND		5.00	1.20	ug/L		04/21/25 08:36	04/22/25 08:37	1
Cobalt	**0.610**		0.500	0.220	ug/L		04/21/25 08:36	04/22/25 08:37	1
Copper	ND		5.00	1.08	ug/L		04/21/25 08:36	04/22/25 08:37	1
Lead	ND		2.50	0.210	ug/L		04/21/25 08:36	04/22/25 08:37	1
Manganese	**137**		5.00	2.20	ug/L		04/21/25 08:36	04/22/25 08:37	1
Nickel	**1.10**	**J**	5.00	0.420	ug/L		04/21/25 08:36	04/22/25 08:37	1
Selenium	ND		2.50	0.990	ug/L		04/21/25 08:36	04/22/25 08:37	1
Silver	ND		1.00	0.390	ug/L		04/21/25 08:36	04/22/25 08:37	1
Thallium	ND		1.00	0.260	ug/L		04/21/25 08:36	04/22/25 08:37	1
Vanadium	**6.27**	**J**	10.0	0.630	ug/L		04/21/25 08:36	04/22/25 08:37	1
Zinc	**6.55**	**J**	20.0	2.80	ug/L		04/21/25 08:36	04/22/25 08:37	1

Client Sample ID: MW-9

Lab Sample ID: 752-31789-7

Date Collected: 04/16/25 17:30

Matrix: Water

Date Received: 04/18/25 11:24

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.0800	ug/L		04/21/25 11:38	04/21/25 16:24	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	**42.4**		2.57	1.03	mg/L			04/24/25 10:33	51.429
Nitrate Nitrite as N (EPA 353.2)	**0.0980**	**J**	0.100	0.0410	mg/L			04/22/25 10:59	1
Nitrite as N (EPA 353.2)	ND		0.100	0.0168	mg/L			04/18/25 15:10	1
Nitrate as N (SM Nitrate by calc)	**0.0980**	**J**	0.100	0.0250	mg/L			04/21/25 16:19	1

Client Sample ID: Dup-01

Lab Sample ID: 752-31789-8

Date Collected: 04/16/25 00:00

Matrix: Water

Date Received: 04/18/25 11:24

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 17:40	1
Benzene	**10.8**		1.00	0.500	ug/L			04/30/25 17:40	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 17:40	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 17:40	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 17:40	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 17:40	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 17:40	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 17:40	1
Chlorobenzene	**14.2**		1.00	0.420	ug/L			04/30/25 17:40	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 17:40	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 17:40	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 17:40	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 17:40	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 17:40	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 17:40	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 17:40	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 17:40	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 17:40	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 17:40	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 17:40	1
1,2-Dichlorobenzene	**0.562**	**J**	1.00	0.500	ug/L			04/30/25 17:40	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 17:40	1
1,4-Dichlorobenzene	**5.34**		1.00	0.640	ug/L			04/30/25 17:40	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 17:40	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 17:40	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 17:40	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 17:40	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 17:40	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 17:40	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 17:40	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 17:40	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 17:40	1
Ethylbenzene	**5.28**		1.00	0.500	ug/L			04/30/25 17:40	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 17:40	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 17:40	1

Client Sample ID: Dup-01

Date Collected: 04/16/25 00:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-8

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.00	0.960	ug/L			04/30/25 17:40	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 17:40	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 17:40	1
Isopropylbenzene	**2.83**		1.00	0.530	ug/L			04/30/25 17:40	1
Isopropyl ether	**0.793**	**J**	1.00	0.740	ug/L			04/30/25 17:40	1
4-Isopropyltoluene	**1.63**		1.00	0.710	ug/L			04/30/25 17:40	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 17:40	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 17:40	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			04/30/25 17:40	1
m-Xylene & p-Xylene	**19.8**		5.00	3.00	ug/L			04/30/25 17:40	1
Naphthalene	**50.0**		5.00	3.00	ug/L			04/30/25 17:40	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 17:40	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 17:40	1
N-Propylbenzene	**2.34**		1.00	0.690	ug/L			04/30/25 17:40	1
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 17:40	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 17:40	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 17:40	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 17:40	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 17:40	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 17:40	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 17:40	1
Toluene	**1.85**		1.00	0.900	ug/L			04/30/25 17:40	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 17:40	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 17:40	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 17:40	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 17:40	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 17:40	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 17:40	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 17:40	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 17:40	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 17:40	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 17:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 17:40	1
1,2,4-Trimethylbenzene	**3.15**		1.00	0.820	ug/L			04/30/25 17:40	1
1,3,5-Trimethylbenzene	**1.66**		1.00	0.560	ug/L			04/30/25 17:40	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 17:40	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 17:40	1
Xylenes, Total	**21.2**		10.0	6.00	ug/L			04/30/25 17:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*107*		*56 - 136*		*04/30/25 17:40*	*1*
Dibromofluoromethane	*92*		*79 - 130*		*04/30/25 17:40*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*59 - 146*		*04/30/25 17:40*	*1*
Toluene-d8 (Surr)	*103*		*64 - 132*		*04/30/25 17:40*	*1*

Method: SW846 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**30.6**		0.300	0.300	ug/L		04/23/25 16:43	04/28/25 20:48	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*25*		*10 - 140*	*04/23/25 16:43*	*04/28/25 20:48*	*1*

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: Dup-01

Date Collected: 04/16/25 00:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-8

Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		9.77	0.410	ug/L		04/22/25 13:34	05/05/25 19:11	1
2,4,5-Trichlorophenol	ND		9.77	0.528	ug/L		04/22/25 13:34	05/05/25 19:11	1
2,4,6-Trichlorophenol	ND		9.77	1.07	ug/L		04/22/25 13:34	05/05/25 19:11	1
2,4-Dichlorophenol	ND		9.77	0.557	ug/L		04/22/25 13:34	05/05/25 19:11	1
2,4-Dimethylphenol	ND		9.77	0.235	ug/L		04/22/25 13:34	05/05/25 19:11	1
2,4-Dinitrophenol	ND		29.3	4.57	ug/L		04/22/25 13:34	05/05/25 19:11	1
2,4-Dinitrotoluene	ND		9.77	0.635	ug/L		04/22/25 13:34	05/05/25 19:11	1
2,6-Dinitrotoluene	ND		9.77	0.283	ug/L		04/22/25 13:34	05/05/25 19:11	1
2-Chloronaphthalene	ND	*+	9.77	0.371	ug/L		04/22/25 13:34	05/05/25 19:11	1
2-Chlorophenol	ND		9.77	0.821	ug/L		04/22/25 13:34	05/05/25 19:11	1
2-Methylnaphthalene	**5.35**	**J**	9.77	0.792	ug/L		04/22/25 13:34	05/05/25 19:11	1
2-Methylphenol	ND		9.77	0.743	ug/L		04/22/25 13:34	05/05/25 19:11	1
2-Nitroaniline	ND		9.77	1.34	ug/L		04/22/25 13:34	05/05/25 19:11	1
2-Nitrophenol	ND		9.77	1.14	ug/L		04/22/25 13:34	05/05/25 19:11	1
3 & 4 Methylphenol	ND		19.5	4.50	ug/L		04/22/25 13:34	05/05/25 19:11	1
3,3'-Dichlorobenzidine	ND		10.7	0.401	ug/L		04/22/25 13:34	05/05/25 19:11	1
3-Nitroaniline	ND		9.77	0.928	ug/L		04/22/25 13:34	05/05/25 19:11	1
4,6-Dinitro-2-methylphenol	ND		9.77	1.93	ug/L		04/22/25 13:34	05/05/25 19:11	1
4-Bromophenyl phenyl ether	ND		9.77	0.127	ug/L		04/22/25 13:34	05/05/25 19:11	1
4-Chloro-3-methylphenol	**12.6**		9.77	0.713	ug/L		04/22/25 13:34	05/05/25 19:11	1
4-Chloroaniline	ND		9.77	0.274	ug/L		04/22/25 13:34	05/05/25 19:11	1
4-Chlorophenyl phenyl ether	ND		9.77	0.235	ug/L		04/22/25 13:34	05/05/25 19:11	1
4-Nitroaniline	ND		9.77	3.42	ug/L		04/22/25 13:34	05/05/25 19:11	1
4-Nitrophenol	ND		9.77	2.68	ug/L		04/22/25 13:34	05/05/25 19:11	1
Acenaphthene	ND		9.77	0.616	ug/L		04/22/25 13:34	05/05/25 19:11	1
Acenaphthylene	ND		9.77	0.743	ug/L		04/22/25 13:34	05/05/25 19:11	1
Acetophenone	ND		9.77	3.13	ug/L		04/22/25 13:34	05/05/25 19:11	1
Anthracene	ND		9.77	0.889	ug/L		04/22/25 13:34	05/05/25 19:11	1
Atrazine	ND		9.77	1.10	ug/L		04/22/25 13:34	05/05/25 19:11	1
Benzaldehyde	**2.28**	**J *1**	9.77	0.655	ug/L		04/22/25 13:34	05/05/25 19:11	1
Benzo[a]anthracene	ND		9.77	0.977	ug/L		04/22/25 13:34	05/05/25 19:11	1
Benzo[a]pyrene	ND		9.77	1.07	ug/L		04/22/25 13:34	05/05/25 19:11	1
Benzo[b]fluoranthene	ND		9.77	1.17	ug/L		04/22/25 13:34	05/05/25 19:11	1
Benzo[g,h,i]perylene	ND		9.77	1.47	ug/L		04/22/25 13:34	05/05/25 19:11	1
Benzo[k]fluoranthene	ND		9.77	1.47	ug/L		04/22/25 13:34	05/05/25 19:11	1
bis (2-chloroisopropyl) ether	ND		9.77	0.909	ug/L		04/22/25 13:34	05/05/25 19:11	1
Bis(2-chloroethoxy)methane	ND		9.77	0.332	ug/L		04/22/25 13:34	05/05/25 19:11	1
Bis(2-chloroethyl)ether	ND		9.77	0.713	ug/L		04/22/25 13:34	05/05/25 19:11	1
Bis(2-ethylhexyl) phthalate	ND		9.77	3.91	ug/L		04/22/25 13:34	05/05/25 19:11	1
Butyl benzyl phthalate	ND		9.77	3.91	ug/L		04/22/25 13:34	05/05/25 19:11	1
Caprolactam	**17.5**		9.77	2.35	ug/L		04/22/25 13:34	05/05/25 19:11	1
Carbazole	ND		9.77	0.313	ug/L		04/22/25 13:34	05/05/25 19:11	1
Chrysene	ND		9.77	1.17	ug/L		04/22/25 13:34	05/05/25 19:11	1
Dibenz(a,h)anthracene	ND		9.77	1.27	ug/L		04/22/25 13:34	05/05/25 19:11	1
Dibenzofuran	ND		9.77	0.625	ug/L		04/22/25 13:34	05/05/25 19:11	1
Diethyl phthalate	**16.0**	***-**	9.77	3.91	ug/L		04/22/25 13:34	05/05/25 19:11	1
Dimethyl phthalate	ND	*-	9.77	3.91	ug/L		04/22/25 13:34	05/05/25 19:11	1
Di-n-butyl phthalate	**4.67**	**J *-**	9.77	3.91	ug/L		04/22/25 13:34	05/05/25 19:11	1
Di-n-octyl phthalate	ND		9.77	3.91	ug/L		04/22/25 13:34	05/05/25 19:11	1

Client Sample ID: Dup-01
Date Collected: 04/16/25 00:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-8
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		9.77	0.616	ug/L		04/22/25 13:34	05/05/25 19:11	1
Fluorene	ND		9.77	0.655	ug/L		04/22/25 13:34	05/05/25 19:11	1
Hexachlorobenzene	ND		9.77	0.244	ug/L		04/22/25 13:34	05/05/25 19:11	1
Hexachlorobutadiene	ND		9.77	0.537	ug/L		04/22/25 13:34	05/05/25 19:11	1
Hexachlorocyclopentadiene	ND		19.5	0.313	ug/L		04/22/25 13:34	05/05/25 19:11	1
Hexachloroethane	ND		9.77	0.518	ug/L		04/22/25 13:34	05/05/25 19:11	1
Indeno[1,2,3-cd]pyrene	ND		9.77	1.07	ug/L		04/22/25 13:34	05/05/25 19:11	1
Isophorone	ND		9.77	0.782	ug/L		04/22/25 13:34	05/05/25 19:11	1
Naphthalene	**37.7**		9.77	0.733	ug/L		04/22/25 13:34	05/05/25 19:11	1
Nitrobenzene	ND		9.77	0.586	ug/L		04/22/25 13:34	05/05/25 19:11	1
N-Nitrosodi-n-propylamine	ND		9.77	0.322	ug/L		04/22/25 13:34	05/05/25 19:11	1
N-Nitrosodiphenylamine	**1.27**	**J**	9.77	0.186	ug/L		04/22/25 13:34	05/05/25 19:11	1
Pentachlorophenol	ND		9.77	2.74	ug/L		04/22/25 13:34	05/05/25 19:11	1
Phenanthrene	ND		9.77	0.723	ug/L		04/22/25 13:34	05/05/25 19:11	1
Phenol	**1.07**	**J**	9.77	0.664	ug/L		04/22/25 13:34	05/05/25 19:11	1
Pyrene	ND		9.77	0.616	ug/L		04/22/25 13:34	05/05/25 19:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*114*		*10 - 150*	*04/22/25 13:34*	*05/05/25 19:11*	*1*
2-Fluorobiphenyl (Surr)	*86*		*15 - 150*	*04/22/25 13:34*	*05/05/25 19:11*	*1*
2-Fluorophenol (Surr)	*172*	*S1+*	*10 - 150*	*04/22/25 13:34*	*05/05/25 19:11*	*1*
Nitrobenzene-d5 (Surr)	*102*		*50 - 150*	*04/22/25 13:34*	*05/05/25 19:11*	*1*
Phenol-d5 (Surr)	*269*	*S1+*	*10 - 150*	*04/22/25 13:34*	*05/05/25 19:11*	*1*
Terphenyl-d14 (Surr)	*88*		*43 - 147*	*04/22/25 13:34*	*05/05/25 19:11*	*1*

Method: SW846 9056A - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**2.91**		1.00	0.390	mg/L			04/23/25 02:13	1

Method: SW846 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.340**	**J**	5.00	0.340	ug/L		04/21/25 08:36	04/22/25 08:35	1
Arsenic	**1.64**	**J**	3.00	0.860	ug/L		04/21/25 08:36	04/22/25 08:35	1
Barium	**80.4**		5.00	0.890	ug/L		04/21/25 08:36	04/22/25 08:35	1
Beryllium	ND		0.500	0.200	ug/L		04/21/25 08:36	04/22/25 08:35	1
Cadmium	**0.190**	**J**	0.500	0.0780	ug/L		04/21/25 08:36	04/22/25 08:35	1
Chromium	**3.78**	**J**	5.00	1.20	ug/L		04/21/25 08:36	04/22/25 08:35	1
Cobalt	**3.52**		0.500	0.220	ug/L		04/21/25 08:36	04/22/25 08:35	1
Copper	**3.64**	**J**	5.00	1.08	ug/L		04/21/25 08:36	04/22/25 08:35	1
Lead	**9.11**		2.50	0.210	ug/L		04/21/25 08:36	04/22/25 08:35	1
Manganese	**67.3**		5.00	2.20	ug/L		04/21/25 08:36	04/22/25 08:35	1
Nickel	**13.7**		5.00	0.420	ug/L		04/21/25 08:36	04/22/25 08:35	1
Selenium	ND		2.50	0.990	ug/L		04/21/25 08:36	04/22/25 08:35	1
Silver	ND		1.00	0.390	ug/L		04/21/25 08:36	04/22/25 08:35	1
Thallium	ND		1.00	0.260	ug/L		04/21/25 08:36	04/22/25 08:35	1
Vanadium	**1.70**	**J**	10.0	0.630	ug/L		04/21/25 08:36	04/22/25 08:35	1
Zinc	**26.4**		20.0	2.80	ug/L		04/21/25 08:36	04/22/25 08:35	1

Client Sample ID: Dup-01

Lab Sample ID: 752-31789-8

Date Collected: 04/16/25 00:00

Matrix: Water

Date Received: 04/18/25 11:24

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.0800	ug/L		04/21/25 11:38	04/21/25 16:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N) (EPA 350.1)	**217**		25.0	10.0	mg/L			04/24/25 10:38	500
Nitrate Nitrite as N (EPA 353.2)	**0.0783**	**J**	0.100	0.0410	mg/L			04/22/25 11:00	1
Nitrite as N (EPA 353.2)	ND	H H3	0.100	0.0168	mg/L			04/18/25 15:11	1
Nitrate as N (SM Nitrate by calc)	**0.0783**	**J**	0.100	0.0250	mg/L			04/21/25 16:19	1

Client Sample ID: Trip Blank

Lab Sample ID: 752-31789-9

Date Collected: 04/16/25 10:20

Matrix: Water

Date Received: 04/18/25 11:24

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 14:25	1
Benzene	ND		1.00	0.500	ug/L			04/30/25 14:25	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 14:25	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 14:25	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 14:25	1
2-Butanone (MEK)	**5.45**	**J**	25.0	2.60	ug/L			04/30/25 14:25	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 14:25	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 14:25	1
Chlorobenzene	ND		1.00	0.420	ug/L			04/30/25 14:25	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 14:25	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 14:25	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 14:25	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 14:25	1
Chloromethane	**0.703**	**J**	1.00	0.400	ug/L			04/30/25 14:25	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 14:25	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 14:25	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 14:25	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 14:25	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 14:25	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 14:25	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			04/30/25 14:25	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 14:25	1
1,4-Dichlorobenzene	ND		1.00	0.640	ug/L			04/30/25 14:25	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 14:25	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 14:25	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 14:25	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 14:25	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 14:25	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 14:25	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 14:25	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 14:25	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 14:25	1
Ethylbenzene	ND		1.00	0.500	ug/L			04/30/25 14:25	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 14:25	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 14:25	1

Client Sample ID: Trip Blank
Date Collected: 04/16/25 10:20
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-9
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexane	ND		1.00	0.960	ug/L			04/30/25 14:25	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 14:25	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 14:25	1
Isopropylbenzene	ND		1.00	0.530	ug/L			04/30/25 14:25	1
Isopropyl ether	ND		1.00	0.740	ug/L			04/30/25 14:25	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			04/30/25 14:25	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 14:25	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 14:25	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			04/30/25 14:25	1
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			04/30/25 14:25	1
Naphthalene	ND		5.00	3.00	ug/L			04/30/25 14:25	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 14:25	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 14:25	1
N-Propylbenzene	ND		1.00	0.690	ug/L			04/30/25 14:25	1
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 14:25	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 14:25	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 14:25	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 14:25	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 14:25	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 14:25	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 14:25	1
Toluene	ND		1.00	0.900	ug/L			04/30/25 14:25	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 14:25	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 14:25	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 14:25	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 14:25	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 14:25	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 14:25	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 14:25	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 14:25	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 14:25	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 14:25	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 14:25	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			04/30/25 14:25	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			04/30/25 14:25	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 14:25	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 14:25	1
Xylenes, Total	ND		10.0	6.00	ug/L			04/30/25 14:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*106*		*56 - 136*		*04/30/25 14:25*	*1*
Dibromofluoromethane	*91*		*79 - 130*		*04/30/25 14:25*	*1*
1,2-Dichloroethane-d4 (Surr)	*88*		*59 - 146*		*04/30/25 14:25*	*1*
Toluene-d8 (Surr)	*102*		*64 - 132*		*04/30/25 14:25*	*1*

Surrogate Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	DBFM	DCA	TOL
Lab Sample ID	Client Sample ID	(56-136)	(79-130)	(59-146)	(64-132)
752-31789-1	MW-1	107	93	90	101
752-31789-2	MW-3	107	91	87	102
752-31789-3	MW-5	107	93	90	100
752-31789-4	MW-6	108	93	92	101
752-31789-5	MW-7	107	92	88	102
752-31789-6	MW-8	105	92	88	103
752-31789-7	MW-9	110	91	89	101
752-31789-8	Dup-01	107	92	89	103
752-31789-9	Trip Blank	106	91	88	102
LCS 400-707537/1002	Lab Control Sample	107	92	91	100
LCS 400-707696/1002	Lab Control Sample	106	93	91	101
MB 400-707537/4	Method Blank	104	93	89	100
MB 400-707696/4	Method Blank	109	92	87	102

Surrogate Legend

BFB = 4-Bromofluorobenzene
DBFM = Dibromofluoromethane
DCA = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL	TPHL
Lab Sample ID	Client Sample ID	(10-150)	(15-150)	(10-150)	(50-150)	(10-150)	(43-147)
752-31789-1	MW-1	89	90	112	96	131	79
752-31789-2	MW-3	123	84	161 S1+	96	255 S1+	85
752-31789-3	MW-5	88	87	105	99	133	85
752-31789-4	MW-6	92	90	106	90	132	86
752-31789-5	MW-7	96	89	123	102	220 S1+	88
752-31789-6	MW-8	87	89	120	104	228 S1+	87
752-31789-7	MW-9	89	86	109	100	162 S1+	87
752-31789-8	Dup-01	114	86	172 S1+	102	269 S1+	88
LCS 400-706646/2-A	Lab Control Sample	67	78	89	80	108	76
LCSD 400-706646/3-A	Lab Control Sample Dup	62	74	93	83	117	71
MB 400-706646/1-A	Method Blank	105	83	114	95	78	82

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl (Surr)
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL = Phenol-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)

Isotope Dilution Summary

Client: S&ME Inc
Job ID: 752-31789-1
Project/Site: Cliffdale Landfill

Method: 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Matrix: Water **Prep Type: Total/NA**

		Percent Isotope Dilution Recovery (Acceptance Limits)						
Lab Sample ID	Client Sample ID	DXE (10-140)						
752-31789-1	MW-1	22						
752-31789-2	MW-3	25						
752-31789-3	MW-5	25						
752-31789-5	MW-7	19						
752-31789-6	MW-8	22						
752-31789-7	MW-9	25						
752-31789-8	Dup-01	25						
LCS 400-706860/2-A	Lab Control Sample	26						
LCSD 400-706860/3-A	Lab Control Sample Dup	23						
MB 400-706860/1-A	Method Blank	25						

Surrogate Legend

DXE = 1,4-Dioxane-d8

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 400-707537/4
Matrix: Water
Analysis Batch: 707537

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		25.0	10.0	ug/L			04/30/25 07:56	1
Benzene	ND		1.00	0.500	ug/L			04/30/25 07:56	1
Bromobenzene	ND		1.00	0.540	ug/L			04/30/25 07:56	1
Bromoform	ND		5.00	0.250	ug/L			04/30/25 07:56	1
Bromomethane	ND		1.00	0.980	ug/L			04/30/25 07:56	1
2-Butanone (MEK)	ND		25.0	2.60	ug/L			04/30/25 07:56	1
Carbon disulfide	ND		1.00	0.500	ug/L			04/30/25 07:56	1
Carbon tetrachloride	ND		1.00	0.190	ug/L			04/30/25 07:56	1
Chlorobenzene	ND		1.00	0.420	ug/L			04/30/25 07:56	1
Chlorobromomethane	ND		1.00	0.520	ug/L			04/30/25 07:56	1
Chlorodibromomethane	ND		1.00	0.240	ug/L			04/30/25 07:56	1
Chloroethane	ND		1.00	0.760	ug/L			04/30/25 07:56	1
Chloroform	ND		1.00	0.900	ug/L			04/30/25 07:56	1
Chloromethane	ND		1.00	0.400	ug/L			04/30/25 07:56	1
2-Chlorotoluene	ND		1.00	0.570	ug/L			04/30/25 07:56	1
4-Chlorotoluene	ND		1.00	0.560	ug/L			04/30/25 07:56	1
cis-1,2-Dichloroethene	ND		1.00	0.200	ug/L			04/30/25 07:56	1
cis-1,3-Dichloropropene	ND		5.00	0.500	ug/L			04/30/25 07:56	1
1,2-Dibromo-3-Chloropropane	ND		5.00	1.50	ug/L			04/30/25 07:56	1
Dibromomethane	ND		5.00	0.220	ug/L			04/30/25 07:56	1
1,2-Dichlorobenzene	ND		1.00	0.500	ug/L			04/30/25 07:56	1
1,3-Dichlorobenzene	ND		1.00	0.540	ug/L			04/30/25 07:56	1
1,4-Dichlorobenzene	ND		1.00	0.640	ug/L			04/30/25 07:56	1
Dichlorobromomethane	ND		1.00	0.500	ug/L			04/30/25 07:56	1
1,1-Dichloroethane	ND		1.00	0.500	ug/L			04/30/25 07:56	1
1,2-Dichloroethane	ND		1.00	0.550	ug/L			04/30/25 07:56	1
1,1-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 07:56	1
1,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 07:56	1
1,3-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 07:56	1
2,2-Dichloropropane	ND		1.00	0.500	ug/L			04/30/25 07:56	1
1,1-Dichloropropene	ND		1.00	0.0900	ug/L			04/30/25 07:56	1
Ethyl acetate	ND		10.0	6.14	ug/L			04/30/25 07:56	1
Ethylbenzene	ND		1.00	0.500	ug/L			04/30/25 07:56	1
Ethylene Dibromide	ND		1.00	0.230	ug/L			04/30/25 07:56	1
Hexachlorobutadiene	ND		5.00	0.900	ug/L			04/30/25 07:56	1
Hexane	ND		1.00	0.960	ug/L			04/30/25 07:56	1
2-Hexanone	ND		25.0	4.26	ug/L			04/30/25 07:56	1
Iodomethane	ND		1.00	0.900	ug/L			04/30/25 07:56	1
Isopropylbenzene	ND		1.00	0.530	ug/L			04/30/25 07:56	1
Isopropyl ether	ND		1.00	0.740	ug/L			04/30/25 07:56	1
4-Isopropyltoluene	ND		1.00	0.710	ug/L			04/30/25 07:56	1
Methylene Chloride	ND		5.00	3.00	ug/L			04/30/25 07:56	1
4-Methyl-2-pentanone (MIBK)	ND		25.0	1.80	ug/L			04/30/25 07:56	1
Methyl tert-butyl ether	ND		1.00	0.220	ug/L			04/30/25 07:56	1
m-Xylene & p-Xylene	ND		5.00	3.00	ug/L			04/30/25 07:56	1
Naphthalene	ND		5.00	3.00	ug/L			04/30/25 07:56	1
n-Butylbenzene	ND		1.00	0.760	ug/L			04/30/25 07:56	1
n-Heptane	ND		1.00	0.210	ug/L			04/30/25 07:56	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 400-707537/4
Matrix: Water
Analysis Batch: 707537

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		1.00	0.690	ug/L			04/30/25 07:56	1
o-Xylene	ND		5.00	3.00	ug/L			04/30/25 07:56	1
sec-Butylbenzene	ND		1.00	0.700	ug/L			04/30/25 07:56	1
Styrene	ND		1.00	1.00	ug/L			04/30/25 07:56	1
tert-Butylbenzene	ND		1.00	0.630	ug/L			04/30/25 07:56	1
1,1,1,2-Tetrachloroethane	ND		1.00	0.380	ug/L			04/30/25 07:56	1
1,1,2,2-Tetrachloroethane	ND		1.00	0.500	ug/L			04/30/25 07:56	1
Tetrachloroethene	ND		1.00	0.330	ug/L			04/30/25 07:56	1
Toluene	ND		1.00	0.900	ug/L			04/30/25 07:56	1
trans-1,4-Dichloro-2-butene	ND		5.00	1.00	ug/L			04/30/25 07:56	1
trans-1,2-Dichloroethene	ND		1.00	0.500	ug/L			04/30/25 07:56	1
trans-1,3-Dichloropropene	ND		5.00	0.200	ug/L			04/30/25 07:56	1
1,2,3-Trichlorobenzene	ND		1.00	0.900	ug/L			04/30/25 07:56	1
1,2,4-Trichlorobenzene	ND		1.00	0.820	ug/L			04/30/25 07:56	1
1,1,1-Trichloroethane	ND		1.00	0.180	ug/L			04/30/25 07:56	1
1,1,2-Trichloroethane	ND		5.00	0.210	ug/L			04/30/25 07:56	1
Trichloroethene	ND		1.00	0.150	ug/L			04/30/25 07:56	1
Trichlorofluoromethane	ND		1.00	0.250	ug/L			04/30/25 07:56	1
1,2,3-Trichloropropane	ND		5.00	0.840	ug/L			04/30/25 07:56	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.00	0.500	ug/L			04/30/25 07:56	1
1,2,4-Trimethylbenzene	ND		1.00	0.820	ug/L			04/30/25 07:56	1
1,3,5-Trimethylbenzene	ND		1.00	0.560	ug/L			04/30/25 07:56	1
Vinyl acetate	ND		25.0	0.930	ug/L			04/30/25 07:56	1
Vinyl chloride	ND		1.00	0.500	ug/L			04/30/25 07:56	1
Xylenes, Total	ND		10.0	6.00	ug/L			04/30/25 07:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*104*		*56 - 136*		*04/30/25 07:56*	*1*
Dibromofluoromethane	*93*		*79 - 130*		*04/30/25 07:56*	*1*
1,2-Dichloroethane-d4 (Surr)	*89*		*59 - 146*		*04/30/25 07:56*	*1*
Toluene-d8 (Surr)	*100*		*64 - 132*		*04/30/25 07:56*	*1*

Lab Sample ID: LCS 400-707537/1002
Matrix: Water
Analysis Batch: 707537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	200	208.8		ug/L		104	43 - 150
Benzene	50.0	48.65		ug/L		97	70 - 130
Bromobenzene	50.0	47.44		ug/L		95	70 - 132
Bromoform	50.0	42.43		ug/L		85	57 - 140
Bromomethane	50.0	47.26		ug/L		95	10 - 150
2-Butanone (MEK)	200	169.1		ug/L		85	61 - 145
Carbon disulfide	50.0	52.71		ug/L		105	61 - 137
Carbon tetrachloride	50.0	42.98		ug/L		86	61 - 137
Chlorobenzene	50.0	47.95		ug/L		96	70 - 130
Chlorobromomethane	50.0	46.90		ug/L		94	70 - 130
Chlorodibromomethane	50.0	45.01		ug/L		90	67 - 135

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 400-707537/1002
Matrix: Water
Analysis Batch: 707537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloroethane	50.0	55.94		ug/L		112	55 - 141
Chloroform	50.0	46.72		ug/L		93	69 - 130
Chloromethane	50.0	56.39		ug/L		113	58 - 137
2-Chlorotoluene	50.0	52.32		ug/L		105	70 - 130
4-Chlorotoluene	50.0	52.55		ug/L		105	70 - 130
cis-1,2-Dichloroethene	50.0	46.91		ug/L		94	68 - 130
cis-1,3-Dichloropropene	50.0	47.28		ug/L		95	69 - 132
1,2-Dibromo-3-Chloropropane	50.0	42.42		ug/L		85	54 - 135
Dibromomethane	50.0	46.42		ug/L		93	70 - 130
1,2-Dichlorobenzene	50.0	49.96		ug/L		100	67 - 130
1,3-Dichlorobenzene	50.0	50.56		ug/L		101	70 - 130
1,4-Dichlorobenzene	50.0	49.52		ug/L		99	70 - 130
Dichlorobromomethane	50.0	45.91		ug/L		92	67 - 133
1,1-Dichloroethane	50.0	49.72		ug/L		99	70 - 130
1,2-Dichloroethane	50.0	40.99		ug/L		82	69 - 130
1,1-Dichloroethene	50.0	54.27		ug/L		109	63 - 134
1,2-Dichloropropane	50.0	49.26		ug/L		99	70 - 130
1,3-Dichloropropane	50.0	48.89		ug/L		98	70 - 130
2,2-Dichloropropane	50.0	43.41		ug/L		87	52 - 135
1,1-Dichloropropene	50.0	47.32		ug/L		95	70 - 130
Ethyl acetate	100	87.57		ug/L		88	34 - 150
Ethylbenzene	50.0	49.72		ug/L		99	70 - 130
Ethylene Dibromide	50.0	48.15		ug/L		96	70 - 130
Hexachlorobutadiene	50.0	47.72		ug/L		95	53 - 140
Hexane	50.0	49.82		ug/L		100	69 - 130
2-Hexanone	200	177.2		ug/L		89	65 - 137
Iodomethane	50.0	47.68		ug/L		95	27 - 150
Isopropylbenzene	50.0	49.07		ug/L		98	70 - 130
Isopropyl ether	50.0	46.92		ug/L		94	64 - 132
4-Isopropyltoluene	50.0	53.54		ug/L		107	65 - 130
Methylene Chloride	50.0	52.81		ug/L		106	66 - 135
4-Methyl-2-pentanone (MIBK)	200	179.1		ug/L		90	69 - 138
Methyl tert-butyl ether	50.0	48.63		ug/L		97	66 - 130
m-Xylene & p-Xylene	50.0	48.32		ug/L		97	70 - 130
Naphthalene	50.0	37.89		ug/L		76	47 - 149
n-Butylbenzene	50.0	56.50		ug/L		113	67 - 130
n-Heptane	50.0	47.87		ug/L		96	70 - 130
N-Propylbenzene	50.0	55.02		ug/L		110	70 - 130
o-Xylene	50.0	48.96		ug/L		98	70 - 130
sec-Butylbenzene	50.0	55.23		ug/L		110	66 - 130
Styrene	50.0	46.72		ug/L		93	70 - 130
tert-Butylbenzene	50.0	51.16		ug/L		102	64 - 139
1,1,1,2-Tetrachloroethane	50.0	45.43		ug/L		91	67 - 131
1,1,2,2-Tetrachloroethane	50.0	48.42		ug/L		97	70 - 131
Tetrachloroethene	50.0	48.74		ug/L		97	65 - 130
Toluene	50.0	47.86		ug/L		96	70 - 130
trans-1,4-Dichloro-2-butene	50.0	48.19		ug/L		96	57 - 140
trans-1,2-Dichloroethene	50.0	50.35		ug/L		101	70 - 130
trans-1,3-Dichloropropene	50.0	46.82		ug/L		94	63 - 130

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 400-707537/1002
Matrix: Water
Analysis Batch: 707537

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichlorobenzene	50.0	39.04		ug/L		78	60 - 138
1,2,4-Trichlorobenzene	50.0	43.26		ug/L		87	60 - 140
1,1,1-Trichloroethane	50.0	44.86		ug/L		90	68 - 130
1,1,2-Trichloroethane	50.0	50.30		ug/L		101	70 - 130
Trichloroethene	50.0	47.71		ug/L		95	70 - 130
Trichlorofluoromethane	50.0	51.27		ug/L		103	65 - 138
1,2,3-Trichloropropane	50.0	49.18		ug/L		98	70 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	45.32		ug/L		91	60 - 139
1,2,4-Trimethylbenzene	50.0	53.00		ug/L		106	70 - 130
1,3,5-Trimethylbenzene	50.0	53.72		ug/L		107	69 - 130
Vinyl acetate	100	106.4		ug/L		106	26 - 150
Vinyl chloride	50.0	52.64		ug/L		105	59 - 136
Xylenes, Total	100	97.28		ug/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*107*		*56 - 136*
Dibromofluoromethane	*92*		*79 - 130*
1,2-Dichloroethane-d4 (Surr)	*91*		*59 - 146*
Toluene-d8 (Surr)	*100*		*64 - 132*

Lab Sample ID: MB 400-707696/4
Matrix: Water
Analysis Batch: 707696

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.00	3.00	ug/L			05/01/25 07:44	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*109*		*56 - 136*		*05/01/25 07:44*	*1*
Dibromofluoromethane	*92*		*79 - 130*		*05/01/25 07:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*87*		*59 - 146*		*05/01/25 07:44*	*1*
Toluene-d8 (Surr)	*102*		*64 - 132*		*05/01/25 07:44*	*1*

Lab Sample ID: LCS 400-707696/1002
Matrix: Water
Analysis Batch: 707696

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Naphthalene	50.0	39.79		ug/L		80	47 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*106*		*56 - 136*
Dibromofluoromethane	*93*		*79 - 130*
1,2-Dichloroethane-d4 (Surr)	*91*		*59 - 146*
Toluene-d8 (Surr)	*101*		*64 - 132*

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS)

Lab Sample ID: MB 400-706646/1-A
Matrix: Water
Analysis Batch: 708164

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 706646

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1'-Biphenyl	ND		10.0	0.420	ug/L		04/22/25 13:34	05/06/25 11:37	1
2,4,5-Trichlorophenol	ND		10.0	0.540	ug/L		04/22/25 13:34	05/06/25 11:37	1
2,4,6-Trichlorophenol	ND		10.0	1.09	ug/L		04/22/25 13:34	05/06/25 11:37	1
2,4-Dichlorophenol	ND		10.0	0.570	ug/L		04/22/25 13:34	05/06/25 11:37	1
2,4-Dimethylphenol	ND		10.0	0.240	ug/L		04/22/25 13:34	05/06/25 11:37	1
2,4-Dinitrophenol	ND		30.0	4.68	ug/L		04/22/25 13:34	05/06/25 11:37	1
2,4-Dinitrotoluene	ND		10.0	0.650	ug/L		04/22/25 13:34	05/06/25 11:37	1
2,6-Dinitrotoluene	ND		10.0	0.290	ug/L		04/22/25 13:34	05/06/25 11:37	1
2-Chloronaphthalene	ND		10.0	0.380	ug/L		04/22/25 13:34	05/06/25 11:37	1
2-Chlorophenol	ND		10.0	0.840	ug/L		04/22/25 13:34	05/06/25 11:37	1
2-Methylnaphthalene	ND		10.0	0.810	ug/L		04/22/25 13:34	05/06/25 11:37	1
2-Methylphenol	ND		10.0	0.760	ug/L		04/22/25 13:34	05/06/25 11:37	1
2-Nitroaniline	ND		10.0	1.37	ug/L		04/22/25 13:34	05/06/25 11:37	1
2-Nitrophenol	ND		10.0	1.17	ug/L		04/22/25 13:34	05/06/25 11:37	1
3 & 4 Methylphenol	ND		20.0	4.60	ug/L		04/22/25 13:34	05/06/25 11:37	1
3,3'-Dichlorobenzidine	ND		11.0	0.410	ug/L		04/22/25 13:34	05/06/25 11:37	1
3-Nitroaniline	ND		10.0	0.950	ug/L		04/22/25 13:34	05/06/25 11:37	1
4,6-Dinitro-2-methylphenol	ND		10.0	1.97	ug/L		04/22/25 13:34	05/06/25 11:37	1
4-Bromophenyl phenyl ether	ND		10.0	0.130	ug/L		04/22/25 13:34	05/06/25 11:37	1
4-Chloro-3-methylphenol	ND		10.0	0.730	ug/L		04/22/25 13:34	05/06/25 11:37	1
4-Chloroaniline	ND		10.0	0.280	ug/L		04/22/25 13:34	05/06/25 11:37	1
4-Chlorophenyl phenyl ether	ND		10.0	0.240	ug/L		04/22/25 13:34	05/06/25 11:37	1
4-Nitroaniline	ND		10.0	3.50	ug/L		04/22/25 13:34	05/06/25 11:37	1
4-Nitrophenol	ND		10.0	2.74	ug/L		04/22/25 13:34	05/06/25 11:37	1
Acenaphthene	ND		10.0	0.630	ug/L		04/22/25 13:34	05/06/25 11:37	1
Acenaphthylene	ND		10.0	0.760	ug/L		04/22/25 13:34	05/06/25 11:37	1
Acetophenone	ND		10.0	3.20	ug/L		04/22/25 13:34	05/06/25 11:37	1
Anthracene	ND		10.0	0.910	ug/L		04/22/25 13:34	05/06/25 11:37	1
Atrazine	ND		10.0	1.13	ug/L		04/22/25 13:34	05/06/25 11:37	1
Benzaldehyde	ND		10.0	0.670	ug/L		04/22/25 13:34	05/06/25 11:37	1
Benzo[a]anthracene	ND		10.0	1.00	ug/L		04/22/25 13:34	05/06/25 11:37	1
Benzo[a]pyrene	ND		10.0	1.10	ug/L		04/22/25 13:34	05/06/25 11:37	1
Benzo[b]fluoranthene	ND		10.0	1.20	ug/L		04/22/25 13:34	05/06/25 11:37	1
Benzo[g,h,i]perylene	ND		10.0	1.50	ug/L		04/22/25 13:34	05/06/25 11:37	1
Benzo[k]fluoranthene	ND		10.0	1.50	ug/L		04/22/25 13:34	05/06/25 11:37	1
bis (2-chloroisopropyl) ether	ND		10.0	0.930	ug/L		04/22/25 13:34	05/06/25 11:37	1
Bis(2-chloroethoxy)methane	ND		10.0	0.340	ug/L		04/22/25 13:34	05/06/25 11:37	1
Bis(2-chloroethyl)ether	ND		10.0	0.730	ug/L		04/22/25 13:34	05/06/25 11:37	1
Bis(2-ethylhexyl) phthalate	ND		10.0	4.00	ug/L		04/22/25 13:34	05/06/25 11:37	1
Butyl benzyl phthalate	ND		10.0	4.00	ug/L		04/22/25 13:34	05/06/25 11:37	1
Caprolactam	ND		10.0	2.40	ug/L		04/22/25 13:34	05/06/25 11:37	1
Carbazole	ND		10.0	0.320	ug/L		04/22/25 13:34	05/06/25 11:37	1
Chrysene	ND		10.0	1.20	ug/L		04/22/25 13:34	05/06/25 11:37	1
Dibenz(a,h)anthracene	ND		10.0	1.30	ug/L		04/22/25 13:34	05/06/25 11:37	1
Dibenzofuran	ND		10.0	0.640	ug/L		04/22/25 13:34	05/06/25 11:37	1
Diethyl phthalate	ND		10.0	4.00	ug/L		04/22/25 13:34	05/06/25 11:37	1
Dimethyl phthalate	ND		10.0	4.00	ug/L		04/22/25 13:34	05/06/25 11:37	1
Di-n-butyl phthalate	ND		10.0	4.00	ug/L		04/22/25 13:34	05/06/25 11:37	1

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: MB 400-706646/1-A
Matrix: Water
Analysis Batch: 708164

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 706646

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Di-n-octyl phthalate	ND		10.0	4.00	ug/L		04/22/25 13:34	05/06/25 11:37	1
Fluoranthene	ND		10.0	0.630	ug/L		04/22/25 13:34	05/06/25 11:37	1
Fluorene	ND		10.0	0.670	ug/L		04/22/25 13:34	05/06/25 11:37	1
Hexachlorobenzene	ND		10.0	0.250	ug/L		04/22/25 13:34	05/06/25 11:37	1
Hexachlorobutadiene	ND		10.0	0.550	ug/L		04/22/25 13:34	05/06/25 11:37	1
Hexachlorocyclopentadiene	ND		20.0	0.320	ug/L		04/22/25 13:34	05/06/25 11:37	1
Hexachloroethane	ND		10.0	0.530	ug/L		04/22/25 13:34	05/06/25 11:37	1
Indeno[1,2,3-cd]pyrene	ND		10.0	1.10	ug/L		04/22/25 13:34	05/06/25 11:37	1
Isophorone	ND		10.0	0.800	ug/L		04/22/25 13:34	05/06/25 11:37	1
Naphthalene	ND		10.0	0.750	ug/L		04/22/25 13:34	05/06/25 11:37	1
Nitrobenzene	ND		10.0	0.600	ug/L		04/22/25 13:34	05/06/25 11:37	1
N-Nitrosodi-n-propylamine	ND		10.0	0.330	ug/L		04/22/25 13:34	05/06/25 11:37	1
N-Nitrosodiphenylamine	ND		10.0	0.190	ug/L		04/22/25 13:34	05/06/25 11:37	1
Pentachlorophenol	ND		10.0	2.80	ug/L		04/22/25 13:34	05/06/25 11:37	1
Phenanthrene	ND		10.0	0.740	ug/L		04/22/25 13:34	05/06/25 11:37	1
Phenol	ND		10.0	0.680	ug/L		04/22/25 13:34	05/06/25 11:37	1
Pyrene	ND		10.0	0.630	ug/L		04/22/25 13:34	05/06/25 11:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*105*		*10 - 150*	*04/22/25 13:34*	*05/06/25 11:37*	*1*
2-Fluorobiphenyl (Surr)	*83*		*15 - 150*	*04/22/25 13:34*	*05/06/25 11:37*	*1*
2-Fluorophenol (Surr)	*114*		*10 - 150*	*04/22/25 13:34*	*05/06/25 11:37*	*1*
Nitrobenzene-d5 (Surr)	*95*		*50 - 150*	*04/22/25 13:34*	*05/06/25 11:37*	*1*
Phenol-d5 (Surr)	*78*		*10 - 150*	*04/22/25 13:34*	*05/06/25 11:37*	*1*
Terphenyl-d14 (Surr)	*82*		*43 - 147*	*04/22/25 13:34*	*05/06/25 11:37*	*1*

Lab Sample ID: LCS 400-706646/2-A
Matrix: Water
Analysis Batch: 707862

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 706646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1'-Biphenyl	25.0	15.33		ug/L		61	47 - 124
2,4,5-Trichlorophenol	25.0	14.74		ug/L		59	10 - 150
2,4,6-Trichlorophenol	25.0	13.63		ug/L		55	50 - 150
2,4-Dichlorophenol	25.0	14.47		ug/L		58	11 - 150
2,4-Dimethylphenol	25.0	12.70		ug/L		51	5 - 150
2,4-Dinitrophenol	50.0	46.53		ug/L		93	10 - 150
2,4-Dinitrotoluene	25.0	16.23		ug/L		65	46 - 137
2,6-Dinitrotoluene	25.0	17.75		ug/L		71	35 - 150
2-Chloronaphthalene	25.0	43.14	*+	ug/L		173	44 - 122
2-Chlorophenol	25.0	15.78		ug/L		63	10 - 150
2-Methylnaphthalene	25.0	15.72		ug/L		63	31 - 115
2-Methylphenol	25.0	12.40		ug/L		50	42 - 120
2-Nitroaniline	25.0	17.61		ug/L		70	10 - 150
2-Nitrophenol	25.0	17.60		ug/L		70	21 - 150
3 & 4 Methylphenol	25.0	18.03	J I	ug/L		72	10 - 150
3,3'-Dichlorobenzidine	33.3	22.19		ug/L		67	10 - 150
3-Nitroaniline	25.0	19.81		ug/L		79	10 - 150

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: LCS 400-706646/2-A
Matrix: Water
Analysis Batch: 707862

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 706646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,6-Dinitro-2-methylphenol	50.0	39.51		ug/L		79	10 - 150
4-Bromophenyl phenyl ether	25.0	16.91		ug/L		68	50 - 126
4-Chloro-3-methylphenol	25.0	12.44		ug/L		50	14 - 150
4-Chloroaniline	25.0	13.53		ug/L		54	10 - 150
4-Chlorophenyl phenyl ether	25.0	14.28		ug/L		57	51 - 125
4-Nitroaniline	25.0	24.59		ug/L		98	10 - 144
4-Nitrophenol	50.0	39.50		ug/L		79	10 - 150
Acenaphthene	25.0	15.71		ug/L		63	44 - 122
Acenaphthylene	25.0	16.59		ug/L		66	42 - 125
Acetophenone	25.0	15.02		ug/L		60	54 - 131
Anthracene	25.0	16.08		ug/L		64	51 - 136
Atrazine	50.0	51.24		ug/L		102	10 - 150
Benzaldehyde	50.0	36.52		ug/L		73	10 - 150
Benzo[a]anthracene	25.0	16.10		ug/L		64	50 - 138
Benzo[a]pyrene	25.0	15.46		ug/L		62	53 - 134
Benzo[b]fluoranthene	25.0	16.41		ug/L		66	50 - 134
Benzo[g,h,i]perylene	25.0	15.56		ug/L		62	42 - 138
Benzo[k]fluoranthene	25.0	15.33		ug/L		61	55 - 136
bis (2-chloroisopropyl) ether	25.0	16.04		ug/L		64	10 - 150
Bis(2-chloroethoxy)methane	25.0	17.96		ug/L		72	60 - 123
Bis(2-chloroethyl)ether	25.0	15.25		ug/L		61	45 - 127
Bis(2-ethylhexyl) phthalate	25.0	13.55		ug/L		54	10 - 147
Butyl benzyl phthalate	25.0	11.84		ug/L		47	36 - 137
Caprolactam	50.0	51.71		ug/L		103	50 - 150
Carbazole	25.0	14.75		ug/L		59	59 - 128
Chrysene	25.0	15.33		ug/L		61	53 - 141
Dibenz(a,h)anthracene	25.0	15.36		ug/L		61	41 - 139
Dibenzofuran	25.0	16.34		ug/L		65	55 - 125
Diethyl phthalate	25.0	11.39	*-	ug/L		46	61 - 130
Dimethyl phthalate	25.0	12.12	*-	ug/L		48	55 - 139
Di-n-butyl phthalate	25.0	10.58	*-	ug/L		42	50 - 150
Di-n-octyl phthalate	25.0	15.93		ug/L		64	10 - 150
Fluoranthene	25.0	15.30		ug/L		61	49 - 141
Fluorene	25.0	18.37		ug/L		73	41 - 136
Hexachlorobenzene	25.0	14.02		ug/L		56	53 - 126
Hexachlorobutadiene	25.0	12.05		ug/L		48	10 - 117
Hexachlorocyclopentadiene	25.0	10.80	J	ug/L		43	10 - 150
Hexachloroethane	25.0	14.01		ug/L		56	10 - 112
Indeno[1,2,3-cd]pyrene	25.0	15.24		ug/L		61	30 - 150
Isophorone	25.0	15.92		ug/L		64	51 - 125
Naphthalene	25.0	16.28		ug/L		65	31 - 122
Nitrobenzene	25.0	16.43		ug/L		66	57 - 138
N-Nitrosodi-n-propylamine	25.0	17.27		ug/L		69	53 - 134
N-Nitrosodiphenylamine	24.8	16.54		ug/L		67	62 - 132
Pentachlorophenol	50.0	21.39		ug/L		43	16 - 150
Phenanthrene	25.0	15.48		ug/L		62	50 - 133
Phenol	25.0	19.63		ug/L		79	10 - 150
Pyrene	25.0	16.02		ug/L		64	46 - 149

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: LCS 400-706646/2-A
Matrix: Water
Analysis Batch: 707862

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 706646

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*67*		*10 - 150*
2-Fluorobiphenyl (Surr)	*78*		*15 - 150*
2-Fluorophenol (Surr)	*89*		*10 - 150*
Nitrobenzene-d5 (Surr)	*80*		*50 - 150*
Phenol-d5 (Surr)	*108*		*10 - 150*
Terphenyl-d14 (Surr)	*76*		*43 - 147*

Lab Sample ID: LCSD 400-706646/3-A
Matrix: Water
Analysis Batch: 707862

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 706646

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1'-Biphenyl			25.0	15.11		ug/L		60	47 - 124	1	40
2,4,5-Trichlorophenol			25.0	14.46		ug/L		58	10 - 150	2	40
2,4,6-Trichlorophenol			25.0	15.08		ug/L		60	50 - 150	10	40
2,4-Dichlorophenol			25.0	13.60		ug/L		54	11 - 150	6	40
2,4-Dimethylphenol			25.0	13.31		ug/L		53	5 - 150	5	40
2,4-Dinitrophenol			50.0	47.30		ug/L		95	10 - 150	2	40
2,4-Dinitrotoluene			25.0	16.39		ug/L		66	46 - 137	1	40
2,6-Dinitrotoluene			25.0	17.96		ug/L		72	35 - 150	1	40
2-Chloronaphthalene			25.0	44.33	*+	ug/L		177	44 - 122	3	40
2-Chlorophenol			25.0	16.46		ug/L		66	10 - 150	4	40
2-Methylnaphthalene			25.0	15.47		ug/L		62	31 - 115	2	40
2-Methylphenol			25.0	11.82		ug/L		47	42 - 120	5	40
2-Nitroaniline			25.0	17.75		ug/L		71	10 - 150	1	40
2-Nitrophenol			25.0	17.84		ug/L		71	21 - 150	1	40
3 & 4 Methylphenol			25.0	18.25	J I	ug/L		73	10 - 150	1	40
3,3'-Dichlorobenzidine			33.3	21.69		ug/L		65	10 - 150	2	40
3-Nitroaniline			25.0	19.80		ug/L		79	10 - 150	0	40
4,6-Dinitro-2-methylphenol			50.0	39.38		ug/L		79	10 - 150	0	40
4-Bromophenyl phenyl ether			25.0	16.49		ug/L		66	50 - 126	2	40
4-Chloro-3-methylphenol			25.0	13.41		ug/L		54	14 - 150	7	40
4-Chloroaniline			25.0	13.71		ug/L		55	10 - 150	1	40
4-Chlorophenyl phenyl ether			25.0	13.87		ug/L		55	51 - 125	3	40
4-Nitroaniline			25.0	25.07		ug/L		100	10 - 144	2	40
4-Nitrophenol			50.0	39.76		ug/L		80	10 - 150	1	40
Acenaphthene			25.0	15.35		ug/L		61	44 - 122	2	40
Acenaphthylene			25.0	16.12		ug/L		64	42 - 125	3	40
Acetophenone			25.0	15.31		ug/L		61	54 - 131	2	40
Anthracene			25.0	15.74		ug/L		63	51 - 136	2	40
Atrazine			50.0	36.89		ug/L		74	10 - 150	33	40
Benzaldehyde			50.0	19.28	*1	ug/L		39	10 - 150	62	40
Benzo[a]anthracene			25.0	15.59		ug/L		62	50 - 138	3	40
Benzo[a]pyrene			25.0	15.25		ug/L		61	53 - 134	1	40
Benzo[b]fluoranthene			25.0	16.30		ug/L		65	50 - 134	1	40
Benzo[g,h,i]perylene			25.0	15.25		ug/L		61	42 - 138	2	40
Benzo[k]fluoranthene			25.0	14.96		ug/L		60	55 - 136	2	40
bis (2-chloroisopropyl) ether			25.0	16.87		ug/L		67	10 - 150	5	40

Method: 8270E - Semivolatile Organic Compounds (GC-MS/MS) (Continued)

Lab Sample ID: LCSD 400-706646/3-A
Matrix: Water
Analysis Batch: 707862

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 706646

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Bis(2-chloroethoxy)methane	25.0	17.55		ug/L		70	60 - 123	2	40
Bis(2-chloroethyl)ether	25.0	15.96		ug/L		64	45 - 127	5	40
Bis(2-ethylhexyl) phthalate	25.0	13.19		ug/L		53	10 - 147	3	40
Butyl benzyl phthalate	25.0	13.05		ug/L		52	36 - 137	10	40
Caprolactam	50.0	42.86		ug/L		86	50 - 150	19	40
Carbazole	25.0	15.03		ug/L		60	59 - 128	2	40
Chrysene	25.0	14.76		ug/L		59	53 - 141	4	40
Dibenz(a,h)anthracene	25.0	15.09		ug/L		60	41 - 139	2	40
Dibenzofuran	25.0	16.09		ug/L		64	55 - 125	2	40
Diethyl phthalate	25.0	11.46	*-	ug/L		46	61 - 130	1	40
Dimethyl phthalate	25.0	11.98	*-	ug/L		48	55 - 139	1	40
Di-n-butyl phthalate	25.0	11.83	*-	ug/L		47	50 - 150	11	40
Di-n-octyl phthalate	25.0	15.64		ug/L		63	10 - 150	2	40
Fluoranthene	25.0	14.89		ug/L		60	49 - 141	3	40
Fluorene	25.0	18.04		ug/L		72	41 - 136	2	40
Hexachlorobenzene	25.0	13.59		ug/L		54	53 - 126	3	40
Hexachlorobutadiene	25.0	11.27		ug/L		45	10 - 117	7	40
Hexachlorocyclopentadiene	25.0	11.16	J	ug/L		45	10 - 150	3	40
Hexachloroethane	25.0	13.82		ug/L		55	10 - 112	1	40
Indeno[1,2,3-cd]pyrene	25.0	15.04		ug/L		60	30 - 150	1	40
Isophorone	25.0	16.49		ug/L		66	51 - 125	4	40
Naphthalene	25.0	15.89		ug/L		64	31 - 122	2	40
Nitrobenzene	25.0	17.51		ug/L		70	57 - 138	6	40
N-Nitrosodi-n-propylamine	25.0	18.11		ug/L		72	53 - 134	5	40
N-Nitrosodiphenylamine	24.8	16.30		ug/L		66	62 - 132	2	40
Pentachlorophenol	50.0	26.96		ug/L		54	16 - 150	23	40
Phenanthrene	25.0	15.02		ug/L		60	50 - 133	3	40
Phenol	25.0	21.61		ug/L		86	10 - 150	10	40
Pyrene	25.0	15.70		ug/L		63	46 - 149	2	40

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*62*		*10 - 150*
2-Fluorobiphenyl (Surr)	*74*		*15 - 150*
2-Fluorophenol (Surr)	*93*		*10 - 150*
Nitrobenzene-d5 (Surr)	*83*		*50 - 150*
Phenol-d5 (Surr)	*117*		*10 - 150*
Terphenyl-d14 (Surr)	*71*		*43 - 147*

Method: 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: MB 400-706860/1-A
Matrix: Water
Analysis Batch: 707337

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 706860

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.300	0.300	ug/L		04/23/25 16:43	04/28/25 17:36	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*25*		*10 - 140*	*04/23/25 16:43*	*04/28/25 17:36*	*1*

Method: 8270E SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: LCS 400-706860/2-A
Matrix: Water
Analysis Batch: 707337

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 706860

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,4-Dioxane			16.0	15.54		ug/L		97	30 - 150		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8	*26*		*10 - 140*

Lab Sample ID: LCSD 400-706860/3-A
Matrix: Water
Analysis Batch: 707337

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 706860

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,4-Dioxane			16.0	16.10		ug/L		101	30 - 150	4	

Isotope Dilution	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8	*23*		*10 - 140*

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 400-706720/36
Matrix: Water
Analysis Batch: 706720

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		1.00	0.390	mg/L			04/22/25 23:14	1

Lab Sample ID: LCS 400-706720/37
Matrix: Water
Analysis Batch: 706720

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfate			10.0	10.41		mg/L		104	90 - 110		

Lab Sample ID: LCSD 400-706720/38
Matrix: Water
Analysis Batch: 706720

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate			10.0	10.25		mg/L		102	90 - 110	2	15

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 680-881136/1-A
Matrix: Water
Analysis Batch: 881214

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 881136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		5.00	0.340	ug/L		04/21/25 08:36	04/22/25 07:56	1
Arsenic	ND		3.00	0.860	ug/L		04/21/25 08:36	04/22/25 07:56	1
Barium	ND		5.00	0.890	ug/L		04/21/25 08:36	04/22/25 07:56	1
Beryllium	ND		0.500	0.200	ug/L		04/21/25 08:36	04/22/25 07:56	1
Cadmium	ND		0.500	0.0780	ug/L		04/21/25 08:36	04/22/25 07:56	1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 680-881136/1-A
Matrix: Water
Analysis Batch: 881214

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 881136

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		5.00	1.20	ug/L		04/21/25 08:36	04/22/25 07:56	1
Cobalt	ND		0.500	0.220	ug/L		04/21/25 08:36	04/22/25 07:56	1
Copper	ND		5.00	1.08	ug/L		04/21/25 08:36	04/22/25 07:56	1
Lead	ND		2.50	0.210	ug/L		04/21/25 08:36	04/22/25 07:56	1
Manganese	ND		5.00	2.20	ug/L		04/21/25 08:36	04/22/25 07:56	1
Nickel	ND		5.00	0.420	ug/L		04/21/25 08:36	04/22/25 07:56	1
Selenium	1.015	J	2.50	0.990	ug/L		04/21/25 08:36	04/22/25 07:56	1
Silver	ND		1.00	0.390	ug/L		04/21/25 08:36	04/22/25 07:56	1
Thallium	ND		1.00	0.260	ug/L		04/21/25 08:36	04/22/25 07:56	1
Vanadium	ND		10.0	0.630	ug/L		04/21/25 08:36	04/22/25 07:56	1
Zinc	ND		20.0	2.80	ug/L		04/21/25 08:36	04/22/25 07:56	1

Lab Sample ID: LCS 680-881136/2-A
Matrix: Water
Analysis Batch: 881214

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 881136

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	50.0	52.89		ug/L		106	80 - 120
Arsenic	100	107.7		ug/L		108	80 - 120
Barium	100	106.5		ug/L		107	80 - 120
Beryllium	50.0	51.32		ug/L		103	80 - 120
Cadmium	50.0	55.00		ug/L		110	80 - 120
Chromium	100	110.0		ug/L		110	80 - 120
Cobalt	50.0	52.23		ug/L		104	80 - 120
Copper	101	103.7		ug/L		103	80 - 120
Lead	500	522.3		ug/L		104	80 - 120
Manganese	400	417.8		ug/L		104	80 - 120
Nickel	100	104.4		ug/L		104	80 - 120
Selenium	100	103.1		ug/L		103	80 - 120
Silver	50.0	55.22		ug/L		110	80 - 120
Thallium	50.0	54.34		ug/L		109	80 - 120
Vanadium	100	111.6		ug/L		112	80 - 120
Zinc	100	102.5		ug/L		102	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-881157/1-A
Matrix: Water
Analysis Batch: 881212

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 881157

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.200	0.0800	ug/L		04/21/25 11:38	04/21/25 15:42	1

Lab Sample ID: LCS 680-881157/2-A
Matrix: Water
Analysis Batch: 881212

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 881157

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	2.50	2.086		ug/L		83	80 - 120

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 752-11782/10
Matrix: Water
Analysis Batch: 11782

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.0500	0.0200	mg/L			04/24/25 10:10	1

Lab Sample ID: MB 752-11782/74
Matrix: Water
Analysis Batch: 11782

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.0500	0.0200	mg/L			04/24/25 12:18	1

Lab Sample ID: LCS 752-11782/11
Matrix: Water
Analysis Batch: 11782

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia (as N)			1.02	1.004		mg/L		99	90 - 110		

Lab Sample ID: LCS 752-11782/75
Matrix: Water
Analysis Batch: 11782

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia (as N)			1.02	1.013		mg/L		100	90 - 110		

Lab Sample ID: 752-31789-1 MS
Matrix: Water
Analysis Batch: 11782

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia (as N)	22.6	F1	39.5	64.70		mg/L		106	90 - 110		

Lab Sample ID: 752-31789-1 MSD
Matrix: Water
Analysis Batch: 11782

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia (as N)	22.6	F1	39.5	75.39	F1	mg/L		133	90 - 110	15	30

Lab Sample ID: 752-31789-2 MS
Matrix: Water
Analysis Batch: 11782

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Ammonia (as N)	230		198	434.9		mg/L		103	90 - 110		

Lab Sample ID: 752-31789-2 MSD
Matrix: Water
Analysis Batch: 11782

Client Sample ID: MW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Ammonia (as N)	230		198	424.9		mg/L		98	90 - 110	2	30

Method: 353.2 - Nitrogen, Nitrite

Lab Sample ID: MB 752-11733/8
Matrix: Water
Analysis Batch: 11733

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	ND		0.100	0.0168	mg/L			04/18/25 15:01	1

Lab Sample ID: LCS 752-11733/11
Matrix: Water
Analysis Batch: 11733

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrite as N			1.00	0.9438		mg/L		94	90 - 110		

Lab Sample ID: LCSD 752-11733/25
Matrix: Water
Analysis Batch: 11733

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N			1.00	0.9526		mg/L		95	90 - 110	1	10

Lab Sample ID: 752-31789-5 MS
Matrix: Water
Analysis Batch: 11733

Client Sample ID: MW-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrite as N	ND	F1	1.00	0.8943	F1	mg/L		89	90 - 110		

Lab Sample ID: 752-31789-5 MSD
Matrix: Water
Analysis Batch: 11733

Client Sample ID: MW-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	ND	F1	1.00	0.8919	F1	mg/L		89	90 - 110	0	10

Lab Sample ID: 752-31789-6 MS
Matrix: Water
Analysis Batch: 11733

Client Sample ID: MW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Nitrite as N	ND		1.00	0.9605		mg/L		96	90 - 110		

Lab Sample ID: 752-31789-6 MSD
Matrix: Water
Analysis Batch: 11733

Client Sample ID: MW-8
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Nitrite as N	ND		1.00	0.9535		mg/L		95	90 - 110	1	10

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 752-11761/8
Matrix: Water
Analysis Batch: 11761

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate Nitrite as N	ND		0.100	0.0410	mg/L			04/22/25 10:12	1

Lab Sample ID: LCS 752-11761/9
Matrix: Water
Analysis Batch: 11761

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Nitrate Nitrite as N	1.25	1.128		mg/L		90	90 - 110

GC/MS VOA

Analysis Batch: 707537

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	8260D	
752-31789-2	MW-3	Total/NA	Water	8260D	
752-31789-3	MW-5	Total/NA	Water	8260D	
752-31789-4	MW-6	Total/NA	Water	8260D	
752-31789-5	MW-7	Total/NA	Water	8260D	
752-31789-6	MW-8	Total/NA	Water	8260D	
752-31789-7	MW-9	Total/NA	Water	8260D	
752-31789-8	Dup-01	Total/NA	Water	8260D	
752-31789-9	Trip Blank	Total/NA	Water	8260D	
MB 400-707537/4	Method Blank	Total/NA	Water	8260D	
LCS 400-707537/1002	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 707696

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-3 - RA	MW-5	Total/NA	Water	8260D	
MB 400-707696/4	Method Blank	Total/NA	Water	8260D	
LCS 400-707696/1002	Lab Control Sample	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 706646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	3511	
752-31789-2	MW-3	Total/NA	Water	3511	
752-31789-3	MW-5	Total/NA	Water	3511	
752-31789-4	MW-6	Total/NA	Water	3511	
752-31789-5	MW-7	Total/NA	Water	3511	
752-31789-6	MW-8	Total/NA	Water	3511	
752-31789-7	MW-9	Total/NA	Water	3511	
752-31789-8	Dup-01	Total/NA	Water	3511	
MB 400-706646/1-A	Method Blank	Total/NA	Water	3511	
LCS 400-706646/2-A	Lab Control Sample	Total/NA	Water	3511	
LCSD 400-706646/3-A	Lab Control Sample Dup	Total/NA	Water	3511	

Prep Batch: 706860

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	3510C	
752-31789-2	MW-3	Total/NA	Water	3510C	
752-31789-3	MW-5	Total/NA	Water	3510C	
752-31789-5	MW-7	Total/NA	Water	3510C	
752-31789-6	MW-8	Total/NA	Water	3510C	
752-31789-7	MW-9	Total/NA	Water	3510C	
752-31789-8	Dup-01	Total/NA	Water	3510C	
MB 400-706860/1-A	Method Blank	Total/NA	Water	3510C	
LCS 400-706860/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 400-706860/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 707337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	8270E SIM ID	706860
752-31789-2	MW-3	Total/NA	Water	8270E SIM ID	706860

GC/MS Semi VOA (Continued)

Analysis Batch: 707337 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-3	MW-5	Total/NA	Water	8270E SIM ID	706860
752-31789-5	MW-7	Total/NA	Water	8270E SIM ID	706860
752-31789-6	MW-8	Total/NA	Water	8270E SIM ID	706860
752-31789-7	MW-9	Total/NA	Water	8270E SIM ID	706860
752-31789-8	Dup-01	Total/NA	Water	8270E SIM ID	706860
MB 400-706860/1-A	Method Blank	Total/NA	Water	8270E SIM ID	706860
LCS 400-706860/2-A	Lab Control Sample	Total/NA	Water	8270E SIM ID	706860
LCSD 400-706860/3-A	Lab Control Sample Dup	Total/NA	Water	8270E SIM ID	706860

Analysis Batch: 707862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 400-706646/2-A	Lab Control Sample	Total/NA	Water	8270E	706646
LCSD 400-706646/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	706646

Analysis Batch: 708072

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	8270E	706646
752-31789-2	MW-3	Total/NA	Water	8270E	706646
752-31789-3	MW-5	Total/NA	Water	8270E	706646
752-31789-4	MW-6	Total/NA	Water	8270E	706646
752-31789-5	MW-7	Total/NA	Water	8270E	706646
752-31789-6	MW-8	Total/NA	Water	8270E	706646
752-31789-7	MW-9	Total/NA	Water	8270E	706646
752-31789-8	Dup-01	Total/NA	Water	8270E	706646

Analysis Batch: 708164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 400-706646/1-A	Method Blank	Total/NA	Water	8270E	706646

HPLC/IC

Analysis Batch: 706720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	9056A	
752-31789-2	MW-3	Total/NA	Water	9056A	
752-31789-3	MW-5	Total/NA	Water	9056A	
752-31789-5	MW-7	Total/NA	Water	9056A	
752-31789-6	MW-8	Total/NA	Water	9056A	
752-31789-7	MW-9	Total/NA	Water	9056A	
752-31789-8	Dup-01	Total/NA	Water	9056A	
MB 400-706720/36	Method Blank	Total/NA	Water	9056A	
LCS 400-706720/37	Lab Control Sample	Total/NA	Water	9056A	
LCSD 400-706720/38	Lab Control Sample Dup	Total/NA	Water	9056A	

Metals

Prep Batch: 881136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total Recoverable	Water	3005A	
752-31789-2	MW-3	Total Recoverable	Water	3005A	
752-31789-3	MW-5	Total Recoverable	Water	3005A	
752-31789-5	MW-7	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 881136 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-6	MW-8	Total Recoverable	Water	3005A	
752-31789-7	MW-9	Total Recoverable	Water	3005A	
752-31789-8	Dup-01	Total Recoverable	Water	3005A	
MB 680-881136/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-881136/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 881157

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	7470A	
752-31789-2	MW-3	Total/NA	Water	7470A	
752-31789-3	MW-5	Total/NA	Water	7470A	
752-31789-5	MW-7	Total/NA	Water	7470A	
752-31789-6	MW-8	Total/NA	Water	7470A	
752-31789-7	MW-9	Total/NA	Water	7470A	
752-31789-8	Dup-01	Total/NA	Water	7470A	
MB 680-881157/1-A	Method Blank	Total/NA	Water	7470A	
LCS 680-881157/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 881212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	7470A	881157
752-31789-2	MW-3	Total/NA	Water	7470A	881157
752-31789-3	MW-5	Total/NA	Water	7470A	881157
752-31789-5	MW-7	Total/NA	Water	7470A	881157
752-31789-6	MW-8	Total/NA	Water	7470A	881157
752-31789-7	MW-9	Total/NA	Water	7470A	881157
752-31789-8	Dup-01	Total/NA	Water	7470A	881157
MB 680-881157/1-A	Method Blank	Total/NA	Water	7470A	881157
LCS 680-881157/2-A	Lab Control Sample	Total/NA	Water	7470A	881157

Analysis Batch: 881214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total Recoverable	Water	6020B	881136
752-31789-2	MW-3	Total Recoverable	Water	6020B	881136
752-31789-3	MW-5	Total Recoverable	Water	6020B	881136
752-31789-5	MW-7	Total Recoverable	Water	6020B	881136
752-31789-6	MW-8	Total Recoverable	Water	6020B	881136
752-31789-7	MW-9	Total Recoverable	Water	6020B	881136
752-31789-8	Dup-01	Total Recoverable	Water	6020B	881136
MB 680-881136/1-A	Method Blank	Total Recoverable	Water	6020B	881136
LCS 680-881136/2-A	Lab Control Sample	Total Recoverable	Water	6020B	881136

General Chemistry

Analysis Batch: 11733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	353.2	
752-31789-2	MW-3	Total/NA	Water	353.2	
752-31789-3	MW-5	Total/NA	Water	353.2	
752-31789-5	MW-7	Total/NA	Water	353.2	
752-31789-6	MW-8	Total/NA	Water	353.2	

General Chemistry (Continued)

Analysis Batch: 11733 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-7	MW-9	Total/NA	Water	353.2	
752-31789-8	Dup-01	Total/NA	Water	353.2	
MB 752-11733/8	Method Blank	Total/NA	Water	353.2	
LCS 752-11733/11	Lab Control Sample	Total/NA	Water	353.2	
LCSD 752-11733/25	Lab Control Sample Dup	Total/NA	Water	353.2	
752-31789-5 MS	MW-7	Total/NA	Water	353.2	
752-31789-5 MSD	MW-7	Total/NA	Water	353.2	
752-31789-6 MS	MW-8	Total/NA	Water	353.2	
752-31789-6 MSD	MW-8	Total/NA	Water	353.2	

Analysis Batch: 11739

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	Nitrate by calc	
752-31789-2	MW-3	Total/NA	Water	Nitrate by calc	
752-31789-3	MW-5	Total/NA	Water	Nitrate by calc	
752-31789-5	MW-7	Total/NA	Water	Nitrate by calc	
752-31789-6	MW-8	Total/NA	Water	Nitrate by calc	
752-31789-7	MW-9	Total/NA	Water	Nitrate by calc	
752-31789-8	Dup-01	Total/NA	Water	Nitrate by calc	

Analysis Batch: 11761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	353.2	
752-31789-2	MW-3	Total/NA	Water	353.2	
752-31789-3	MW-5	Total/NA	Water	353.2	
752-31789-5	MW-7	Total/NA	Water	353.2	
752-31789-6	MW-8	Total/NA	Water	353.2	
752-31789-7	MW-9	Total/NA	Water	353.2	
752-31789-8	Dup-01	Total/NA	Water	353.2	
MB 752-11761/8	Method Blank	Total/NA	Water	353.2	
LCS 752-11761/9	Lab Control Sample	Total/NA	Water	353.2	

Analysis Batch: 11782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
752-31789-1	MW-1	Total/NA	Water	350.1	
752-31789-2	MW-3	Total/NA	Water	350.1	
752-31789-3	MW-5	Total/NA	Water	350.1	
752-31789-5	MW-7	Total/NA	Water	350.1	
752-31789-6	MW-8	Total/NA	Water	350.1	
752-31789-7	MW-9	Total/NA	Water	350.1	
752-31789-8	Dup-01	Total/NA	Water	350.1	
MB 752-11782/10	Method Blank	Total/NA	Water	350.1	
MB 752-11782/74	Method Blank	Total/NA	Water	350.1	
LCS 752-11782/11	Lab Control Sample	Total/NA	Water	350.1	
LCS 752-11782/75	Lab Control Sample	Total/NA	Water	350.1	
752-31789-1 MS	MW-1	Total/NA	Water	350.1	
752-31789-1 MSD	MW-1	Total/NA	Water	350.1	
752-31789-2 MS	MW-3	Total/NA	Water	350.1	
752-31789-2 MSD	MW-3	Total/NA	Water	350.1	

Lab Chronicle

Client: S&ME Inc
Job ID: 752-31789-1
Project/Site: Cliffdale Landfill

Client Sample ID: MW-1
Lab Sample ID: 752-31789-1
Date Collected: 04/16/25 10:20
Matrix: Water
Date Received: 04/18/25 11:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 14:50
Total/NA	Prep	3511			706646	RAW	EET PEN	04/22/25 13:34
Total/NA	Analysis	8270E		1	708072	JAW	EET PEN	05/05/25 15:35
Total/NA	Prep	3510C			706860	STC	EET PEN	04/23/25 16:43
Total/NA	Analysis	8270E SIM ID		1	707337	VC1	EET PEN	04/28/25 18:40
Total/NA	Analysis	9056A		1	706720	AMM	EET PEN	04/23/25 01:22
Total Recoverable	Prep	3005A			881136	RR	EET SAV	04/21/25 08:36
Total Recoverable	Analysis	6020B		1	881214	BWR	EET SAV	04/22/25 08:43
Total/NA	Prep	7470A			881157	MG	EET SAV	04/21/25 11:38
Total/NA	Analysis	7470A		1	881212	BJB	EET SAV	04/21/25 16:29
Total/NA	Analysis	350.1		100	11782	ME	EET RAL	04/24/25 10:17
Total/NA	Analysis	353.2		1	11733	ME	EET RAL	04/18/25 15:12
Total/NA	Analysis	353.2		1	11761	ME	EET RAL	04/22/25 10:52
Total/NA	Analysis	Nitrate by calc		1	11739	LEB	EET RAL	04/21/25 16:19

Client Sample ID: MW-3
Lab Sample ID: 752-31789-2
Date Collected: 04/16/25 11:50
Matrix: Water
Date Received: 04/18/25 11:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 15:14
Total/NA	Prep	3511			706646	RAW	EET PEN	04/22/25 13:34
Total/NA	Analysis	8270E		1	708072	JAW	EET PEN	05/05/25 16:05
Total/NA	Prep	3510C			706860	STC	EET PEN	04/23/25 16:43
Total/NA	Analysis	8270E SIM ID		1	707337	VC1	EET PEN	04/28/25 19:01
Total/NA	Analysis	9056A		1	706720	AMM	EET PEN	04/23/25 01:31
Total Recoverable	Prep	3005A			881136	RR	EET SAV	04/21/25 08:36
Total Recoverable	Analysis	6020B		1	881214	BWR	EET SAV	04/22/25 08:29
Total/NA	Prep	7470A			881157	MG	EET SAV	04/21/25 11:38
Total/NA	Analysis	7470A		1	881212	BJB	EET SAV	04/21/25 16:31
Total/NA	Analysis	350.1		500	11782	ME	EET RAL	04/24/25 10:22
Total/NA	Analysis	353.2		1	11733	ME	EET RAL	04/18/25 15:13
Total/NA	Analysis	353.2		1	11761	ME	EET RAL	04/22/25 10:54
Total/NA	Analysis	Nitrate by calc		1	11739	LEB	EET RAL	04/21/25 16:19

Client Sample ID: MW-5
Lab Sample ID: 752-31789-3
Date Collected: 04/16/25 13:00
Matrix: Water
Date Received: 04/18/25 11:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 15:38
Total/NA	Analysis	8260D	RA	1	707696	WPD	EET PEN	05/01/25 08:33

Lab Chronicle

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-5

Date Collected: 04/16/25 13:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3511			706646	RAW	EET PEN	04/22/25 13:34
Total/NA	Analysis	8270E		1	708072	JAW	EET PEN	05/05/25 16:36
Total/NA	Prep	3510C			706860	STC	EET PEN	04/23/25 16:43
Total/NA	Analysis	8270E SIM ID		1	707337	VC1	EET PEN	04/28/25 19:23
Total/NA	Analysis	9056A		1	706720	AMM	EET PEN	04/23/25 01:39
Total Recoverable	Prep	3005A			881136	RR	EET SAV	04/21/25 08:36
Total Recoverable	Analysis	6020B		1	881214	BWR	EET SAV	04/22/25 08:31
Total/NA	Prep	7470A			881157	MG	EET SAV	04/21/25 11:38
Total/NA	Analysis	7470A		1	881212	BJB	EET SAV	04/21/25 16:43
Total/NA	Analysis	350.1		1	11782	ME	EET RAL	04/24/25 12:36
Total/NA	Analysis	353.2		1	11733	ME	EET RAL	04/18/25 15:14
Total/NA	Analysis	353.2		1	11761	ME	EET RAL	04/22/25 10:54
Total/NA	Analysis	Nitrate by calc		1	11739	LEB	EET RAL	04/21/25 16:19

Client Sample ID: MW-6

Date Collected: 04/16/25 14:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 16:03
Total/NA	Prep	3511			706646	RAW	EET PEN	04/22/25 13:34
Total/NA	Analysis	8270E		1	708072	JAW	EET PEN	05/05/25 17:07

Client Sample ID: MW-7

Date Collected: 04/16/25 15:25
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 16:27
Total/NA	Prep	3511			706646	RAW	EET PEN	04/22/25 13:34
Total/NA	Analysis	8270E		1	708072	JAW	EET PEN	05/05/25 17:38
Total/NA	Prep	3510C			706860	STC	EET PEN	04/23/25 16:43
Total/NA	Analysis	8270E SIM ID		1	707337	VC1	EET PEN	04/28/25 19:44
Total/NA	Analysis	9056A		1	706720	AMM	EET PEN	04/23/25 01:48
Total Recoverable	Prep	3005A			881136	RR	EET SAV	04/21/25 08:36
Total Recoverable	Analysis	6020B		1	881214	BWR	EET SAV	04/22/25 08:20
Total/NA	Prep	7470A			881157	MG	EET SAV	04/21/25 11:38
Total/NA	Analysis	7470A		1	881212	BJB	EET SAV	04/21/25 16:38
Total/NA	Analysis	350.1		51.429	11782	ME	EET RAL	04/24/25 10:29
Total/NA	Analysis	353.2		1	11733	ME	EET RAL	04/18/25 15:05
Total/NA	Analysis	353.2		1	11761	ME	EET RAL	04/22/25 10:55
Total/NA	Analysis	Nitrate by calc		1	11739	LEB	EET RAL	04/21/25 16:19

Lab Chronicle

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Client Sample ID: MW-8

Date Collected: 04/16/25 16:15
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 16:51
Total/NA	Prep	3511			706646	RAW	EET PEN	04/22/25 13:34
Total/NA	Analysis	8270E		1	708072	JAW	EET PEN	05/05/25 18:09
Total/NA	Prep	3510C			706860	STC	EET PEN	04/23/25 16:43
Total/NA	Analysis	8270E SIM ID		1	707337	VC1	EET PEN	04/28/25 20:06
Total/NA	Analysis	9056A		1	706720	AMM	EET PEN	04/23/25 01:56
Total Recoverable	Prep	3005A			881136	RR	EET SAV	04/21/25 08:36
Total Recoverable	Analysis	6020B		1	881214	BWR	EET SAV	04/22/25 08:33
Total/NA	Prep	7470A			881157	MG	EET SAV	04/21/25 11:38
Total/NA	Analysis	7470A		1	881212	BJB	EET SAV	04/21/25 16:46
Total/NA	Analysis	350.1		90	11782	ME	EET RAL	04/24/25 10:31
Total/NA	Analysis	353.2		1	11733	ME	EET RAL	04/18/25 15:08
Total/NA	Analysis	353.2		1	11761	ME	EET RAL	04/22/25 10:58
Total/NA	Analysis	Nitrate by calc		1	11739	LEB	EET RAL	04/21/25 16:19

Client Sample ID: MW-9

Date Collected: 04/16/25 17:30
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 17:16
Total/NA	Prep	3511			706646	RAW	EET PEN	04/22/25 13:34
Total/NA	Analysis	8270E		1	708072	JAW	EET PEN	05/05/25 18:40
Total/NA	Prep	3510C			706860	STC	EET PEN	04/23/25 16:43
Total/NA	Analysis	8270E SIM ID		1	707337	VC1	EET PEN	04/28/25 20:27
Total/NA	Analysis	9056A		1	706720	AMM	EET PEN	04/23/25 02:05
Total Recoverable	Prep	3005A			881136	RR	EET SAV	04/21/25 08:36
Total Recoverable	Analysis	6020B		1	881214	BWR	EET SAV	04/22/25 08:37
Total/NA	Prep	7470A			881157	MG	EET SAV	04/21/25 11:38
Total/NA	Analysis	7470A		1	881212	BJB	EET SAV	04/21/25 16:24
Total/NA	Analysis	350.1		51.429	11782	ME	EET RAL	04/24/25 10:33
Total/NA	Analysis	353.2		1	11733	ME	EET RAL	04/18/25 15:10
Total/NA	Analysis	353.2		1	11761	ME	EET RAL	04/22/25 10:59
Total/NA	Analysis	Nitrate by calc		1	11739	LEB	EET RAL	04/21/25 16:19

Client Sample ID: Dup-01

Date Collected: 04/16/25 00:00
Date Received: 04/18/25 11:24

Lab Sample ID: 752-31789-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 17:40
Total/NA	Prep	3511			706646	RAW	EET PEN	04/22/25 13:34
Total/NA	Analysis	8270E		1	708072	JAW	EET PEN	05/05/25 19:11

Lab Chronicle

Client: S&ME Inc
Job ID: 752-31789-1
Project/Site: Cliffdale Landfill

Client Sample ID: Dup-01
Lab Sample ID: 752-31789-8
Date Collected: 04/16/25 00:00
Matrix: Water
Date Received: 04/18/25 11:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3510C			706860	STC	EET PEN	04/23/25 16:43
Total/NA	Analysis	8270E SIM ID		1	707337	VC1	EET PEN	04/28/25 20:48
Total/NA	Analysis	9056A		1	706720	AMM	EET PEN	04/23/25 02:13
Total Recoverable	Prep	3005A			881136	RR	EET SAV	04/21/25 08:36
Total Recoverable	Analysis	6020B		1	881214	BWR	EET SAV	04/22/25 08:35
Total/NA	Prep	7470A			881157	MG	EET SAV	04/21/25 11:38
Total/NA	Analysis	7470A		1	881212	BJB	EET SAV	04/21/25 16:41
Total/NA	Analysis	350.1		500	11782	ME	EET RAL	04/24/25 10:38
Total/NA	Analysis	353.2		1	11733	ME	EET RAL	04/18/25 15:11
Total/NA	Analysis	353.2		1	11761	ME	EET RAL	04/22/25 11:00
Total/NA	Analysis	Nitrate by calc		1	11739	LEB	EET RAL	04/21/25 16:19

Client Sample ID: Trip Blank
Lab Sample ID: 752-31789-9
Date Collected: 04/16/25 10:20
Matrix: Water
Date Received: 04/18/25 11:24

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	707537	WPD	EET PEN	04/30/25 14:25

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

EET RAL = Eurofins Raleigh, 104 Woodwinds Industrial Court, Suite A, Cary, NC 27511, TEL (919)467-3090

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Accreditation/Certification Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Laboratory: Eurofins Raleigh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87610	06-30-25
Georgia	State	E87610	06-30-25
North Carolina (DW)	State	37724	07-31-25
North Carolina (WW/SW)	State	591	12-31-25
Virginia	NELAP	460146	06-14-25

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-25
ANAB	ISO/IEC 17025	L2471	02-22-26
Arkansas DEQ	State	88-00689	08-01-25
California	State	2510	06-30-25
Florida	NELAP	E81010	06-30-25
Georgia	State	E81010(FL)	06-30-25
Illinois	NELAP	200041	10-09-25
Kansas	NELAP	E-10253	10-31-25
Kentucky (UST)	State	53	06-30-25
Louisiana (All)	NELAP	30976	06-30-25
Louisiana (DW)	State	LA017	12-31-25
North Carolina (WW/SW)	State	314	12-31-25
Oklahoma	NELAP	9810	08-31-25
Pennsylvania	NELAP	68-00467	01-31-26
South Carolina	State	96026	06-30-25
Tennessee	State	TN02907	06-30-25
Texas	NELAP	T104704286	09-30-25
US Fish & Wildlife	US Federal Programs	A22340	06-30-25
USDA	US Federal Programs	FLGNV23001	01-08-26
USDA	US Federal Programs	525-23-9-22801	01-09-26
Virginia	NELAP	460166	06-14-25
West Virginia DEP	State	136	03-31-26

Laboratory: Eurofins Savannah

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
	AFCEE	SAVLAB	
Alabama	State	41450	06-30-25
ANAB	Dept. of Defense ELAP	L2463	09-22-26
Arkansas (DW)	State	GA00006	06-30-25
Arkansas DEQ	State	88-00692	02-09-26
Florida	NELAP	E87052	06-30-25
Georgia	State	E87052	06-30-25
Georgia (DW)	State	803	06-30-25
Hawaii	State	<cert No.>	06-30-25
Illinois	NELAP	200022	11-30-25
Iowa	State	353	07-01-25
Kentucky (UST)	State	108138	06-30-24 *
Louisiana (All)	NELAP	30690	06-30-25
Maine	State	GA00006	09-25-26

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: S&ME Inc
Job ID: 752-31789-1
Project/Site: Cliffdale Landfill

Laboratory: Eurofins Savannah (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Maryland	State	250	12-31-25
Mississippi	State	<cert No.>	06-30-25
Nebraska	State	NE-OS-7-04	06-30-25
New Mexico	State	GA00006	06-30-25
North Carolina (DW)	State	13701	07-31-25
North Carolina (WW/SW)	State	269	12-31-25
Puerto Rico	State	GA00006	01-15-26
South Carolina	State	98001	06-30-25
Tennessee	State	TN02961	06-30-25
Texas	TCEQ Water Supply	T104704185	06-30-25
USDA	US Federal Programs	P330-18-00313	04-04-27
Virginia	NELAP	460161	06-14-25
Wyoming	State	8TMS-L	06-30-25

Method Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET PEN
8270E	Semivolatile Organic Compounds (GC-MS/MS)	SW846	EET PEN
8270E SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	EET PEN
9056A	Anions, Ion Chromatography	SW846	EET PEN
6020B	Metals (ICP/MS)	SW846	EET SAV
7470A	Mercury (CVAA)	SW846	EET SAV
350.1	Nitrogen, Ammonia	EPA	EET RAL
353.2	Nitrogen, Nitrate-Nitrite	EPA	EET RAL
353.2	Nitrogen, Nitrite	EPA	EET RAL
Nitrate by calc	Nitrogen, Nitrate-Nitrite	SM	EET RAL
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET SAV
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET PEN
3511	Microextraction of Organic Compounds	SW846	EET PEN
5030C	Purge and Trap	SW846	EET PEN
7470A	Preparation, Mercury	SW846	EET SAV

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

EET RAL = Eurofins Raleigh, 104 Woodwinds Industrial Court, Suite A, Cary, NC 27511, TEL (919)467-3090

EET SAV = Eurofins Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

Sample Summary

Client: S&ME Inc
Project/Site: Cliffdale Landfill

Job ID: 752-31789-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
752-31789-1	MW-1	Water	04/16/25 10:20	04/18/25 11:24
752-31789-2	MW-3	Water	04/16/25 11:50	04/18/25 11:24
752-31789-3	MW-5	Water	04/16/25 13:00	04/18/25 11:24
752-31789-4	MW-6	Water	04/16/25 14:30	04/18/25 11:24
752-31789-5	MW-7	Water	04/16/25 15:25	04/18/25 11:24
752-31789-6	MW-8	Water	04/16/25 16:15	04/18/25 11:24
752-31789-7	MW-9	Water	04/16/25 17:30	04/18/25 11:24
752-31789-8	Dup-01	Water	04/16/25 00:00	04/18/25 11:24
752-31789-9	Trip Blank	Water	04/16/25 10:20	04/18/25 11:24

Eurofins Pensacola
3355 McLemore Drive
Pensacola, FL 32514
Phone (850) 474-1001 Phone (850) 478-2671

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: James Waters	Lab PM: Bechtold, Chad	Carrier Tracking No(s):	COC No: 680-166789-57642.1
Client Contact: Thomas Raymond	Phone: 919-621-6031	E-Mail: Chad.Bechtold@et.eurofinsus.com	State of Origin: NC	Page: 1 of 1
Company: S&ME Inc	PWSID:			Job #: 23050459

Address: 3201 Spring Forest Road	Due Date Requested:
City: Raleigh	TAT Requested (days):
State, Zip: NC, 27616	Compliance Project: Δ Yes Δ No
Phone: 919-872-2660(Tel) 919-876-3958(Fax)	PO #: 23050459
Email: traymond@smeinc.com	WO #:
Project Name: Cliffdale Landfill	Project #: 68026680
Site:	SSOW#:

Analysis Requested

Preservation Codes:
N - None
S - H2SO4
D - HNO3
A - HCL

752-31789 COC

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9056A_ORGFM_28D - Sulfate, 9056A_ORGFM_48H - Nitrate	350.1 - Ammonia as N	6020B - PRLF 16 Metals, Including prep; 7470A - Mercury	8270E - SVOC TCL OLM4.2	8260D - VOC NC 02L List	8270E_SIM_MS_ID - 1,4-Dioxane	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	S	D	N	A	N		
MW-1	4/16/25	1020	G	W			✓	✓	✓	✓	✓	✓		
MW-3	4/16/25	1150	G	W			✓	✓	✓	✓	✓	✓		
MW-5	4/16/25	1300	G	W			✓	✓	✓	✓	✓	✓		
MW-6	4/16/25	1430	G	W						✓	✓			
MW-7	4/16/25	1525	G	W			✓	✓	✓	✓	✓	✓		
MW-8	4/16/25	1615	G	W			✓	✓	✓	✓	✓	✓		
MW-9	4/16/25	1730	G	W			✓	✓	✓	✓	✓	✓		
Dup-01	4/16/25	—	G	W			✓	✓	✓	✓	✓	✓		

Initial Temperature: 2.8 °C
Correction Factor: 0.2°C
Corrected Temperature: 3.0 °C
Temp IR Gun: CRY-T-132
Initials: RY BR PG DW DO LB

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: James A. Waters	Date/Time: 4/18/25	Company SME	Received by: Brent Modlin	Date/Time: 4/18/25 1104	Company Eurofins
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Eurofins Raleigh
104 Woodwinds Industrial Court Suite A
Cary, NC 27511
Phone: 919-467-3090

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bechtold, Chad	Carrier Tracking No(s): N/A	COC No: 752-5433.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Chad.Bechtold@et.eurofinsus.com	State of Origin: North Carolina	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast L		Accreditations Required (See note): State - North Carolina (WW/SW)		Job #: 752-31789-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 4/28/2025			
City: Pensacola	TAT Requested (days): N/A			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Cliffdale Landfill	Project #: 68026680			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D/5030C VOC NC 02L List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Trip Blank (752-31789-9)	4/16/25	10:20 Eastern	G	Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
PG	4/18/25 1453				
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: ✓	Date/Time: 4/19/25 9:40	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.4°C, 0.0°C, 1.7°C, 0.6°C, 0.0°C IR8

Ver: 10/10/2024

Eurofins Raleigh
104 Woodwinds Industrial Court Suite A
Cary, NC 27511
Phone: 919-467-3090

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bechtold, Chad	Carrier Tracking No(s): N/A	COC No: 752-5430.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Chad.Bechtold@et.eurofinsus.com	State of Origin: North Carolina	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast L		Accreditations Required (See note): State - North Carolina (WW/SW)		Job #: 752-31789-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 4/28/2025			Preservation Codes: -
City: Pensacola	TAT Requested (days): N/A			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Cliffdale Landfill	Project #: 68026680			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D/5030C VOC NC 02L List	8270E_SIM_ID_D5/3510C_LVI 1,4 Dioxane	8270E_QQQ/3511 SVOC TCL OLM4.2	9056A_ORGFM_28D/ Sulfate	Total Number of containers	Special Instructions/Note:
Preservation Code:												
MW-1 (752-31789-1)	4/16/25	10:20 Eastern	G	Water			X	X	X	X	10	
MW-3 (752-31789-2)	4/16/25	11:50 Eastern	G	Water			X	X	X	X	10	
MW-5 (752-31789-3)	4/16/25	13:00 Eastern	G	Water			X	X	X	X	10	
MW-6 (752-31789-4)	4/16/25	14:30 Eastern	G	Water			X		X		7	
MW-7 (752-31789-5)	4/16/25	15:25 Eastern	G	Water			X	X	X	X	10	
MW-8 (752-31789-6)	4/16/25	16:15 Eastern	G	Water			X	X	X	X	10	
MW-9 (752-31789-7)	4/16/25	17:30 Eastern	G	Water			X	X	X	X	10	
Dup-01 (752-31789-8)	4/16/25	Eastern	G	Water			X	X	X	X	10	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Rachell	Date/Time: 4/18/25 1443	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 4/19/25 9:40	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.4°C, 0.0°C, 1.7°C, 0.6°C, 0.0°C MB

Ver: 10/10/2024

5/13/2025

Eurofins Raleigh
104 Woodwinds Industrial Court Suite A
Cary, NC 27511
Phone: 919-467-3090

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bechtold, Chad	Carrier Tracking No(s): N/A	COC No: 752-5433.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Chad.Bechtold@et.eurofinsus.com	State of Origin: North Carolina	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast L		Accreditations Required (See note): State - North Carolina (WW/SW)		Job #: 752-31789-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 4/28/2025			
City: Pensacola	TAT Requested (days): N/A			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Cliffdale Landfill	Project #: 68026680			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D/5030C VOC NC 02L List	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
Trip Blank (752-31789-9)	4/16/25	10:20 Eastern	G	Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 4/19/25 9:40	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.4°C 0.0°C, 1.7°C, 0.6°C, 0.0°C IR8

Ver: 10/10/2024

5/13/2025

Eurofins Raleigh
104 Woodwinds Industrial Court Suite A
Cary, NC 27511
Phone: 919-467-3090

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bechtold, Chad	Carrier Tracking No(s): N/A	COC No: 752-5430.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Chad.Bechtold@et.eurofinsus.com	State of Origin: North Carolina	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast L		Accreditations Required (See note): State - North Carolina (WW/SW)		Job #: 752-31789-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 4/28/2025			Preservation Codes: -
City: Pensacola	TAT Requested (days): N/A			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Cliffdale Landfill	Project #: 68026680			
Site: N/A	SSOW#: N/A			Other: N/A

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260D/5030C VOC NC 02L List	8270E_SIM_ID_D5/3510C_LVI 1,4 Dioxane	8270E_QQQ/3511 SVOC TCL OLM4.2	9056A_ORGFM_28D/ Sulfate	Total Number of containers	Special Instructions/Note:
Preservation Code:												
MW-1 (752-31789-1)	4/16/25	10:20 Eastern	G	Water			X	X	X	X	10	
MW-3 (752-31789-2)	4/16/25	11:50 Eastern	G	Water			X	X	X	X	10	
MW-5 (752-31789-3)	4/16/25	13:00 Eastern	G	Water			X	X	X	X	10	
MW-6 (752-31789-4)	4/16/25	14:30 Eastern	G	Water			X		X		7	
MW-7 (752-31789-5)	4/16/25	15:25 Eastern	G	Water			X	X	X	X	10	
MW-8 (752-31789-6)	4/16/25	16:15 Eastern	G	Water			X	X	X	X	10	
MW-9 (752-31789-7)	4/16/25	17:30 Eastern	G	Water			X	X	X	X	10	
Dup-01 (752-31789-8)	4/16/25	Eastern	G	Water			X	X	X	X	10	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by: Rachell	Date/Time: 4/18/25 1443	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 4/19/25 9:40	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.4C, 0.0C, 1.7C, 0.6C, 0.0C IR8

Ver: 10/10/2024

Eurofins Raleigh
104 Woodwinds Industrial Court Suite A
Cary, NC 27511
Phone: 919-467-3090

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler: N/A	Lab PM: Bechtold, Chad	Carrier Tracking No(s): N/A	COC No: 752-5431.1
Client Contact: Shipping/Receiving	Phone: N/A	E-Mail: Chad.Bechtold@et.eurofinsus.com	State of Origin: North Carolina	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast L		Accreditations Required (See note): State - North Carolina (WW/SW)		Job #: 752-31789-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 4/28/2025			
City: Savannah	TAT Requested (days): N/A			
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #: N/A			
Email: N/A	WO #: N/A			
Project Name: Cliffdale Landfill	Project #: 68026680			
Site: N/A	SSOW#: N/A			

Analysis Requested

Preservation Codes: -

Other: N/A

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6020B/3005A PRLF 16 Metals, Including prep	7470A/7470A_Prep Mercury	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW-1 (752-31789-1)	4/16/25	10:20 Eastern	G	Water			X	X	1	
MW-3 (752-31789-2)	4/16/25	11:50 Eastern	G	Water			X	X	1	
MW-5 (752-31789-3)	4/16/25	13:00 Eastern	G	Water			X	X	1	
MW-7 (752-31789-5)	4/16/25	15:25 Eastern	G	Water			X	X	1	
MW-8 (752-31789-6)	4/16/25	16:15 Eastern	G	Water			X	X	1	
MW-9 (752-31789-7)	4/16/25	17:30 Eastern	G	Water			X	X	1	
Dup-01 (752-31789-8)	4/16/25	Eastern	G	Water			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southeast, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing Southeast, LLC.

Possible Hazard Identification	*Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Rachel	4/18/25 1443			4/19/25 1000	
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		1.9 / 1.9

Login Sample Receipt Checklist

Client: S&ME Inc

Job Number: 752-31789-1

Login Number: 31789
List Number: 1
Creator: Yonish, Rachel

List Source: Eurofins Raleigh

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Received Trip Blank(s) not listed on COC.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: S&ME Inc

Job Number: 752-31789-1

Login Number: 31789
List Number: 3
Creator: Roberts, Darrien

List Source: Eurofins Pensacola
List Creation: 04/19/25 02:54 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4°C, 0.0°C, 1.7°C, 0.6°C, 0.0°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: S&ME Inc

Job Number: 752-31789-1

Login Number: 31789
List Number: 2
Creator: Lincoln, Alyssa

List Source: Eurofins Savannah
List Creation: 04/19/25 10:22 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Appendix V – NCDEQ Risk Calculator Forms

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	Sitewide Risk Calculator: Soil Gas and Groundwater Assessment
Submittal Date:	5/19/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Sitewide Risk Calculator: Soil Gas and Groundwater Assessment

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Sitewide risk calculator for groundwater samples collected for RI-10-12

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
10.1	J	67-64-1	Acetone			ug/L	MW-6									
230000		7664-41-7	Ammonia			ug/L	MW-3									
25.8		7440-38-2	Arsenic, Inorganic			ug/L	MW-1									
381		7440-39-3	Barium			ug/L	MW-7									
2.28	J*1	100-52-7	Benzaldehyde			ug/L	DUP-1									
11.3		71-43-2	Benzene			ug/L	MW-3									
1.16		7440-41-7	Beryllium and compounds			ug/L	MW-5									
0.464	J	92-52-4	Biphenyl, 1,1'-			ug/L	MW-6									
54.9		460-00-4	Bromo-4-fluorobenzene, 1-			ug/L	MW-9									
0.355	J	7440-43-9	Cadmium (Diet)			ug/L	MW-5									
24.3		105-60-2	Caprolactam			ug/L	MW-6									
15.1		108-90-7	Chlorobenzene			ug/L	MW-3									
10.6		18540-29-9	Chromium(VI)			ug/L	MW-5									
3.59		7440-48-4	Cobalt			ug/L	MW-3									
7.2		7440-50-8	Copper			ug/L	MW-5									
12.6		59-50-7	Cresol, p-chloro-m-			ug/L	DUP-1									
3.06		98-82-8	Cumene			ug/L	MW-3									
0.586	J	95-50-1	Dichlorobenzene, 1,2-			ug/L	MW-3									
14.2		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-5									
15.8		156-59-2	Dichloroethylene, cis-1,2-			ug/L	MW-6									
1.88		156-60-5	Dichloroethylene, trans-1,2-			ug/L	MW-6									
1.3		78-87-5	Dichloropropane, 1,2-			ug/L	MW-5									
1.43		108-20-3	Diisopropyl Ether			ug/L	MW-6									
1.11	J	105-67-9	Dimethylphenol, 2,4-			ug/L	MW-6									
30.6		123-91-1	Dioxane, 1,4-			ug/L	DUP-1									
11.6		100-41-4	Ethylbenzene			ug/L	MW-6									
4.66		99-87-6	Isopropyltoluene, p-			ug/L	MW-1									
20.7		7439-92-1	~Lead and Compounds			ug/L	MW-5									
1150		7439-96-5b	Manganese (Diet)			ug/L	MW-7									
0.349	J	1634-04-4	Methyl tert-Butyl Ether (MTBE)			ug/L	MW-6									
27.5		7440-02-0	Nickel Soluble Salts			ug/L	MW-5									
168		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-1									
168		E701177	Nitrate + Nitrite (measured as nitrogen)			ug/L	MW-1									
2.49	J	86-30-6	Nitrosodiphenylamine, N-			ug/L	MW-9									
1.08	J	108-95-2	Phenol			ug/L	MW-3									
4.67	*-	84-74-2	~Dibutyl Phthalate			ug/L	DUP-1									
16	*-	84-66-2	~Diethyl Phthalate			ug/L	DUP-1									
5.35	J	91-57-6	~Methylnaphthalene, 2-			ug/L	DUP-1									
51.2		91-20-3	~Naphthalene			ug/L	MW-3									
2.49		103-65-1	Propyl benzene			ug/L	MW-3									
1.57	J B	7782-49-2	Selenium			ug/L	MW-5									
2.22		108-88-3	Toluene			ug/L	MW-3									
3.39		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-3									
1.75		108-67-8	Trimethylbenzene, 1,3,5-			ug/L	MW-3									
53		7440-62-2	Vanadium and Compounds			ug/L	MW-5									
0.946	J	75-01-4	Vinyl Chloride			ug/L	MW-6									
23		1330-20-7	Xylenes			ug/L	MW-3									
1120		7440-66-6	Zinc and Compounds			ug/L	MW-5									

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Sitewide Risk Calculator: Soil Gas and Groundwater Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Sitewide risk calculator includes both Landfill Gas and Residential Soil Gas sample locations for RI-10-12

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
2700		71-43-2	Benzene			ug/m^3	SGP-07/SGP-22									
22		75-15-0	Carbon Disulfide			ug/m^3	SGP-39									
7400		108-90-7	Chlorobenzene			ug/m^3	Duplicate-04/SGI-25									
130		67-66-3	Chloroform			ug/m^3	SGP-13									
88	Isopropylbenzene	98-82-8	Cumene			ug/m^3	SGP-23									
14000		110-82-7	Cyclohexane			ug/m^3	SGP-07									
250	J	106-46-7	Dichlorobenzene, 1,4-			ug/m^3	SGP-09									
9800		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-02									
1800		75-34-3	Dichloroethane, 1,1-			ug/m^3	SGI-34									
260		75-35-4	Dichloroethylene, 1,1-			ug/m^3	SGP-05									
1200		156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGP-05									
150	J	156-60-5	Dichloroethylene, trans-1,2-			ug/m^3	SGP-05									
34000		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGI-06									
10000		100-41-4	Ethylbenzene			ug/m^3	SGP-10									
280		109-99-9	~Tetrahydrofuran			ug/m^3	SGP-23									
50000		142-82-5	Heptane, N-			ug/m^3	SGP-07									
17000		110-54-3	Hexane, N-			ug/m^3	SGP-07									
38000		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-07									
150	J	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m^3	SGI-06									
41	J	75-09-2	Methylene Chloride			ug/m^3	SGP-14									
310	C	91-20-3	~Naphthalene			ug/m^3	SGP-08									
3200		115-07-1	Propylene			ug/m^3	SGP-36									
130	J	127-18-4	Tetrachloroethylene			ug/m^3	SGP-23									
2100		108-88-3	Toluene			ug/m^3	SGP-22									
260		79-01-6	Trichloroethylene			ug/m^3	SGP-05									
970		75-69-4	Trichlorofluoromethane			ug/m^3	SGP-23									
610		95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-23									
380		108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGP-23									
1400		75-01-4	Vinyl Chloride			ug/m^3	SGP-05									
1500		95-47-6	Xylene, o-			ug/m^3	SGP-11									
13000	m+p	1330-20-7	Xylenes			ug/m^3	SGP-10									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Sitewide Risk Calculator: Soil Gas and Groundwater Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	1.2E-03	2.5E+02	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	2.6E-04	5.9E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	9.6E-04	5.8E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.9E-05	4.6E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Direct Contact - Resident Groundwater Use **Output Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Sitewide Risk Calculator: Soil Gas and Groundwater Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	10.1	10.1	10.1					5.6E-04	2.3E-06		5.6E-04
7664-41-7	Ammonia	230000	230000	230000							**2.2E+02**	**2.2E+02**
7440-38-2	Arsenic, Inorganic	25.8	25.8	25.8	**5.0E-04**	**2.7E-06**		**5.0E-04**	**4.3E+00**	1.9E-02		**4.3E+00**
7440-39-3	Barium	381	381	381					9.5E-02	6.0E-03		1.0E-01
100-52-7	Benzaldehyde	2.28	2.28	2.28	1.2E-07	5.2E-09		1.2E-07	1.1E-03	4.6E-05		1.2E-03
71-43-2	Benzene	11.3	11.3	11.3	**8.0E-06**	**1.1E-06**	**1.6E-05**	**2.5E-05**	1.4E-01	1.9E-02	1.8E-01	**3.4E-01**
7440-41-7	Beryllium and compounds	1.16	1.16	1.16					2.9E-02	1.8E-02		4.7E-02
92-52-4	Biphenyl, 1,1'-	0.464	0.464	0.464	4.8E-08	7.1E-08		1.2E-07	4.6E-05	6.3E-05	**5.6E-01**	**5.6E-01**
460-00-4	Bromo-4-fluorobenzene, 1-	54.9	54.9	54.9					**9.1E+00**	**2.8E+00**		**1.2E+01**
7440-43-9	Cadmium (Diet)	0.355	0.355	0.355					1.8E-01			1.8E-01
105-60-2	Caprolactam	24.3	24.3	24.3					2.4E-03	2.7E-05		2.5E-03
108-90-7	Chlorobenzene	15.1	15.1	15.1					3.8E-02	1.2E-02	1.4E-01	1.9E-01
18540-29-9	Chromium(VI)	10.6	10.6	10.6	**6.8E-05**	**2.9E-05**		**9.7E-05**	**5.9E-01**	**2.1E-01**		**7.9E-01**
7440-48-4	Cobalt	3.59	3.59	3.59					**6.0E-01**	1.1E-03		**6.0E-01**
7440-50-8	Copper	7.2	7.2	7.2					9.0E-03	4.0E-05		9.0E-03
59-50-7	Cresol, p-chloro-m-	12.6	12.6	12.6					6.3E-03	2.4E-03		8.7E-03
98-82-8	Cumene	3.06	3.06	3.06					1.5E-03	1.6E-03	3.7E-03	6.8E-03
95-50-1	Dichlorobenzene, 1,2-	0.586	0.586	0.586					3.2E-04	2.0E-04	1.4E-03	1.9E-03
106-46-7	Dichlorobenzene, 1,4-	14.2	14.2	14.2	9.8E-07	6.7E-07	**2.8E-05**	**2.9E-05**	1.0E-02	6.4E-03	8.5E-03	2.5E-02
156-59-2	Dichloroethylene, cis-1,2-	15.8	15.8	15.8					**3.9E-01**	4.4E-02	1.9E-01	**6.3E-01**
156-60-5	Dichloroethylene, trans-1,2-	1.88	1.88	1.88					4.7E-03	5.2E-04	2.3E-02	2.8E-02
78-87-5	Dichloropropane, 1,2-	1.3	1.3	1.3	6.2E-07	5.6E-08	8.6E-07	**1.5E-06**	1.6E-03	1.4E-04	1.6E-01	1.6E-01
108-20-3	Diisopropyl Ether	1.43	1.43	1.43							9.8E-04	9.8E-04
105-67-9	Dimethylphenol, 2,4-	1.11	1.11	1.11					2.8E-03	3.6E-04		3.1E-03
123-91-1	Dioxane, 1,4-	30.6	30.6	30.6	**3.9E-05**	1.3E-07	**2.7E-05**	**6.7E-05**	5.1E-02	1.6E-04	**4.9E-01**	**5.4E-01**
100-41-4	Ethylbenzene	11.6	11.6	11.6	**1.6E-06**	9.4E-07	**5.2E-06**	**7.7E-06**	1.2E-02	6.1E-03	5.6E-03	2.3E-02
99-87-6	Isopropyltoluene, p-	4.66	4.66	4.66					5.8E-02	1.1E-01	5.6E-02	**2.2E-01**
7439-92-1	~Lead and Compounds	20.7	20.7	20.7					**>SL****	**>SL****	**>SL****	
7439-96-5b	Manganese (Diet)	1150	1150	1150					**4.1E-01**			**4.1E-01**
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.349	0.349	0.349	8.1E-09	1.8E-10	1.6E-08	2.4E-08			5.6E-05	5.6E-05
7440-02-0	Nickel Soluble Salts	27.5	27.5	27.5					6.9E-02	1.5E-03		7.0E-02
14797-55-8	Nitrate (measured as nitrogen)	168	168	168					5.2E-03	2.3E-05		5.3E-03
E701177	Nitrate + Nitrite (measured as nitrogen)	168	168	168								
86-30-6	Nitrosodiphenylamine, N-	2.49	2.49	2.49	1.6E-07	4.8E-08		2.0E-07				
108-95-2	Phenol	1.08	1.08	1.08					1.8E-04	7.7E-06		1.9E-04
84-74-2	~Dibutyl Phthalate	4.67	4.67	4.67					2.3E-03	2.8E-03		5.2E-03
84-66-2	~Diethyl Phthalate	16	16	16					1.0E-03	8.1E-05		1.1E-03
91-57-6	~Methylnaphthalene, 2-	5.35	5.35	5.35					6.7E-02	8.2E-02		1.5E-01
91-20-3	~Naphthalene	51.2	51.2	51.2	**7.9E-05**	**4.9E-05**	**3.1E-04**	**4.4E-04**	1.3E-01	7.3E-02	**8.2E+00**	**8.4E+00**
103-65-1	Propyl benzene	2.49	2.49	2.49					1.2E-03	1.4E-03	1.2E-03	3.8E-03
7782-49-2	Selenium	1.57	1.57	1.57					1.6E-02	6.9E-05		1.6E-02
108-88-3	Toluene	2.22	2.22	2.22					1.4E-03	4.2E-04	2.1E-04	2.0E-03
95-63-6	Trimethylbenzene, 1,2,4-	3.39	3.39	3.39					1.7E-02	1.7E-02	2.7E-02	6.1E-02
108-67-8	Trimethylbenzene, 1,3,5-	1.75	1.75	1.75					8.7E-03	6.3E-03	1.4E-02	2.9E-02
7440-62-2	Vanadium and Compounds	53	53	53					**5.2E-01**	8.9E-02		**6.1E-01**
75-01-4	Vinyl Chloride	0.946	0.946	0.946	**4.4E-05**	**3.4E-06**	**2.8E-06**	**5.0E-05**	1.6E-02	1.1E-03	8.9E-03	2.6E-02
1330-20-7	Xylenes	23	23	23					5.7E-03	3.1E-03	1.1E-01	1.2E-01
7440-66-6	Zinc and Compounds	1120	1120	1120					1.9E-01	4.9E-04		1.9E-01
						Cumulative:		**1.2E-03**				**2.5E+02**

DEQ Risk Calculator - Direct Contact - Non-Residential Worker Groundwater Use **Output Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Sitewide Risk Calculator: Soil Gas and Groundwater Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	10.1	10.1	10.1					8.0E-05	1.1E-06		8.1E-05
7664-41-7	Ammonia	230000	230000	230000							**5.3E+01**	**5.3E+01**
7440-38-2	Arsenic, Inorganic	25.8	25.8	25.8	**9.8E-05**	**1.6E-06**		**1.0E-04**	**6.1E-01**	9.7E-03		**6.2E-01**
7440-39-3	Barium	381	381	381					1.4E-02	3.1E-03		1.7E-02
100-52-7	Benzaldehyde	2.28	2.28	2.28	2.3E-08	3.1E-09		2.6E-08	1.6E-04	2.1E-05		1.8E-04
71-43-2	Benzene	11.3	11.3	11.3	**1.6E-06**	6.8E-07	**3.6E-06**	**5.8E-06**	2.0E-02	8.6E-03	4.3E-02	7.2E-02
7440-41-7	Beryllium and compounds	1.16	1.16	1.16					4.1E-03	9.3E-03		1.3E-02
92-52-4	Biphenyl, 1,1'-	0.464	0.464	0.464	9.4E-09	4.2E-08		5.1E-08	6.6E-06	2.9E-05	1.3E-01	1.3E-01
460-00-4	Bromo-4-fluorobenzene, 1-	54.9	54.9	54.9					**1.3E+00**	**1.3E+00**		**2.6E+00**
7440-43-9	Cadmium (Diet)	0.355	0.355	0.355					2.5E-02			2.5E-02
105-60-2	Caprolactam	24.3	24.3	24.3					3.5E-04	1.2E-05		3.6E-04
108-90-7	Chlorobenzene	15.1	15.1	15.1					5.4E-03	5.4E-03	3.4E-02	4.5E-02
18540-29-9	Chromium(VI)	10.6	10.6	10.6	**4.3E-06**	**5.5E-06**		**9.8E-06**	8.4E-02	1.1E-01		1.9E-01
7440-48-4	Cobalt	3.59	3.59	3.59					8.5E-02	5.4E-04		8.6E-02
7440-50-8	Copper	7.2	7.2	7.2					1.3E-03	2.0E-05		1.3E-03
59-50-7	Cresol, p-chloro-m-	12.6	12.6	12.6					9.0E-04	1.1E-03		2.0E-03
98-82-8	Cumene	3.06	3.06	3.06					2.2E-04	7.4E-04	8.7E-04	1.8E-03
95-50-1	Dichlorobenzene, 1,2-	0.586	0.586	0.586					4.6E-05	9.2E-05	3.3E-04	4.7E-04
106-46-7	Dichlorobenzene, 1,4-	14.2	14.2	14.2	1.9E-07	4.0E-07	**6.4E-06**	**7.0E-06**	1.4E-03	2.9E-03	2.0E-03	6.4E-03
156-59-2	Dichloroethylene, cis-1,2-	15.8	15.8	15.8					5.6E-02	2.0E-02	4.5E-02	1.2E-01
156-60-5	Dichloroethylene, trans-1,2-	1.88	1.88	1.88					6.7E-04	2.4E-04	5.4E-03	6.3E-03
78-87-5	Dichloropropane, 1,2-	1.3	1.3	1.3	1.2E-07	3.3E-08	2.0E-07	3.5E-07	2.3E-04	6.3E-05	3.7E-02	3.7E-02
108-20-3	Diisopropyl Ether	1.43	1.43	1.43							2.3E-04	2.3E-04
105-67-9	Dimethylphenol, 2,4-	1.11	1.11	1.11					3.9E-04	1.6E-04		5.6E-04
123-91-1	Dioxane, 1,4-	30.6	30.6	30.6	**7.8E-06**	7.9E-08	**6.2E-06**	**1.4E-05**	7.2E-03	7.4E-05	1.2E-01	1.2E-01
100-41-4	Ethylbenzene	11.6	11.6	11.6	3.2E-07	5.5E-07	**1.2E-06**	**2.1E-06**	1.6E-03	2.8E-03	1.3E-03	5.8E-03
99-87-6	Isopropyltoluene, p-	4.66	4.66	4.66					8.3E-03	5.0E-02	1.3E-02	7.2E-02
7439-92-1	~Lead and Compounds	20.7	20.7	20.7					**>SL****	**>SL****	**>SL****	
7439-96-5b	Manganese (Diet)	1150	1150	1150					5.8E-02			5.8E-02
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.349	0.349	0.349	1.6E-09	1.0E-10	3.7E-09	5.4E-09			1.3E-05	1.3E-05
7440-02-0	Nickel Soluble Salts	27.5	27.5	27.5					9.8E-03	7.8E-04		1.1E-02
14797-55-8	Nitrate (measured as nitrogen)	168	168	168					7.5E-04	1.2E-05		7.6E-04
E701177	Nitrate + Nitrite (measured as nitrogen)	168	168	168								
86-30-6	Nitrosodiphenylamine, N-	2.49	2.49	2.49	3.1E-08	2.8E-08		5.9E-08				
108-95-2	Phenol	1.08	1.08	1.08					2.6E-05	3.5E-06		2.9E-05
84-74-2	~Dibutyl Phthalate	4.67	4.67	4.67					3.3E-04	1.3E-03		1.6E-03
84-66-2	~Diethyl Phthalate	16	16	16					1.4E-04	3.7E-05		1.8E-04
91-57-6	~Methylnaphthalene, 2-	5.35	5.35	5.35					9.5E-03	3.8E-02		4.7E-02
91-20-3	~Naphthalene	51.2	51.2	51.2	**1.6E-05**	**2.9E-05**	**7.1E-05**	**1.2E-04**	1.8E-02	3.4E-02	**1.9E+00**	**2.0E+00**
103-65-1	Propyl benzene	2.49	2.49	2.49					1.8E-04	6.3E-04	2.8E-04	1.1E-03
7782-49-2	Selenium	1.57	1.57	1.57					2.2E-03	3.5E-05		2.3E-03
108-88-3	Toluene	2.22	2.22	2.22					2.0E-04	1.9E-04	5.1E-05	4.4E-04
95-63-6	Trimethylbenzene, 1,2,4-	3.39	3.39	3.39					2.4E-03	7.8E-03	6.4E-03	1.7E-02
108-67-8	Trimethylbenzene, 1,3,5-	1.75	1.75	1.75					1.2E-03	2.9E-03	3.3E-03	7.5E-03
7440-62-2	Vanadium and Compounds	53	53	53					7.5E-02	4.6E-02		1.2E-01
75-01-4	Vinyl Chloride	0.946	0.946	0.946	**1.7E-06**	3.9E-07	1.70E-07	**2.3E-06**	2.2E-03	5.1E-04	2.1E-03	4.9E-03
1330-20-7	Xylenes	23	23	23					8.2E-04	1.4E-03	2.6E-02	2.8E-02
7440-66-6	Zinc and Compounds	1120	1120	1120					2.7E-02	2.5E-04		2.7E-02
						Cumulative:		**2.6E-04**				**5.9E+01**

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Sitewide Risk Calculator: Soil Gas and Groundwater Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2700	81	3.6E-01	6.3E+00	**2.3E-04**	**2.6E+00**
75-15-0	Carbon Disulfide	22	0.66	-	1.5E+02		9.0E-04
108-90-7	Chlorobenzene	7400	222	-	1.0E+01		**4.3E+00**
67-66-3	Chloroform	130	3.9	1.2E-01	4.1E-01	**3.2E-05**	**1.9E+00**
98-82-8	Cumene	88	2.64	-	8.3E+01		6.3E-03
110-82-7	Cyclohexane	14000	420	-	1.3E+03		6.7E-02
106-46-7	Dichlorobenzene, 1,4-	250	7.5	2.6E-01	1.7E+02	**2.9E-05**	9.0E-03
75-71-8	Dichlorodifluoromethane	9800	294	-	2.1E+01		**2.8E+00**
75-34-3	Dichloroethane, 1,1-	1800	54	1.8E+00	-	**3.1E-05**	
75-35-4	Dichloroethylene, 1,1-	260	7.8	-	8.3E-01		**1.9E+00**
156-59-2	Dichloroethylene, cis-1,2-	1200	36	-	8.3E+00		**8.6E-01**
156-60-5	Dichloroethylene, trans-1,2-	150	4.5	-	8.3E+00		1.1E-01
75-00-3	Ethyl Chloride (Chloroethane)	34000	1020	-	8.3E+02		**2.4E-01**
100-41-4	Ethylbenzene	10000	300	1.1E+00	2.1E+02	**2.7E-04**	**2.9E-01**
109-99-9	~Tetrahydrofuran	280	8.4	-	4.2E+02		4.0E-03
142-82-5	Heptane, N-	50000	1500	-	8.3E+01		**3.6E+00**
110-54-3	Hexane, N-	17000	510	-	1.5E+02		**7.0E-01**
7783-06-4	Hydrogen Sulfide	38000	1140	-	4.2E-01		**5.5E+02**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	150	4.5	-	1.0E+03		8.6E-04
75-09-2	Methylene Chloride	41	1.23	1.0E+02	1.3E+02	1.2E-08	2.0E-03
91-20-3	~Naphthalene	310	9.3	8.3E-02	6.3E-01	**1.1E-04**	**3.0E+00**
115-07-1	Propylene	3200	96	-	6.3E+02		3.1E-02
127-18-4	Tetrachloroethylene	130	3.9	1.1E+01	8.3E+00	3.6E-07	9.3E-02
108-88-3	Toluene	2100	63	-	1.0E+03		1.2E-02
79-01-6	Trichloroethylene	260	7.8	4.8E-01	4.2E-01	**1.6E-05**	**3.7E+00**
75-69-4	Trichlorofluoromethane	970	29.1	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	610	18.3	-	1.3E+01		**2.9E-01**
108-67-8	Trimethylbenzene, 1,3,5-	380	11.4	-	1.3E+01		1.8E-01
75-01-4	Vinyl Chloride	1400	42	1.7E-01	1.1E+01	**2.5E-04**	**7.9E-01**
95-47-6	Xylene, o-	1500	45	-	2.1E+01		**4.3E-01**
1330-20-7	Xylenes	13000	390	-	2.1E+01		**3.7E+00**
					Cumulative:	**9.6E-04**	**5.8E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: Sitewide Risk Calculator: Soil Gas and Groundwater Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2700	27	1.6E+00	2.6E+01	**1.7E-05**	**2.1E-01**
75-15-0	Carbon Disulfide	22	0.22	-	6.1E+02		7.2E-05
108-90-7	Chlorobenzene	7400	74	-	4.4E+01		**3.4E-01**
67-66-3	Chloroform	130	1.3	5.3E-01	1.7E+00	**2.4E-06**	1.5E-01
98-82-8	Cumene	88	0.88	-	3.5E+02		5.0E-04
110-82-7	Cyclohexane	14000	140	-	5.3E+03		5.3E-03
106-46-7	Dichlorobenzene, 1,4-	250	2.5	1.1E+00	7.0E+02	**2.2E-06**	7.1E-04
75-71-8	Dichlorodifluoromethane	9800	98	-	8.8E+01		**2.2E-01**
75-34-3	Dichloroethane, 1,1-	1800	18	7.7E+00	-	**2.3E-06**	
75-35-4	Dichloroethylene, 1,1-	260	2.6	-	3.5E+00		1.5E-01
156-59-2	Dichloroethylene, cis-1,2-	1200	12	-	3.5E+01		6.8E-02
156-60-5	Dichloroethylene, trans-1,2-	150	1.5	-	3.5E+01		8.6E-03
75-00-3	Ethyl Chloride (Chloroethane)	34000	340	-	3.5E+03		1.9E-02
100-41-4	Ethylbenzene	10000	100	4.9E+00	8.8E+02	**2.0E-05**	2.3E-02
109-99-9	~Tetrahydrofuran	280	2.8	-	1.8E+03		3.2E-04
142-82-5	Heptane, N-	50000	500	-	3.5E+02		**2.9E-01**
110-54-3	Hexane, N-	17000	170	-	6.1E+02		5.5E-02
7783-06-4	Hydrogen Sulfide	38000	380	-	1.8E+00		**4.3E+01**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	150	1.5	-	4.4E+03		6.8E-05
75-09-2	Methylene Chloride	41	0.41	1.2E+03	5.3E+02	3.3E-10	1.6E-04
91-20-3	~Naphthalene	310	3.1	3.6E-01	2.6E+00	**8.6E-06**	**2.4E-01**
115-07-1	Propylene	3200	32	-	2.6E+03		2.4E-03
127-18-4	Tetrachloroethylene	130	1.3	4.7E+01	3.5E+01	2.8E-08	7.4E-03
108-88-3	Toluene	2100	21	-	4.4E+03		9.6E-04
79-01-6	Trichloroethylene	260	2.6	3.0E+00	1.8E+00	8.7E-07	**3.0E-01**
75-69-4	Trichlorofluoromethane	970	9.7	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	610	6.1	-	5.3E+01		2.3E-02
108-67-8	Trimethylbenzene, 1,3,5-	380	3.8	-	5.3E+01		1.4E-02
75-01-4	Vinyl Chloride	1400	14	2.8E+00	4.5E+01	**5.0E-06**	6.3E-02
95-47-6	Xylene, o-	1500	15	-	8.8E+01		3.4E-02
1330-20-7	Xylenes	13000	130	-	8.8E+01		**3.0E-01**
					Cumulative:	5.9E-05	**4.6E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-01 Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-01 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 6.38% at DUP-1

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
130		71-43-2	Benzene			ug/m^3	SGP-01									
110		110-82-7	Cyclohexane			ug/m^3	SGP-01									
58	J	106-46-7	Dichlorobenzene, 1,4-			ug/m^3	SGP-01									
240		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-01									
670		142-82-5	Heptane, N-			ug/m^3	SGP-01									
360		110-54-3	Hexane, N-			ug/m^3	SGP-01									
2600		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-01									
25	J	75-01-4	Vinyl Chloride			ug/m^3	SGP-01									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-01 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.2E-05	3.8E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.4E-06	3.0E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-01 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	130	3.9	3.6E-01	6.3E+00	**1.1E-05**	1.2E-01
110-82-7	Cyclohexane	110	3.3	-	1.3E+03		5.3E-04
106-46-7	Dichlorobenzene, 1,4-	58	1.74	2.6E-01	1.7E+02	**6.8E-06**	2.1E-03
75-71-8	Dichlorodifluoromethane	240	7.2	-	2.1E+01		6.9E-02
142-82-5	Heptane, N-	670	20.1	-	8.3E+01		4.8E-02
110-54-3	Hexane, N-	360	10.8	-	1.5E+02		1.5E-02
7783-06-4	Hydrogen Sulfide	2600	78	-	4.2E-01		**3.7E+01**
75-01-4	Vinyl Chloride	25	0.75	1.7E-01	1.1E+01	**4.5E-06**	1.4E-02
					Cumulative:	2.2E-05	**3.8E+01**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-01 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	130	1.3	1.6E+00	2.6E+01	8.3E-07	9.9E-03
110-82-7	Cyclohexane	110	1.1	-	5.3E+03		4.2E-05
106-46-7	Dichlorobenzene, 1,4-	58	0.58	1.1E+00	7.0E+02	5.2E-07	1.7E-04
75-71-8	Dichlorodifluoromethane	240	2.4	-	8.8E+01		5.5E-03
142-82-5	Heptane, N-	670	6.7	-	3.5E+02		3.8E-03
110-54-3	Hexane, N-	360	3.6	-	6.1E+02		1.2E-03
7783-06-4	Hydrogen Sulfide	2600	26	-	1.8E+00		**3.0E+00**
75-01-4	Vinyl Chloride	25	0.25	2.8E+00	4.5E+01	9.0E-08	1.1E-03
					Cumulative:	1.4E-06	**3.0E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-02 Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-02 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 22.1%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
720		71-43-2	Benzene			ug/m^3	SGP-02									
1000		110-82-7	Cyclohexane			ug/m^3	SGP-02									
9800		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-02									
130		75-34-3	Dichloroethane, 1,1-			ug/m^3	SGP-02									
510		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-02									
140		100-41-4	Ethylbenzene			ug/m^3	SGP-02									
1900		142-82-5	Heptane, N-			ug/m^3	SGP-02									
1100		110-54-3	Hexane, N-			ug/m^3	SGP-02									
12000		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-02									
670		115-07-1	Propylene			ug/m^3	SGP-02									
93		108-88-3	Toluene			ug/m^3	SGP-02									
81		95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-02									
87		108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGP-02									
63		75-01-4	Vinyl Chloride			ug/m^3	SGP-02									
280		1330-20-7	Xylenes			ug/m^3	SGP-02									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-02 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.7E-05	1.8E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.3E-06	1.4E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-02 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	720	21.6	3.6E-01	6.3E+00	**6.0E-05**	**6.9E-01**
110-82-7	Cyclohexane	1000	30	-	1.3E+03		4.8E-03
75-71-8	Dichlorodifluoromethane	9800	294	-	2.1E+01		**2.8E+00**
75-34-3	Dichloroethane, 1,1-	130	3.9	1.8E+00	-	**2.2E-06**	
75-00-3	Ethyl Chloride (Chloroethane)	510	15.3	-	8.3E+02		3.7E-03
100-41-4	Ethylbenzene	140	4.2	1.1E+00	2.1E+02	**3.7E-06**	4.0E-03
142-82-5	Heptane, N-	1900	57	-	8.3E+01		1.4E-01
110-54-3	Hexane, N-	1100	33	-	1.5E+02		4.5E-02
7783-06-4	Hydrogen Sulfide	12000	360	-	4.2E-01		**1.7E+02**
115-07-1	Propylene	670	20.1	-	6.3E+02		6.4E-03
108-88-3	Toluene	93	2.79	-	1.0E+03		5.4E-04
95-63-6	Trimethylbenzene, 1,2,4-	81	2.43	-	1.3E+01		3.9E-02
108-67-8	Trimethylbenzene, 1,3,5-	87	2.61	-	1.3E+01		4.2E-02
75-01-4	Vinyl Chloride	63	1.89	1.7E-01	1.1E+01	**1.1E-05**	3.5E-02
1330-20-7	Xylenes	280	8.4	-	2.1E+01		8.1E-02
					Cumulative:	7.7E-05	**1.8E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-02 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	720	7.2	1.6E+00	2.6E+01	**4.6E-06**	5.5E-02
110-82-7	Cyclohexane	1000	10	-	5.3E+03		3.8E-04
75-71-8	Dichlorodifluoromethane	9800	98	-	8.8E+01		**2.2E-01**
75-34-3	Dichloroethane, 1,1-	130	1.3	7.7E+00	-	1.7E-07	
75-00-3	Ethyl Chloride (Chloroethane)	510	5.1	-	3.5E+03		2.9E-04
100-41-4	Ethylbenzene	140	1.4	4.9E+00	8.8E+02	2.9E-07	3.2E-04
142-82-5	Heptane, N-	1900	19	-	3.5E+02		1.1E-02
110-54-3	Hexane, N-	1100	11	-	6.1E+02		3.6E-03
7783-06-4	Hydrogen Sulfide	12000	120	-	1.8E+00		**1.4E+01**
115-07-1	Propylene	670	6.7	-	2.6E+03		5.1E-04
108-88-3	Toluene	93	0.93	-	4.4E+03		4.2E-05
95-63-6	Trimethylbenzene, 1,2,4-	81	0.81	-	5.3E+01		3.1E-03
108-67-8	Trimethylbenzene, 1,3,5-	87	0.87	-	5.3E+01		3.3E-03
75-01-4	Vinyl Chloride	63	0.63	2.8E+00	4.5E+01	2.3E-07	2.8E-03
1330-20-7	Xylenes	280	2.8	-	8.8E+01		6.4E-03
					Cumulative:	5.3E-06	**1.4E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-03 Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-03 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator.

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
100		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-03									
4.2	J	110-54-3	Hexane, N-			ug/m^3	SGP-03									
5.1	J	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m^3	SGP-03									
28		75-09-2	Methylene Chloride			ug/m^3	SGP-03									
42		127-18-4	Tetrachloroethylene			ug/m^3	SGP-03									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-03 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.2E-07	6.1E-02	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	9.1E-09	4.8E-03	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-03 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
75-71-8	Dichlorodifluoromethane	100	3	-	2.1E+01		2.9E-02
110-54-3	Hexane, N-	4.2	0.126	-	1.5E+02		1.7E-04
78-93-3	Methyl Ethyl Ketone (2-Butanone)	5.1	0.153	-	1.0E+03		2.9E-05
75-09-2	Methylene Chloride	28	0.84	1.0E+02	1.3E+02	8.3E-09	1.3E-03
127-18-4	Tetrachloroethylene	42	1.26	1.1E+01	8.3E+00	1.2E-07	3.0E-02
					Cumulative:	1.2E-07	6.1E-02

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-03 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
75-71-8	Dichlorodifluoromethane	100	1	-	8.8E+01		2.3E-03
110-54-3	Hexane, N-	4.2	0.042	-	6.1E+02		1.4E-05
78-93-3	Methyl Ethyl Ketone (2-Butanone)	5.1	0.051	-	4.4E+03		2.3E-06
75-09-2	Methylene Chloride	28	0.28	1.2E+03	5.3E+02	2.3E-10	1.1E-04
127-18-4	Tetrachloroethylene	42	0.42	4.7E+01	3.5E+01	8.9E-09	2.4E-03
					Cumulative:	9.1E-09	4.8E-03

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-04 Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-04 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 37%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
480		71-43-2	Benzene			ug/m^3	SGP-04									
1200		110-82-7	Cyclohexane			ug/m^3	SGP-04									
120		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-04									
120		156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGP-04									
33	J	75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-04									
670		100-41-4	Ethylbenzene			ug/m^3	SGP-04									
2800		142-82-5	Heptane, N-			ug/m^3	SGP-04									
1900		110-54-3	Hexane, N-			ug/m^3	SGP-04									
690		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-04									
23	J	108-88-3	Toluene			ug/m^3	SGP-04									
48		75-01-4	Vinyl Chloride			ug/m^3	SGP-04									
810		1330-20-7	Xylenes			ug/m^3	SGP-04									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-04 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.6E-05	1.1E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.6E-06	8.8E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-04 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	480	14.4	3.6E-01	6.3E+00	**4.0E-05**	**4.6E-01**
110-82-7	Cyclohexane	1200	36	-	1.3E+03		5.8E-03
75-71-8	Dichlorodifluoromethane	120	3.6	-	2.1E+01		3.5E-02
156-59-2	Dichloroethylene, cis-1,2-	120	3.6	-	8.3E+00		8.6E-02
75-00-3	Ethyl Chloride (Chloroethane)	33	0.99	-	8.3E+02		2.4E-04
100-41-4	Ethylbenzene	670	20.1	1.1E+00	2.1E+02	**1.8E-05**	1.9E-02
142-82-5	Heptane, N-	2800	84	-	8.3E+01		**2.0E-01**
110-54-3	Hexane, N-	1900	57	-	1.5E+02		7.8E-02
7783-06-4	Hydrogen Sulfide	690	20.7	-	4.2E-01		**9.9E+00**
108-88-3	Toluene	23	0.69	-	1.0E+03		1.3E-04
75-01-4	Vinyl Chloride	48	1.44	1.7E-01	1.1E+01	**8.6E-06**	2.7E-02
1330-20-7	Xylenes	810	24.3	-	2.1E+01		**2.3E-01**
					Cumulative:	6.6E-05	**1.1E+01**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-04 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	480	4.8	1.6E+00	2.6E+01	**3.1E-06**	3.7E-02
110-82-7	Cyclohexane	1200	12	-	5.3E+03		4.6E-04
75-71-8	Dichlorodifluoromethane	120	1.2	-	8.8E+01		2.7E-03
156-59-2	Dichloroethylene, cis-1,2-	120	1.2	-	3.5E+01		6.8E-03
75-00-3	Ethyl Chloride (Chloroethane)	33	0.33	-	3.5E+03		1.9E-05
100-41-4	Ethylbenzene	670	6.7	4.9E+00	8.8E+02	**1.4E-06**	1.5E-03
142-82-5	Heptane, N-	2800	28	-	3.5E+02		1.6E-02
110-54-3	Hexane, N-	1900	19	-	6.1E+02		6.2E-03
7783-06-4	Hydrogen Sulfide	690	6.9	-	1.8E+00		**7.9E-01**
108-88-3	Toluene	23	0.23	-	4.4E+03		1.1E-05
75-01-4	Vinyl Chloride	48	0.48	2.8E+00	4.5E+01	1.7E-07	2.1E-03
1330-20-7	Xylenes	810	8.1	-	8.8E+01		1.8E-02
					Cumulative:	4.6E-06	8.8E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-05 Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-05 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 42.8%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
360		71-43-2	Benzene			ug/m^3	SGP-05									
3400		110-82-7	Cyclohexane			ug/m^3	SGP-05									
1700		75-34-3	Dichloroethane, 1,1-			ug/m^3	SGP-05									
260		75-35-4	Dichloroethylene, 1,1-			ug/m^3	SGP-05									
1200		156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGP-05									
150		156-60-5	Dichloroethylene, trans-1,2-			ug/m^3	SGP-05									
570		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-05									
6100		142-82-5	Heptane, N-			ug/m^3	SGP-05									
4400		110-54-3	Hexane, N-			ug/m^3	SGP-05									
260		79-01-6	Trichloroethylene			ug/m^3	SGP-05									
1400		75-01-4	Vinyl Chloride			ug/m^3	SGP-05									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-05 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.3E-04	8.4E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.0E-05	6.6E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-05 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	360	10.8	3.6E-01	6.3E+00	**3.0E-05**	**3.5E-01**
110-82-7	Cyclohexane	3400	102	-	1.3E+03		1.6E-02
75-34-3	Dichloroethane, 1,1-	1700	51	1.8E+00	-	**2.9E-05**	
75-35-4	Dichloroethylene, 1,1-	260	7.8	-	8.3E-01		**1.9E+00**
156-59-2	Dichloroethylene, cis-1,2-	1200	36	-	8.3E+00		**8.6E-01**
156-60-5	Dichloroethylene, trans-1,2-	150	4.5	-	8.3E+00		1.1E-01
75-00-3	Ethyl Chloride (Chloroethane)	570	17.1	-	8.3E+02		4.1E-03
142-82-5	Heptane, N-	6100	183	-	8.3E+01		**4.4E-01**
110-54-3	Hexane, N-	4400	132	-	1.5E+02		1.8E-01
79-01-6	Trichloroethylene	260	7.8	4.8E-01	4.2E-01	**1.6E-05**	**3.7E+00**
75-01-4	Vinyl Chloride	1400	42	1.7E-01	1.1E+01	**2.5E-04**	**7.9E-01**
					Cumulative:	**3.3E-04**	**8.4E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-05 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	360	3.6	1.6E+00	2.6E+01	**2.3E-06**	2.7E-02
110-82-7	Cyclohexane	3400	34	-	5.3E+03		1.3E-03
75-34-3	Dichloroethane, 1,1-	1700	17	7.7E+00	-	**2.2E-06**	
75-35-4	Dichloroethylene, 1,1-	260	2.6	-	3.5E+00		1.5E-01
156-59-2	Dichloroethylene, cis-1,2-	1200	12	-	3.5E+01		6.8E-02
156-60-5	Dichloroethylene, trans-1,2-	150	1.5	-	3.5E+01		8.6E-03
75-00-3	Ethyl Chloride (Chloroethane)	570	5.7	-	3.5E+03		3.3E-04
142-82-5	Heptane, N-	6100	61	-	3.5E+02		3.5E-02
110-54-3	Hexane, N-	4400	44	-	6.1E+02		1.4E-02
79-01-6	Trichloroethylene	260	2.6	3.0E+00	1.8E+00	8.7E-07	**3.0E-01**
75-01-4	Vinyl Chloride	1400	14	2.8E+00	4.5E+01	**5.0E-06**	6.3E-02
					Cumulative:	1.0E-05	6.6E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-06 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-06 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 73.4%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
1300		71-43-2	Benzene			ug/m^3	SGP-06									
4300		110-82-7	Cyclohexane			ug/m^3	SGP-06									
1300		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-06									
34000		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-06									
8400		142-82-5	Heptane, N-			ug/m^3	SGP-06									
6000		110-54-3	Hexane, N-			ug/m^3	SGP-06									
17000		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-06									
150	J	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m^3	SGP-06									
330		115-07-1	Propylene			ug/m^3	SGP-06									
350		95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-06									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-06 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.1E-04	2.5E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	8.3E-06	2.0E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-06 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1300	39	3.6E-01	6.3E+00	**1.1E-04**	**1.2E+00**
110-82-7	Cyclohexane	4300	129	-	1.3E+03		2.1E-02
75-71-8	Dichlorodifluoromethane	1300	39	-	2.1E+01		**3.7E-01**
75-00-3	Ethyl Chloride (Chloroethane)	34000	1020	-	8.3E+02		**2.4E-01**
142-82-5	Heptane, N-	8400	252	-	8.3E+01		**6.0E-01**
110-54-3	Hexane, N-	6000	180	-	1.5E+02		**2.5E-01**
7783-06-4	Hydrogen Sulfide	17000	510	-	4.2E-01		**2.4E+02**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	150	4.5	-	1.0E+03		8.6E-04
115-07-1	Propylene	330	9.9	-	6.3E+02		3.2E-03
95-63-6	Trimethylbenzene, 1,2,4-	350	10.5	-	1.3E+01		1.7E-01
					Cumulative:	**1.1E-04**	**2.5E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-06 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1300	13	1.6E+00	2.6E+01	**8.3E-06**	9.9E-02
110-82-7	Cyclohexane	4300	43	-	5.3E+03		1.6E-03
75-71-8	Dichlorodifluoromethane	1300	13	-	8.8E+01		3.0E-02
75-00-3	Ethyl Chloride (Chloroethane)	34000	340	-	3.5E+03		1.9E-02
142-82-5	Heptane, N-	8400	84	-	3.5E+02		4.8E-02
110-54-3	Hexane, N-	6000	60	-	6.1E+02		2.0E-02
7783-06-4	Hydrogen Sulfide	17000	170	-	1.8E+00		**1.9E+01**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	150	1.5	-	4.4E+03		6.8E-05
115-07-1	Propylene	330	3.3	-	2.6E+03		2.5E-04
95-63-6	Trimethylbenzene, 1,2,4-	350	3.5	-	5.3E+01		1.3E-02
					Cumulative:	8.3E-06	**2.0E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-07 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-07 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 74%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
2700		71-43-2	Benzene			ug/m^3	SGP-07									
14000		110-82-7	Cyclohexane			ug/m^3	SGP-07									
210	J	75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-07									
1500		100-41-4	Ethylbenzene			ug/m^3	SGP-07									
50000		142-82-5	Heptane, N-			ug/m^3	SGP-07									
17000		110-54-3	Hexane, N-			ug/m^3	SGP-07									
38000		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-07									
3200	m+p	1330-20-7	Xylenes			ug/m^3	SGP-07									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-07 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.7E-04	5.5E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.0E-05	4.4E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-07 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2700	81	3.6E-01	6.3E+00	**2.3E-04**	**2.6E+00**
110-82-7	Cyclohexane	14000	420	-	1.3E+03		6.7E-02
75-00-3	Ethyl Chloride (Chloroethane)	210	6.3	-	8.3E+02		1.5E-03
100-41-4	Ethylbenzene	1500	45	1.1E+00	2.1E+02	**4.0E-05**	4.3E-02
142-82-5	Heptane, N-	50000	1500	-	8.3E+01		**3.6E+00**
110-54-3	Hexane, N-	17000	510	-	1.5E+02		**7.0E-01**
7783-06-4	Hydrogen Sulfide	38000	1140	-	4.2E-01		**5.5E+02**
1330-20-7	Xylenes	3200	96	-	2.1E+01		**9.2E-01**
					Cumulative:	**2.7E-04**	**5.5E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-07 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2700	27	1.6E+00	2.6E+01	**1.7E-05**	**2.1E-01**
110-82-7	Cyclohexane	14000	140	-	5.3E+03		5.3E-03
75-00-3	Ethyl Chloride (Chloroethane)	210	2.1	-	3.5E+03		1.2E-04
100-41-4	Ethylbenzene	1500	15	4.9E+00	8.8E+02	**3.1E-06**	3.4E-03
142-82-5	Heptane, N-	50000	500	-	3.5E+02		**2.9E-01**
110-54-3	Hexane, N-	17000	170	-	6.1E+02		5.5E-02
7783-06-4	Hydrogen Sulfide	38000	380	-	1.8E+00		**4.3E+01**
1330-20-7	Xylenes	3200	32	-	8.8E+01		7.3E-02
					Cumulative:	2.0E-05	**4.4E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-08 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-08 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 69.9%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
570		71-43-2	Benzene			ug/m^3	SGP-08									
500		110-82-7	Cyclohexane			ug/m^3	SGP-08									
56	J	106-46-7	Dichlorobenzene, 1,4-			ug/m^3	SGP-08									
210		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-08									
140		100-41-4	Ethylbenzene			ug/m^3	SGP-08									
1400		142-82-5	Heptane, N-			ug/m^3	SGP-08									
670		110-54-3	Hexane, N-			ug/m^3	SGP-08									
21000		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-08									
310	C	91-20-3	~Naphthalene			ug/m^3	SGP-08									
670		115-07-1	Propylene			ug/m^3	SGP-08									
41	J	108-88-3	Toluene			ug/m^3	SGP-08									
35	J	95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-08									
74		75-01-4	Vinyl Chloride			ug/m^3	SGP-08									
270		1330-20-7	Xylenes			ug/m^3	SGP-08									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-08 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.8E-04	3.1E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.3E-05	2.4E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-08 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	570	17.1	3.6E-01	6.3E+00	**4.8E-05**	**5.5E-01**
110-82-7	Cyclohexane	500	15	-	1.3E+03		2.4E-03
106-46-7	Dichlorobenzene, 1,4-	56	1.68	2.6E-01	1.7E+02	**6.6E-06**	2.0E-03
75-71-8	Dichlorodifluoromethane	210	6.3	-	2.1E+01		6.0E-02
100-41-4	Ethylbenzene	140	4.2	1.1E+00	2.1E+02	**3.7E-06**	4.0E-03
142-82-5	Heptane, N-	1400	42	-	8.3E+01		1.0E-01
110-54-3	Hexane, N-	670	20.1	-	1.5E+02		2.8E-02
7783-06-4	Hydrogen Sulfide	21000	630	-	4.2E-01		**3.0E+02**
91-20-3	~Naphthalene	310	9.3	8.3E-02	6.3E-01	**1.1E-04**	**3.0E+00**
115-07-1	Propylene	670	20.1	-	6.3E+02		6.4E-03
108-88-3	Toluene	41	1.23	-	1.0E+03		2.4E-04
95-63-6	Trimethylbenzene, 1,2,4-	35	1.05	-	1.3E+01		1.7E-02
75-01-4	Vinyl Chloride	74	2.22	1.7E-01	1.1E+01	**1.3E-05**	4.2E-02
1330-20-7	Xylenes	270	8.1	-	2.1E+01		7.8E-02
					Cumulative:	**1.8E-04**	**3.1E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-08 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	570	5.7	1.6E+00	2.6E+01	**3.6E-06**	4.3E-02
110-82-7	Cyclohexane	500	5	-	5.3E+03		1.9E-04
106-46-7	Dichlorobenzene, 1,4-	56	0.56	1.1E+00	7.0E+02	5.0E-07	1.6E-04
75-71-8	Dichlorodifluoromethane	210	2.1	-	8.8E+01		4.8E-03
100-41-4	Ethylbenzene	140	1.4	4.9E+00	8.8E+02	2.9E-07	3.2E-04
142-82-5	Heptane, N-	1400	14	-	3.5E+02		8.0E-03
110-54-3	Hexane, N-	670	6.7	-	6.1E+02		2.2E-03
7783-06-4	Hydrogen Sulfide	21000	210	-	1.8E+00		**2.4E+01**
91-20-3	~Naphthalene	310	3.1	3.6E-01	2.6E+00	**8.6E-06**	**2.4E-01**
115-07-1	Propylene	670	6.7	-	2.6E+03		5.1E-04
108-88-3	Toluene	41	0.41	-	4.4E+03		1.9E-05
95-63-6	Trimethylbenzene, 1,2,4-	35	0.35	-	5.3E+01		1.3E-03
75-01-4	Vinyl Chloride	74	0.74	2.8E+00	4.5E+01	2.7E-07	3.3E-03
1330-20-7	Xylenes	270	2.7	-	8.8E+01		6.2E-03
					Cumulative:	1.3E-05	**2.4E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-09 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-09 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 30.7%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
230		71-43-2	Benzene			ug/m^3	SGP-09									
780		110-82-7	Cyclohexane			ug/m^3	SGP-09									
1000		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-09									
130		75-34-3	Dichloroethane, 1,1-			ug/m^3	SGP-09									
51	J	156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGP-09									
620		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-09									
81		100-41-4	Ethylbenzene			ug/m^3	SGP-09									
1100		142-82-5	Heptane, N-			ug/m^3	SGP-09									
600		110-54-3	Hexane, N-			ug/m^3	SGP-09									
100	C	91-20-3	~Naphthalene			ug/m^3	SGP-09									
630		115-07-1	Propylene			ug/m^3	SGP-09									
85	J	127-18-4	Tetrachloroethylene			ug/m^3	SGP-09									
29	J	108-88-3	Toluene			ug/m^3	SGP-09									
68		79-01-6	Trichloroethylene			ug/m^3	SGP-09									
40	J	108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGP-09									
350		1330-20-7	Xylenes			ug/m^3	SGP-09									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-09 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.4E-05	2.8E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.8E-06	2.2E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-09 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	230	6.9	3.6E-01	6.3E+00	**1.9E-05**	**2.2E-01**
110-82-7	Cyclohexane	780	23.4	-	1.3E+03		3.7E-03
75-71-8	Dichlorodifluoromethane	1000	30	-	2.1E+01		**2.9E-01**
75-34-3	Dichloroethane, 1,1-	130	3.9	1.8E+00	-	**2.2E-06**	
156-59-2	Dichloroethylene, cis-1,2-	51	1.53	-	8.3E+00		3.7E-02
75-00-3	Ethyl Chloride (Chloroethane)	620	18.6	-	8.3E+02		4.5E-03
100-41-4	Ethylbenzene	81	2.43	1.1E+00	2.1E+02	**2.2E-06**	2.3E-03
142-82-5	Heptane, N-	1100	33	-	8.3E+01		7.9E-02
110-54-3	Hexane, N-	600	18	-	1.5E+02		2.5E-02
91-20-3	~Naphthalene	100	3	8.3E-02	6.3E-01	**3.6E-05**	**9.6E-01**
115-07-1	Propylene	630	18.9	-	6.3E+02		6.0E-03
127-18-4	Tetrachloroethylene	85	2.55	1.1E+01	8.3E+00	2.4E-07	6.1E-02
108-88-3	Toluene	29	0.87	-	1.0E+03		1.7E-04
79-01-6	Trichloroethylene	68	2.04	4.8E-01	4.2E-01	**4.3E-06**	**9.8E-01**
108-67-8	Trimethylbenzene, 1,3,5-	40	1.2	-	1.3E+01		1.9E-02
1330-20-7	Xylenes	350	10.5	-	2.1E+01		1.0E-01
					Cumulative:	6.4E-05	**2.8E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-09 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	230	2.3	1.6E+00	2.6E+01	**1.5E-06**	1.8E-02
110-82-7	Cyclohexane	780	7.8	-	5.3E+03		3.0E-04
75-71-8	Dichlorodifluoromethane	1000	10	-	8.8E+01		2.3E-02
75-34-3	Dichloroethane, 1,1-	130	1.3	7.7E+00	-	1.7E-07	
156-59-2	Dichloroethylene, cis-1,2-	51	0.51	-	3.5E+01		2.9E-03
75-00-3	Ethyl Chloride (Chloroethane)	620	6.2	-	3.5E+03		3.5E-04
100-41-4	Ethylbenzene	81	0.81	4.9E+00	8.8E+02	1.7E-07	1.8E-04
142-82-5	Heptane, N-	1100	11	-	3.5E+02		6.3E-03
110-54-3	Hexane, N-	600	6	-	6.1E+02		2.0E-03
91-20-3	~Naphthalene	100	1	3.6E-01	2.6E+00	**2.8E-06**	7.6E-02
115-07-1	Propylene	630	6.3	-	2.6E+03		4.8E-04
127-18-4	Tetrachloroethylene	85	0.85	4.7E+01	3.5E+01	1.8E-08	4.9E-03
108-88-3	Toluene	29	0.29	-	4.4E+03		1.3E-05
79-01-6	Trichloroethylene	68	0.68	3.0E+00	1.8E+00	2.3E-07	7.8E-02
108-67-8	Trimethylbenzene, 1,3,5-	40	0.4	-	5.3E+01		1.5E-03
1330-20-7	Xylenes	350	3.5	-	8.8E+01		8.0E-03

Cumulative:	4.8E-06	2.2E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-10 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-10 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 64.7%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
2500		71-43-2	Benzene			ug/m^3	SGP-10									
7400		110-82-7	Cyclohexane			ug/m^3	SGP-10									
250	J	106-46-7	Dichlorobenzene, 1,4-			ug/m^3	SGP-10									
320		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-10									
10000		100-41-4	Ethylbenzene			ug/m^3	SGP-10									
21000		142-82-5	Heptane, N-			ug/m^3	SGP-10									
1300		110-54-3	Hexane, N-			ug/m^3	SGP-10									
5900		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-10									
170	J	108-88-3	Toluene			ug/m^3	SGP-10									
580		95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-10									
310	J	108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGP-10									
13000		1330-20-7	Xylenes			ug/m^3	SGP-10									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-10 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.0E-04	9.3E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.9E-05	7.4E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-10 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2500	75	3.6E-01	6.3E+00	**2.1E-04**	**2.4E+00**
110-82-7	Cyclohexane	7400	222	-	1.3E+03		3.5E-02
106-46-7	Dichlorobenzene, 1,4-	250	7.5	2.6E-01	1.7E+02	**2.9E-05**	9.0E-03
75-00-3	Ethyl Chloride (Chloroethane)	320	9.6	-	8.3E+02		2.3E-03
100-41-4	Ethylbenzene	10000	300	1.1E+00	2.1E+02	**2.7E-04**	**2.9E-01**
142-82-5	Heptane, N-	21000	630	-	8.3E+01		**1.5E+00**
110-54-3	Hexane, N-	1300	39	-	1.5E+02		5.3E-02
7783-06-4	Hydrogen Sulfide	5900	177	-	4.2E-01		**8.5E+01**
108-88-3	Toluene	170	5.1	-	1.0E+03		9.8E-04
95-63-6	Trimethylbenzene, 1,2,4-	580	17.4	-	1.3E+01		**2.8E-01**
108-67-8	Trimethylbenzene, 1,3,5-	310	9.3	-	1.3E+01		1.5E-01
1330-20-7	Xylenes	13000	390	-	2.1E+01		**3.7E+00**
					Cumulative:	**5.0E-04**	**9.3E+01**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-10 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2500	25	1.6E+00	2.6E+01	**1.6E-05**	1.9E-01
110-82-7	Cyclohexane	7400	74	-	5.3E+03		2.8E-03
106-46-7	Dichlorobenzene, 1,4-	250	2.5	1.1E+00	7.0E+02	**2.2E-06**	7.1E-04
75-00-3	Ethyl Chloride (Chloroethane)	320	3.2	-	3.5E+03		1.8E-04
100-41-4	Ethylbenzene	10000	100	4.9E+00	8.8E+02	**2.0E-05**	2.3E-02
142-82-5	Heptane, N-	21000	210	-	3.5E+02		1.2E-01
110-54-3	Hexane, N-	1300	13	-	6.1E+02		4.2E-03
7783-06-4	Hydrogen Sulfide	5900	59	-	1.8E+00		**6.7E+00**
108-88-3	Toluene	170	1.7	-	4.4E+03		7.8E-05
95-63-6	Trimethylbenzene, 1,2,4-	580	5.8	-	5.3E+01		2.2E-02
108-67-8	Trimethylbenzene, 1,3,5-	310	3.1	-	5.3E+01		1.2E-02
1330-20-7	Xylenes	13000	130	-	8.8E+01		**3.0E-01**
					Cumulative:	3.9E-05	**7.4E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-11 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-11 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 10.2%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
580		71-43-2	Benzene			ug/m^3	SGP-11									
1100		110-82-7	Cyclohexane			ug/m^3	SGP-11									
490		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-11									
120	J	75-34-3	Dichloroethane, 1,1-			ug/m^3	SGP-11									
64	J	156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGP-11									
52	J	156-60-5	Dichloroethylene, trans-1,2-			ug/m^3	SGP-11									
250		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-11									
720		100-41-4	Ethylbenzene			ug/m^3	SGP-11									
3600		142-82-5	Heptane, N-			ug/m^3	SGP-11									
1200		110-54-3	Hexane, N-			ug/m^3	SGP-11									
140	J	95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-11									
100	J	108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGP-11									
5600		1330-20-7	Xylenes			ug/m^3	SGP-11									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-11 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.0E-05	2.8E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.3E-06	2.3E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-11 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	580	17.4	3.6E-01	6.3E+00	**4.8E-05**	**5.6E-01**
110-82-7	Cyclohexane	1100	33	-	1.3E+03		5.3E-03
75-71-8	Dichlorodifluoromethane	490	14.7	-	2.1E+01		1.4E-01
75-34-3	Dichloroethane, 1,1-	120	3.6	1.8E+00	-	**2.1E-06**	
156-59-2	Dichloroethylene, cis-1,2-	64	1.92	-	8.3E+00		4.6E-02
156-60-5	Dichloroethylene, trans-1,2-	52	1.56	-	8.3E+00		3.7E-02
75-00-3	Ethyl Chloride (Chloroethane)	250	7.5	-	8.3E+02		1.8E-03
100-41-4	Ethylbenzene	720	21.6	1.1E+00	2.1E+02	**1.9E-05**	2.1E-02
142-82-5	Heptane, N-	3600	108	-	8.3E+01		**2.6E-01**
110-54-3	Hexane, N-	1200	36	-	1.5E+02		4.9E-02
95-63-6	Trimethylbenzene, 1,2,4-	140	4.2	-	1.3E+01		6.7E-02
108-67-8	Trimethylbenzene, 1,3,5-	100	3	-	1.3E+01		4.8E-02
1330-20-7	Xylenes	5600	168	-	2.1E+01		**1.6E+00**
					Cumulative:	7.0E-05	**2.8E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-11 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	580	5.8	1.6E+00	2.6E+01	**3.7E-06**	4.4E-02
110-82-7	Cyclohexane	1100	11	-	5.3E+03		4.2E-04
75-71-8	Dichlorodifluoromethane	490	4.9	-	8.8E+01		1.1E-02
75-34-3	Dichloroethane, 1,1-	120	1.2	7.7E+00	-	1.6E-07	
156-59-2	Dichloroethylene, cis-1,2-	64	0.64	-	3.5E+01		3.7E-03
156-60-5	Dichloroethylene, trans-1,2-	52	0.52	-	3.5E+01		3.0E-03
75-00-3	Ethyl Chloride (Chloroethane)	250	2.5	-	3.5E+03		1.4E-04
100-41-4	Ethylbenzene	720	7.2	4.9E+00	8.8E+02	**1.5E-06**	1.6E-03
142-82-5	Heptane, N-	3600	36	-	3.5E+02		2.1E-02
110-54-3	Hexane, N-	1200	12	-	6.1E+02		3.9E-03
95-63-6	Trimethylbenzene, 1,2,4-	140	1.4	-	5.3E+01		5.3E-03
108-67-8	Trimethylbenzene, 1,3,5-	100	1	-	5.3E+01		3.8E-03
1330-20-7	Xylenes	5600	56	-	8.8E+01		1.3E-01
					Cumulative:	5.3E-06	2.3E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-12 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-12 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 73%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
1900		71-43-2	Benzene			ug/m^3	SGP-12									
420		108-90-7	Chlorobenzene			ug/m^3	SGP-12									
590		110-82-7	Cyclohexane			ug/m^3	SGP-12									
65	J	100-41-4	Ethylbenzene			ug/m^3	SGP-12									
1500		142-82-5	Heptane, N-			ug/m^3	SGP-12									
1500		110-54-3	Hexane, N-			ug/m^3	SGP-12									
37000		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-12									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-12 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.6E-04	5.3E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.2E-05	4.2E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-12 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1900	57	3.6E-01	6.3E+00	**1.6E-04**	**1.8E+00**
108-90-7	Chlorobenzene	420	12.6	-	1.0E+01		**2.4E-01**
110-82-7	Cyclohexane	590	17.7	-	1.3E+03		2.8E-03
100-41-4	Ethylbenzene	65	1.95	1.1E+00	2.1E+02	**1.7E-06**	1.9E-03
142-82-5	Heptane, N-	1500	45	-	8.3E+01		1.1E-01
110-54-3	Hexane, N-	1500	45	-	1.5E+02		6.2E-02
7783-06-4	Hydrogen Sulfide	37000	1110	-	4.2E-01		**5.3E+02**
					Cumulative:	**1.6E-04**	**5.3E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-12 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	1900	19	1.6E+00	2.6E+01	**1.2E-05**	1.4E-01
108-90-7	Chlorobenzene	420	4.2	-	4.4E+01		1.9E-02
110-82-7	Cyclohexane	590	5.9	-	5.3E+03		2.2E-04
100-41-4	Ethylbenzene	65	0.65	4.9E+00	8.8E+02	1.3E-07	1.5E-04
142-82-5	Heptane, N-	1500	15	-	3.5E+02		8.6E-03
110-54-3	Hexane, N-	1500	15	-	6.1E+02		4.9E-03
7783-06-4	Hydrogen Sulfide	37000	370	-	1.8E+00		**4.2E+01**
					Cumulative:	1.2E-05	**4.2E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-13 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-13 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 1.02%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
130		67-66-3	Chloroform			ug/m^3	SGP-13									
31		110-82-7	Cyclohexane			ug/m^3	SGP-13									
88		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-13									
25		142-82-5	Heptane, N-			ug/m^3	SGP-13									
69		110-54-3	Hexane, N-			ug/m^3	SGP-13									
14	C	91-20-3	~Naphthalene			ug/m^3	SGP-13									
9.1		115-07-1	Propylene			ug/m^3	SGP-13									
10	J	127-18-4	Tetrachloroethylene			ug/m^3	SGP-13									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-13 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.7E-05	2.1E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.8E-06	1.7E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-13 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-66-3	Chloroform	130	3.9	1.2E-01	4.1E-01	**3.2E-05**	**1.9E+00**
110-82-7	Cyclohexane	31	0.93	-	1.3E+03		1.5E-04
75-71-8	Dichlorodifluoromethane	88	2.64	-	2.1E+01		2.5E-02
142-82-5	Heptane, N-	25	0.75	-	8.3E+01		1.8E-03
110-54-3	Hexane, N-	69	2.07	-	1.5E+02		2.8E-03
91-20-3	~Naphthalene	14	0.42	8.3E-02	6.3E-01	**5.1E-06**	1.3E-01
115-07-1	Propylene	9.1	0.273	-	6.3E+02		8.7E-05
127-18-4	Tetrachloroethylene	10	0.3	1.1E+01	8.3E+00	2.8E-08	7.2E-03
					Cumulative:	3.7E-05	**2.1E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-13 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
67-66-3	Chloroform	130	1.3	5.3E-01	1.7E+00	**2.4E-06**	1.5E-01
110-82-7	Cyclohexane	31	0.31	-	5.3E+03		1.2E-05
75-71-8	Dichlorodifluoromethane	88	0.88	-	8.8E+01		2.0E-03
142-82-5	Heptane, N-	25	0.25	-	3.5E+02		1.4E-04
110-54-3	Hexane, N-	69	0.69	-	6.1E+02		2.3E-04
91-20-3	~Naphthalene	14	0.14	3.6E-01	2.6E+00	3.9E-07	1.1E-02
115-07-1	Propylene	9.1	0.091	-	2.6E+03		6.9E-06
127-18-4	Tetrachloroethylene	10	0.1	4.7E+01	3.5E+01	2.1E-09	5.7E-04
					Cumulative:	2.8E-06	1.7E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-14 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-14 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 6.73%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
95		71-43-2	Benzene			ug/m^3	SGP-14									
42		108-90-7	Chlorobenzene			ug/m^3	SGP-14									
180		110-82-7	Cyclohexane			ug/m^3	SGP-14									
19	J	106-46-7	Dichlorobenzene, 1,4-			ug/m^3	SGP-14									
170		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-14									
36		100-41-4	Ethylbenzene			ug/m^3	SGP-14									
9.3	J	109-99-9	~Tetrahydrofuran			ug/m^3	SGP-14									
550		142-82-5	Heptane, N-			ug/m^3	SGP-14									
220		110-54-3	Hexane, N-			ug/m^3	SGP-14									
41	J	75-09-2	Methylene Chloride			ug/m^3	SGP-14									
51		91-20-3	~Naphthalene			ug/m^3	SGP-14									
110		115-07-1	Propylene			ug/m^3	SGP-14									
72	J	1330-20-7	Xylenes			ug/m^3	SGP-14									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-14 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.0E-05	7.3E-01	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.3E-06	5.8E-02	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-14 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	95	2.85	3.6E-01	6.3E+00	**7.9E-06**	9.1E-02
108-90-7	Chlorobenzene	42	1.26	-	1.0E+01		2.4E-02
110-82-7	Cyclohexane	180	5.4	-	1.3E+03		8.6E-04
106-46-7	Dichlorobenzene, 1,4-	19	0.57	2.6E-01	1.7E+02	**2.2E-06**	6.8E-04
75-71-8	Dichlorodifluoromethane	170	5.1	-	2.1E+01		4.9E-02
100-41-4	Ethylbenzene	36	1.08	1.1E+00	2.1E+02	9.6E-07	1.0E-03
109-99-9	~Tetrahydrofuran	9.3	0.279	-	4.2E+02		1.3E-04
142-82-5	Heptane, N-	550	16.5	-	8.3E+01		4.0E-02
110-54-3	Hexane, N-	220	6.6	-	1.5E+02		9.0E-03
75-09-2	Methylene Chloride	41	1.23	1.0E+02	1.3E+02	1.2E-08	2.0E-03
91-20-3	~Naphthalene	51	1.53	8.3E-02	6.3E-01	**1.9E-05**	**4.9E-01**
115-07-1	Propylene	110	3.3	-	6.3E+02		1.1E-03
1330-20-7	Xylenes	72	2.16	-	2.1E+01		2.1E-02
					Cumulative:	3.0E-05	7.3E-01

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-14 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	95	0.95	1.6E+00	2.6E+01	6.0E-07	7.2E-03
108-90-7	Chlorobenzene	42	0.42	-	4.4E+01		1.9E-03
110-82-7	Cyclohexane	180	1.8	-	5.3E+03		6.8E-05
106-46-7	Dichlorobenzene, 1,4-	19	0.19	1.1E+00	7.0E+02	1.7E-07	5.4E-05
75-71-8	Dichlorodifluoromethane	170	1.7	-	8.8E+01		3.9E-03
100-41-4	Ethylbenzene	36	0.36	4.9E+00	8.8E+02	7.3E-08	8.2E-05
109-99-9	~Tetrahydrofuran	9.3	0.093	-	1.8E+03		1.1E-05
142-82-5	Heptane, N-	550	5.5	-	3.5E+02		3.1E-03
110-54-3	Hexane, N-	220	2.2	-	6.1E+02		7.2E-04
75-09-2	Methylene Chloride	41	0.41	1.2E+03	5.3E+02	3.3E-10	1.6E-04
91-20-3	~Naphthalene	51	0.51	3.6E-01	2.6E+00	**1.4E-06**	3.9E-02
115-07-1	Propylene	110	1.1	-	2.6E+03		8.4E-05
1330-20-7	Xylenes	72	0.72	-	8.8E+01		1.6E-03
					Cumulative:	2.3E-06	5.8E-02

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGI-18 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-18 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Duplicate-03 was collected at this location. Methane: 64.2%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
680		71-43-2	Benzene			ug/m^3	SGI-18									
190		108-90-7	Chlorobenzene			ug/m^3	SGI-18									
630		110-82-7	Cyclohexane			ug/m^3	SGI-18									
420		75-71-8	Dichlorodifluoromethane			ug/m^3	SGI-18									
41	J	156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGI-18									
42	J	75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	Duplicate									
1400		100-41-4	Ethylbenzene			ug/m^3	SGI-18									
2900		142-82-5	Heptane, N-			ug/m^3	SGI-18									
1800		110-54-3	Hexane, N-			ug/m^3	SGI-18									
3100		7783-06-4	Hydrogen Sulfide			ug/m^3	SGI-18									
1700		115-07-1	Propylene			ug/m^3	SGI-18									
70	J	108-88-3	Toluene			ug/m^3	SGI-18									
100	J	95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGI-18									
100	J	108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGI-18									
68		75-01-4	Vinyl Chloride			ug/m^3	SGI-18									
960		1330-20-7	Xylenes			ug/m^3	SGI-18									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-18 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.1E-04	4.6E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.4E-06	3.7E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-18 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	680	20.4	3.6E-01	6.3E+00	**5.7E-05**	**6.5E-01**
108-90-7	Chlorobenzene	190	5.7	-	1.0E+01		1.1E-01
110-82-7	Cyclohexane	630	18.9	-	1.3E+03		3.0E-03
75-71-8	Dichlorodifluoromethane	420	12.6	-	2.1E+01		1.2E-01
156-59-2	Dichloroethylene, cis-1,2-	41	1.23	-	8.3E+00		2.9E-02
75-00-3	Ethyl Chloride (Chloroethane)	42	1.26	-	8.3E+02		3.0E-04
100-41-4	Ethylbenzene	1400	42	1.1E+00	2.1E+02	**3.7E-05**	4.0E-02
142-82-5	Heptane, N-	2900	87	-	8.3E+01		**2.1E-01**
110-54-3	Hexane, N-	1800	54	-	1.5E+02		7.4E-02
7783-06-4	Hydrogen Sulfide	3100	93	-	4.2E-01		**4.5E+01**
115-07-1	Propylene	1700	51	-	6.3E+02		1.6E-02
108-88-3	Toluene	70	2.1	-	1.0E+03		4.0E-04
95-63-6	Trimethylbenzene, 1,2,4-	100	3	-	1.3E+01		4.8E-02
108-67-8	Trimethylbenzene, 1,3,5-	100	3	-	1.3E+01		4.8E-02
75-01-4	Vinyl Chloride	68	2.04	1.7E-01	1.1E+01	**1.2E-05**	3.8E-02
1330-20-7	Xylenes	960	28.8	-	2.1E+01		**2.8E-01**
					Cumulative:	**1.1E-04**	**4.6E+01**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-18 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	680	6.8	1.6E+00	2.6E+01	**4.3E-06**	5.2E-02
108-90-7	Chlorobenzene	190	1.9	-	4.4E+01		8.7E-03
110-82-7	Cyclohexane	630	6.3	-	5.3E+03		2.4E-04
75-71-8	Dichlorodifluoromethane	420	4.2	-	8.8E+01		9.6E-03
156-59-2	Dichloroethylene, cis-1,2-	41	0.41	-	3.5E+01		2.3E-03
75-00-3	Ethyl Chloride (Chloroethane)	42	0.42	-	3.5E+03		2.4E-05
100-41-4	Ethylbenzene	1400	14	4.9E+00	8.8E+02	**2.9E-06**	3.2E-03
142-82-5	Heptane, N-	2900	29	-	3.5E+02		1.7E-02
110-54-3	Hexane, N-	1800	18	-	6.1E+02		5.9E-03
7783-06-4	Hydrogen Sulfide	3100	31	-	1.8E+00		**3.5E+00**
115-07-1	Propylene	1700	17	-	2.6E+03		1.3E-03
108-88-3	Toluene	70	0.7	-	4.4E+03		3.2E-05
95-63-6	Trimethylbenzene, 1,2,4-	100	1	-	5.3E+01		3.8E-03
108-67-8	Trimethylbenzene, 1,3,5-	100	1	-	5.3E+01		3.8E-03
75-01-4	Vinyl Chloride	68	0.68	2.8E+00	4.5E+01	2.4E-07	3.0E-03
1330-20-7	Xylenes	960	9.6	-	8.8E+01		2.2E-02
					Cumulative:	7.4E-06	**3.7E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-19 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-19 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 61%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
860		71-43-2	Benzene			ug/m^3	SGP-19									
1400		108-90-7	Chlorobenzene			ug/m^3	SGP-19									
1900		110-82-7	Cyclohexane			ug/m^3	SGP-19									
100	J	106-46-7	Dichlorobenzene, 1,4-			ug/m^3	SGP-19									
3100		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-19									
280		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-19									
550		100-41-4	Ethylbenzene			ug/m^3	SGP-19									
6000		142-82-5	Heptane, N-			ug/m^3	SGP-19									
3800		110-54-3	Hexane, N-			ug/m^3	SGP-19									
3800		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-19									
1200		115-07-1	Propylene			ug/m^3	SGP-19									
510		108-88-3	Toluene			ug/m^3	SGP-19									
68		79-01-6	Trichloroethylene			ug/m^3	SGP-19									
250		95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-19									
150		108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGP-19									
28	J	75-01-4	Vinyl Chloride			ug/m^3	SGP-19									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-19 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.1E-04	5.9E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.8E-06	4.7E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-19 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	860	25.8	3.6E-01	6.3E+00	**7.2E-05**	**8.2E-01**
108-90-7	Chlorobenzene	1400	42	-	1.0E+01		**8.1E-01**
110-82-7	Cyclohexane	1900	57	-	1.3E+03		9.1E-03
106-46-7	Dichlorobenzene, 1,4-	100	3	2.6E-01	1.7E+02	**1.2E-05**	3.6E-03
75-71-8	Dichlorodifluoromethane	3100	93	-	2.1E+01		**8.9E-01**
75-00-3	Ethyl Chloride (Chloroethane)	280	8.4	-	8.3E+02		2.0E-03
100-41-4	Ethylbenzene	550	16.5	1.1E+00	2.1E+02	**1.5E-05**	1.6E-02
142-82-5	Heptane, N-	6000	180	-	8.3E+01		**4.3E-01**
110-54-3	Hexane, N-	3800	114	-	1.5E+02		1.6E-01
7783-06-4	Hydrogen Sulfide	3800	114	-	4.2E-01		**5.5E+01**
115-07-1	Propylene	1200	36	-	6.3E+02		1.2E-02
108-88-3	Toluene	510	15.3	-	1.0E+03		2.9E-03
79-01-6	Trichloroethylene	68	2.04	4.8E-01	4.2E-01	**4.3E-06**	**9.8E-01**
95-63-6	Trimethylbenzene, 1,2,4-	250	7.5	-	1.3E+01		1.2E-01
108-67-8	Trimethylbenzene, 1,3,5-	150	4.5	-	1.3E+01		7.2E-02
75-01-4	Vinyl Chloride	28	0.84	1.7E-01	1.1E+01	**5.0E-06**	1.6E-02
					Cumulative:	**1.1E-04**	**5.9E+01**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-19 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	860	8.6	1.6E+00	2.6E+01	**5.5E-06**	6.5E-02
108-90-7	Chlorobenzene	1400	14	-	4.4E+01		6.4E-02
110-82-7	Cyclohexane	1900	19	-	5.3E+03		7.2E-04
106-46-7	Dichlorobenzene, 1,4-	100	1	1.1E+00	7.0E+02	9.0E-07	2.9E-04
75-71-8	Dichlorodifluoromethane	3100	31	-	8.8E+01		7.1E-02
75-00-3	Ethyl Chloride (Chloroethane)	280	2.8	-	3.5E+03		1.6E-04
100-41-4	Ethylbenzene	550	5.5	4.9E+00	8.8E+02	**1.1E-06**	1.3E-03
142-82-5	Heptane, N-	6000	60	-	3.5E+02		3.4E-02
110-54-3	Hexane, N-	3800	38	-	6.1E+02		1.2E-02
7783-06-4	Hydrogen Sulfide	3800	38	-	1.8E+00		**4.3E+00**
115-07-1	Propylene	1200	12	-	2.6E+03		9.1E-04
108-88-3	Toluene	510	5.1	-	4.4E+03		2.3E-04
79-01-6	Trichloroethylene	68	0.68	3.0E+00	1.8E+00	2.3E-07	7.8E-02
95-63-6	Trimethylbenzene, 1,2,4-	250	2.5	-	5.3E+01		9.5E-03
108-67-8	Trimethylbenzene, 1,3,5-	150	1.5	-	5.3E+01		5.7E-03
75-01-4	Vinyl Chloride	28	0.28	2.8E+00	4.5E+01	1.0E-07	1.3E-03
					Cumulative:	7.8E-06	**4.7E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-20 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-20 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 64.4%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
960		71-43-2	Benzene			ug/m^3	SGP-20									
4000		108-90-7	Chlorobenzene			ug/m^3	SGP-20									
2900		110-82-7	Cyclohexane			ug/m^3	SGP-20									
3400		142-82-5	Heptane, N-			ug/m^3	SGP-20									
2200		110-54-3	Hexane, N-			ug/m^3	SGP-20									
1400		115-07-1	Propylene			ug/m^3	SGP-20									
78	J	108-88-3	Toluene			ug/m^3	SGP-20									
64	J	75-01-4	Vinyl Chloride			ug/m^3	SGP-20									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-20 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	9.1E-05	3.6E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.3E-06	2.9E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-20 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	960	28.8	3.6E-01	6.3E+00	**8.0E-05**	**9.2E-01**
108-90-7	Chlorobenzene	4000	120	-	1.0E+01		**2.3E+00**
110-82-7	Cyclohexane	2900	87	-	1.3E+03		1.4E-02
142-82-5	Heptane, N-	3400	102	-	8.3E+01		**2.4E-01**
110-54-3	Hexane, N-	2200	66	-	1.5E+02		9.0E-02
115-07-1	Propylene	1400	42	-	6.3E+02		1.3E-02
108-88-3	Toluene	78	2.34	-	1.0E+03		4.5E-04
75-01-4	Vinyl Chloride	64	1.92	1.7E-01	1.1E+01	**1.1E-05**	3.6E-02
					Cumulative:	9.1E-05	**3.6E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-20 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	960	9.6	1.6E+00	2.6E+01	**6.1E-06**	7.3E-02
108-90-7	Chlorobenzene	4000	40	-	4.4E+01		1.8E-01
110-82-7	Cyclohexane	2900	29	-	5.3E+03		1.1E-03
142-82-5	Heptane, N-	3400	34	-	3.5E+02		1.9E-02
110-54-3	Hexane, N-	2200	22	-	6.1E+02		7.2E-03
115-07-1	Propylene	1400	14	-	2.6E+03		1.1E-03
108-88-3	Toluene	78	0.78	-	4.4E+03		3.6E-05
75-01-4	Vinyl Chloride	64	0.64	2.8E+00	4.5E+01	2.3E-07	2.9E-03
					Cumulative:	6.3E-06	2.9E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-21 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-21 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 16.8%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
810		71-43-2	Benzene			ug/m^3	SGP-21									
3100		110-82-7	Cyclohexane			ug/m^3	SGP-21									
8200		142-82-5	Heptane, N-			ug/m^3	SGP-21									
3200		110-54-3	Hexane, N-			ug/m^3	SGP-21									
290		115-07-1	Propylene			ug/m^3	SGP-21									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-21 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.8E-05	1.5E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.2E-06	1.2E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-21 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	810	24.3	3.6E-01	6.3E+00	**6.8E-05**	**7.8E-01**
110-82-7	Cyclohexane	3100	93	-	1.3E+03		1.5E-02
142-82-5	Heptane, N-	8200	246	-	8.3E+01		**5.9E-01**
110-54-3	Hexane, N-	3200	96	-	1.5E+02		1.3E-01
115-07-1	Propylene	290	8.7	-	6.3E+02		2.8E-03
					Cumulative:	6.8E-05	**1.5E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-21 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	810	8.1	1.6E+00	2.6E+01	**5.2E-06**	6.2E-02
110-82-7	Cyclohexane	3100	31	-	5.3E+03		1.2E-03
142-82-5	Heptane, N-	8200	82	-	3.5E+02		4.7E-02
110-54-3	Hexane, N-	3200	32	-	6.1E+02		1.0E-02
115-07-1	Propylene	290	2.9	-	2.6E+03		2.2E-04
					Cumulative:	5.2E-06	1.2E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-22 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-22 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 62%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
2700		71-43-2	Benzene			ug/m^3	SGP-22									
3100		110-82-7	Cyclohexane			ug/m^3	SGP-22									
140	J	75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-22									
4100		100-41-4	Ethylbenzene			ug/m^3	SGP-22									
13000		142-82-5	Heptane, N-			ug/m^3	SGP-22									
3200		110-54-3	Hexane, N-			ug/m^3	SGP-22									
420		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-22									
2100		108-88-3	Toluene			ug/m^3	SGP-22									
230	J	95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-22									
690		75-01-4	Vinyl Chloride			ug/m^3	SGP-22									
5600		1330-20-7	Xylenes			ug/m^3	SGP-22									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-22 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.6E-04	1.2E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.8E-05	9.5E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-22 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2700	81	3.6E-01	6.3E+00	**2.3E-04**	**2.6E+00**
110-82-7	Cyclohexane	3100	93	-	1.3E+03		1.5E-02
75-00-3	Ethyl Chloride (Chloroethane)	140	4.2	-	8.3E+02		1.0E-03
100-41-4	Ethylbenzene	4100	123	1.1E+00	2.1E+02	**1.1E-04**	1.2E-01
142-82-5	Heptane, N-	13000	390	-	8.3E+01		**9.3E-01**
110-54-3	Hexane, N-	3200	96	-	1.5E+02		1.3E-01
7783-06-4	Hydrogen Sulfide	420	12.6	-	4.2E-01		**6.0E+00**
108-88-3	Toluene	2100	63	-	1.0E+03		1.2E-02
95-63-6	Trimethylbenzene, 1,2,4-	230	6.9	-	1.3E+01		1.1E-01
75-01-4	Vinyl Chloride	690	20.7	1.7E-01	1.1E+01	**1.2E-04**	**3.9E-01**
1330-20-7	Xylenes	5600	168	-	2.1E+01		**1.6E+00**
					Cumulative:	**4.6E-04**	**1.2E+01**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-22 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2700	27	1.6E+00	2.6E+01	**1.7E-05**	**2.1E-01**
110-82-7	Cyclohexane	3100	31	-	5.3E+03		1.2E-03
75-00-3	Ethyl Chloride (Chloroethane)	140	1.4	-	3.5E+03		8.0E-05
100-41-4	Ethylbenzene	4100	41	4.9E+00	8.8E+02	**8.4E-06**	9.4E-03
142-82-5	Heptane, N-	13000	130	-	3.5E+02		7.4E-02
110-54-3	Hexane, N-	3200	32	-	6.1E+02		1.0E-02
7783-06-4	Hydrogen Sulfide	420	4.2	-	1.8E+00		**4.8E-01**
108-88-3	Toluene	2100	21	-	4.4E+03		9.6E-04
95-63-6	Trimethylbenzene, 1,2,4-	230	2.3	-	5.3E+01		8.8E-03
75-01-4	Vinyl Chloride	690	6.9	2.8E+00	4.5E+01	**2.5E-06**	3.1E-02
1330-20-7	Xylenes	5600	56	-	8.8E+01		1.3E-01
					Cumulative:	2.8E-05	9.5E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-23 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-23 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 65.6%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
960		71-43-2	Benzene			ug/m^3	SGP-23									
88	J	98-82-8	Cumene			ug/m^3	SGP-23									
820		110-82-7	Cyclohexane			ug/m^3	SGP-23									
4400		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-23									
190		156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGP-23									
100	J	75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-23									
7800		100-41-4	Ethylbenzene			ug/m^3	SGP-23									
280		109-99-9	~Tetrahydrofuran			ug/m^3	SGP-23									
3200		142-82-5	Heptane, N-			ug/m^3	SGP-23									
1400		110-54-3	Hexane, N-			ug/m^3	SGP-23									
6900		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-23									
2400		115-07-1	Propylene			ug/m^3	SGP-23									
130	J	127-18-4	Tetrachloroethylene			ug/m^3	SGP-23									
450		108-88-3	Toluene			ug/m^3	SGP-23									
970		75-69-4	Trichlorofluoromethane			ug/m^3	SGP-23									
610		95-63-6	Trimethylbenzene, 1,2,4-			ug/m^3	SGP-23									
380		108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGP-23									
590		75-01-4	Vinyl Chloride			ug/m^3	SGP-23									
11000		1330-20-7	Xylenes			ug/m^3	SGP-23									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-23 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.9E-04	1.1E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.4E-05	8.4E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-23 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	960	28.8	3.6E-01	6.3E+00	**8.0E-05**	**9.2E-01**
98-82-8	Cumene	88	2.64	-	8.3E+01		6.3E-03
110-82-7	Cyclohexane	820	24.6	-	1.3E+03		3.9E-03
75-71-8	Dichlorodifluoromethane	4400	132	-	2.1E+01		**1.3E+00**
156-59-2	Dichloroethylene, cis-1,2-	190	5.7	-	8.3E+00		1.4E-01
75-00-3	Ethyl Chloride (Chloroethane)	100	3	-	8.3E+02		7.2E-04
100-41-4	Ethylbenzene	7800	234	1.1E+00	2.1E+02	**2.1E-04**	**2.2E-01**
109-99-9	~Tetrahydrofuran	280	8.4	-	4.2E+02		4.0E-03
142-82-5	Heptane, N-	3200	96	-	8.3E+01		**2.3E-01**
110-54-3	Hexane, N-	1400	42	-	1.5E+02		5.8E-02
7783-06-4	Hydrogen Sulfide	6900	207	-	4.2E-01		**9.9E+01**
115-07-1	Propylene	2400	72	-	6.3E+02		2.3E-02
127-18-4	Tetrachloroethylene	130	3.9	1.1E+01	8.3E+00	3.6E-07	9.3E-02
108-88-3	Toluene	450	13.5	-	1.0E+03		2.6E-03
75-69-4	Trichlorofluoromethane	970	29.1	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	610	18.3	-	1.3E+01		**2.9E-01**
108-67-8	Trimethylbenzene, 1,3,5-	380	11.4	-	1.3E+01		1.8E-01
75-01-4	Vinyl Chloride	590	17.7	1.7E-01	1.1E+01	**1.1E-04**	**3.3E-01**
1330-20-7	Xylenes	11000	330	-	2.1E+01		**3.2E+00**

Cumulative:	**3.9E-04**	**1.1E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-23 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	960	9.6	1.6E+00	2.6E+01	**6.1E-06**	7.3E-02
98-82-8	Cumene	88	0.88	-	3.5E+02		5.0E-04
110-82-7	Cyclohexane	820	8.2	-	5.3E+03		3.1E-04
75-71-8	Dichlorodifluoromethane	4400	44	-	8.8E+01		1.0E-01
156-59-2	Dichloroethylene, cis-1,2-	190	1.9	-	3.5E+01		1.1E-02
75-00-3	Ethyl Chloride (Chloroethane)	100	1	-	3.5E+03		5.7E-05
100-41-4	Ethylbenzene	7800	78	4.9E+00	8.8E+02	**1.6E-05**	1.8E-02
109-99-9	~Tetrahydrofuran	280	2.8	-	1.8E+03		3.2E-04
142-82-5	Heptane, N-	3200	32	-	3.5E+02		1.8E-02
110-54-3	Hexane, N-	1400	14	-	6.1E+02		4.6E-03
7783-06-4	Hydrogen Sulfide	6900	69	-	1.8E+00		**7.9E+00**
115-07-1	Propylene	2400	24	-	2.6E+03		1.8E-03
127-18-4	Tetrachloroethylene	130	1.3	4.7E+01	3.5E+01	2.8E-08	7.4E-03
108-88-3	Toluene	450	4.5	-	4.4E+03		2.1E-04
75-69-4	Trichlorofluoromethane	970	9.7	-	-		
95-63-6	Trimethylbenzene, 1,2,4-	610	6.1	-	5.3E+01		2.3E-02
108-67-8	Trimethylbenzene, 1,3,5-	380	3.8	-	5.3E+01		1.4E-02
75-01-4	Vinyl Chloride	590	5.9	2.8E+00	4.5E+01	**2.1E-06**	2.6E-02
1330-20-7	Xylenes	11000	110	-	8.8E+01		**2.5E-01**
					Cumulative:	2.4E-05	**8.4E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-24 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-24 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 52.2%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
560		71-43-2	Benzene			ug/m^3	SGP-24									
5800		110-82-7	Cyclohexane			ug/m^3	SGP-24									
2500		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-24									
400		156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGP-24									
950		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-24									
7700		142-82-5	Heptane, N-			ug/m^3	SGP-24									
7600		110-54-3	Hexane, N-			ug/m^3	SGP-24									
490		115-07-1	Propylene			ug/m^3	SGP-24									
180	J	75-01-4	Vinyl Chloride			ug/m^3	SGP-24									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-24 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.9E-05	2.6E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.2E-06	2.0E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-24 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	560	16.8	3.6E-01	6.3E+00	**4.7E-05**	**5.4E-01**
110-82-7	Cyclohexane	5800	174	-	1.3E+03		2.8E-02
75-71-8	Dichlorodifluoromethane	2500	75	-	2.1E+01		**7.2E-01**
156-59-2	Dichloroethylene, cis-1,2-	400	12	-	8.3E+00		**2.9E-01**
75-00-3	Ethyl Chloride (Chloroethane)	950	28.5	-	8.3E+02		6.8E-03
142-82-5	Heptane, N-	7700	231	-	8.3E+01		**5.5E-01**
110-54-3	Hexane, N-	7600	228	-	1.5E+02		**3.1E-01**
115-07-1	Propylene	490	14.7	-	6.3E+02		4.7E-03
75-01-4	Vinyl Chloride	180	5.4	1.7E-01	1.1E+01	**3.2E-05**	1.0E-01
					Cumulative:	7.9E-05	**2.6E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-24 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	560	5.6	1.6E+00	2.6E+01	**3.6E-06**	4.3E-02
110-82-7	Cyclohexane	5800	58	-	5.3E+03		2.2E-03
75-71-8	Dichlorodifluoromethane	2500	25	-	8.8E+01		5.7E-02
156-59-2	Dichloroethylene, cis-1,2-	400	4	-	3.5E+01		2.3E-02
75-00-3	Ethyl Chloride (Chloroethane)	950	9.5	-	3.5E+03		5.4E-04
142-82-5	Heptane, N-	7700	77	-	3.5E+02		4.4E-02
110-54-3	Hexane, N-	7600	76	-	6.1E+02		2.5E-02
115-07-1	Propylene	490	4.9	-	2.6E+03		3.7E-04
75-01-4	Vinyl Chloride	180	1.8	2.8E+00	4.5E+01	6.5E-07	8.0E-03
					Cumulative:	4.2E-06	2.0E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGI-25 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-25 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Duplicate-04 was collected at this location. Methane: 65.3%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
870		71-43-2	Benzene			ug/m^3	Duplicate									
7400		108-90-7	Chlorobenzene			ug/m^3	Duplicate									
510		110-82-7	Cyclohexane			ug/m^3	Duplicate									
320		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	Duplicate									
710		100-41-4	Ethylbenzene			ug/m^3	Duplicate									
61	J	109-99-9	~Tetrahydrofuran			ug/m^3	Duplicate									
2800		142-82-5	Heptane, N-			ug/m^3	Duplicate									
2000		110-54-3	Hexane, N-			ug/m^3	Duplicate									
15000		7783-06-4	Hydrogen Sulfide			ug/m^3	SGI-25									
53	J	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m^3	SGI-25									
1900		115-07-1	Propylene			ug/m^3	Duplicate									
88	J	108-88-3	Toluene			ug/m^3	Duplicate									
55	J	75-01-4	Vinyl Chloride			ug/m^3	Duplicate									
1900		1330-20-7	Xylenes			ug/m^3	Duplicate									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-25 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.0E-04	2.2E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	7.2E-06	1.8E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-25 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	870	26.1	3.6E-01	6.3E+00	**7.3E-05**	**8.3E-01**
108-90-7	Chlorobenzene	7400	222	-	1.0E+01		**4.3E+00**
110-82-7	Cyclohexane	510	15.3	-	1.3E+03		2.4E-03
75-00-3	Ethyl Chloride (Chloroethane)	320	9.6	-	8.3E+02		2.3E-03
100-41-4	Ethylbenzene	710	21.3	1.1E+00	2.1E+02	**1.9E-05**	2.0E-02
109-99-9	~Tetrahydrofuran	61	1.83	-	4.2E+02		8.8E-04
142-82-5	Heptane, N-	2800	84	-	8.3E+01		**2.0E-01**
110-54-3	Hexane, N-	2000	60	-	1.5E+02		8.2E-02
7783-06-4	Hydrogen Sulfide	15000	450	-	4.2E-01		**2.2E+02**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	53	1.59	-	1.0E+03		3.0E-04
115-07-1	Propylene	1900	57	-	6.3E+02		1.8E-02
108-88-3	Toluene	88	2.64	-	1.0E+03		5.1E-04
75-01-4	Vinyl Chloride	55	1.65	1.7E-01	1.1E+01	**9.8E-06**	3.1E-02
1330-20-7	Xylenes	1900	57	-	2.1E+01		**5.5E-01**
					Cumulative:	**1.0E-04**	**2.2E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-25 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	870	8.7	1.6E+00	2.6E+01	**5.5E-06**	6.6E-02
108-90-7	Chlorobenzene	7400	74	-	4.4E+01		**3.4E-01**
110-82-7	Cyclohexane	510	5.1	-	5.3E+03		1.9E-04
75-00-3	Ethyl Chloride (Chloroethane)	320	3.2	-	3.5E+03		1.8E-04
100-41-4	Ethylbenzene	710	7.1	4.9E+00	8.8E+02	**1.4E-06**	1.6E-03
109-99-9	~Tetrahydrofuran	61	0.61	-	1.8E+03		7.0E-05
142-82-5	Heptane, N-	2800	28	-	3.5E+02		1.6E-02
110-54-3	Hexane, N-	2000	20	-	6.1E+02		6.5E-03
7783-06-4	Hydrogen Sulfide	15000	150	-	1.8E+00		**1.7E+01**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	53	0.53	-	4.4E+03		2.4E-05
115-07-1	Propylene	1900	19	-	2.6E+03		1.4E-03
108-88-3	Toluene	88	0.88	-	4.4E+03		4.0E-05
75-01-4	Vinyl Chloride	55	0.55	2.8E+00	4.5E+01	2.0E-07	2.5E-03
1330-20-7	Xylenes	1900	19	-	8.8E+01		4.3E-02
					Cumulative:	7.2E-06	**1.8E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGI-26 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-26 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 24.3%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
200		71-43-2	Benzene			ug/m^3	SGI-26									
180		108-90-7	Chlorobenzene			ug/m^3	SGI-26									
220		110-82-7	Cyclohexane			ug/m^3	SGI-26									
91		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGI-26									
170		142-82-5	Heptane, N-			ug/m^3	SGI-26									
590		110-54-3	Hexane, N-			ug/m^3	SGI-26									
840		115-07-1	Propylene			ug/m^3	SGI-26									
34	J	108-88-3	Toluene			ug/m^3	SGI-26									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-26 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.7E-05	3.4E-01	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.3E-06	2.7E-02	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-26 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	200	6	3.6E-01	6.3E+00	**1.7E-05**	1.9E-01
108-90-7	Chlorobenzene	180	5.4	-	1.0E+01		1.0E-01
110-82-7	Cyclohexane	220	6.6	-	1.3E+03		1.1E-03
75-00-3	Ethyl Chloride (Chloroethane)	91	2.73	-	8.3E+02		6.5E-04
142-82-5	Heptane, N-	170	5.1	-	8.3E+01		1.2E-02
110-54-3	Hexane, N-	590	17.7	-	1.5E+02		2.4E-02
115-07-1	Propylene	840	25.2	-	6.3E+02		8.1E-03
108-88-3	Toluene	34	1.02	-	1.0E+03		2.0E-04
					Cumulative:	1.7E-05	3.4E-01

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-26 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	200	2	1.6E+00	2.6E+01	**1.3E-06**	1.5E-02
108-90-7	Chlorobenzene	180	1.8	-	4.4E+01		8.2E-03
110-82-7	Cyclohexane	220	2.2	-	5.3E+03		8.4E-05
75-00-3	Ethyl Chloride (Chloroethane)	91	0.91	-	3.5E+03		5.2E-05
142-82-5	Heptane, N-	170	1.7	-	3.5E+02		9.7E-04
110-54-3	Hexane, N-	590	5.9	-	6.1E+02		1.9E-03
115-07-1	Propylene	840	8.4	-	2.6E+03		6.4E-04
108-88-3	Toluene	34	0.34	-	4.4E+03		1.6E-05
					Cumulative:	1.3E-06	2.7E-02

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-27 Risk Assessment
Submittal Date:	5/19/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-27 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 63.6%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
540		71-43-2	Benzene			ug/m^3	SGP-27									
710		108-90-7	Chlorobenzene			ug/m^3	SGP-27									
330		110-82-7	Cyclohexane			ug/m^3	SGP-27									
130		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-27									
210		109-99-9	~Tetrahydrofuran			ug/m^3	SGP-27									
820		142-82-5	Heptane, N-			ug/m^3	SGP-27									
890		110-54-3	Hexane, N-			ug/m^3	SGP-27									
9100		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-27									
1300		115-07-1	Propylene			ug/m^3	SGP-27									
46	J	108-88-3	Toluene			ug/m^3	SGP-27									
120	J	1330-20-7	Xylenes			ug/m^3	SGP-27									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-27 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.5E-05	1.3E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.4E-06	1.0E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-27 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	540	16.2	3.6E-01	6.3E+00	**4.5E-05**	**5.2E-01**
108-90-7	Chlorobenzene	710	21.3	-	1.0E+01		**4.1E-01**
110-82-7	Cyclohexane	330	9.9	-	1.3E+03		1.6E-03
75-00-3	Ethyl Chloride (Chloroethane)	130	3.9	-	8.3E+02		9.3E-04
109-99-9	~Tetrahydrofuran	210	6.3	-	4.2E+02		3.0E-03
142-82-5	Heptane, N-	820	24.6	-	8.3E+01		5.9E-02
110-54-3	Hexane, N-	890	26.7	-	1.5E+02		3.7E-02
7783-06-4	Hydrogen Sulfide	9100	273	-	4.2E-01		**1.3E+02**
115-07-1	Propylene	1300	39	-	6.3E+02		1.2E-02
108-88-3	Toluene	46	1.38	-	1.0E+03		2.6E-04
1330-20-7	Xylenes	120	3.6	-	2.1E+01		3.5E-02
					Cumulative:	4.5E-05	**1.3E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-27 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	540	5.4	1.6E+00	2.6E+01	**3.4E-06**	4.1E-02
108-90-7	Chlorobenzene	710	7.1	-	4.4E+01		3.2E-02
110-82-7	Cyclohexane	330	3.3	-	5.3E+03		1.3E-04
75-00-3	Ethyl Chloride (Chloroethane)	130	1.3	-	3.5E+03		7.4E-05
109-99-9	~Tetrahydrofuran	210	2.1	-	1.8E+03		2.4E-04
142-82-5	Heptane, N-	820	8.2	-	3.5E+02		4.7E-03
110-54-3	Hexane, N-	890	8.9	-	6.1E+02		2.9E-03
7783-06-4	Hydrogen Sulfide	9100	91	-	1.8E+00		**1.0E+01**
115-07-1	Propylene	1300	13	-	2.6E+03		9.9E-04
108-88-3	Toluene	46	0.46	-	4.4E+03		2.1E-05
1330-20-7	Xylenes	120	1.2	-	8.8E+01		2.7E-03
					Cumulative:	3.4E-06	**1.0E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-28 Risk Assessment
Submittal Date:	5/20/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-28 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 2.23%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
72		71-43-2	Benzene			ug/m^3	SGP-28									
660		108-90-7	Chlorobenzene			ug/m^3	SGP-28									
56		110-82-7	Cyclohexane			ug/m^3	SGP-28									
370		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-28									
66		142-82-5	Heptane, N-			ug/m^3	SGP-28									
170		110-54-3	Hexane, N-			ug/m^3	SGP-28									
1200		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-28									
13	J	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m^3	SGP-28									
95		115-07-1	Propylene			ug/m^3	SGP-28									
33	J	108-88-3	Toluene			ug/m^3	SGP-28									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-28 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.0E-06	1.8E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	4.6E-07	1.4E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-28 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	72	2.16	3.6E-01	6.3E+00	**6.0E-06**	6.9E-02
108-90-7	Chlorobenzene	660	19.8	-	1.0E+01		**3.8E-01**
110-82-7	Cyclohexane	56	1.68	-	1.3E+03		2.7E-04
75-71-8	Dichlorodifluoromethane	370	11.1	-	2.1E+01		1.1E-01
142-82-5	Heptane, N-	66	1.98	-	8.3E+01		4.7E-03
110-54-3	Hexane, N-	170	5.1	-	1.5E+02		7.0E-03
7783-06-4	Hydrogen Sulfide	1200	36	-	4.2E-01		**1.7E+01**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	13	0.39	-	1.0E+03		7.5E-05
115-07-1	Propylene	95	2.85	-	6.3E+02		9.1E-04
108-88-3	Toluene	33	0.99	-	1.0E+03		1.9E-04
					Cumulative:	6.0E-06	**1.8E+01**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-28 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	72	0.72	1.6E+00	2.6E+01	4.6E-07	5.5E-03
108-90-7	Chlorobenzene	660	6.6	-	4.4E+01		3.0E-02
110-82-7	Cyclohexane	56	0.56	-	5.3E+03		2.1E-05
75-71-8	Dichlorodifluoromethane	370	3.7	-	8.8E+01		8.4E-03
142-82-5	Heptane, N-	66	0.66	-	3.5E+02		3.8E-04
110-54-3	Hexane, N-	170	1.7	-	6.1E+02		5.5E-04
7783-06-4	Hydrogen Sulfide	1200	12	-	1.8E+00		**1.4E+00**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	13	0.13	-	4.4E+03		5.9E-06
115-07-1	Propylene	95	0.95	-	2.6E+03		7.2E-05
108-88-3	Toluene	33	0.33	-	4.4E+03		1.5E-05
					Cumulative:	4.6E-07	**1.4E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-29 Risk Assessment
Submittal Date:	5/20/2025
Prepared By:	Clay Faircloth
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-29 Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 33.6%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
310		71-43-2	Benzene			ug/m^3	SGP-29									
260		108-90-7	Chlorobenzene			ug/m^3	SGP-29									
1100		110-82-7	Cyclohexane			ug/m^3	SGP-29									
640		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-29									
840		142-82-5	Heptane, N-			ug/m^3	SGP-29									
2900		110-54-3	Hexane, N-			ug/m^3	SGP-29									
190		115-07-1	Propylene			ug/m^3	SGP-29									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-29 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.6E-05	6.4E-01	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.0E-06	5.1E-02	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-29 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	310	9.3	3.6E-01	6.3E+00	**2.6E-05**	**3.0E-01**
108-90-7	Chlorobenzene	260	7.8	-	1.0E+01		1.5E-01
110-82-7	Cyclohexane	1100	33	-	1.3E+03		5.3E-03
75-00-3	Ethyl Chloride (Chloroethane)	640	19.2	-	8.3E+02		4.6E-03
142-82-5	Heptane, N-	840	25.2	-	8.3E+01		6.0E-02
110-54-3	Hexane, N-	2900	87	-	1.5E+02		1.2E-01
115-07-1	Propylene	190	5.7	-	6.3E+02		1.8E-03
					Cumulative:	2.6E-05	6.4E-01

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-29 Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	310	3.1	1.6E+00	2.6E+01	**2.0E-06**	2.4E-02
108-90-7	Chlorobenzene	260	2.6	-	4.4E+01		1.2E-02
110-82-7	Cyclohexane	1100	11	-	5.3E+03		4.2E-04
75-00-3	Ethyl Chloride (Chloroethane)	640	6.4	-	3.5E+03		3.7E-04
142-82-5	Heptane, N-	840	8.4	-	3.5E+02		4.8E-03
110-54-3	Hexane, N-	2900	29	-	6.1E+02		9.5E-03
115-07-1	Propylene	190	1.9	-	2.6E+03		1.4E-04
					Cumulative:	2.0E-06	5.1E-02

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGI-30 7591 Levi RD Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-30 7591 Levi RD Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 28.4% at DUP-5

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
31	J	110-82-7	Cyclohexane			ug/m^3	DUP-5									
8.3		91-20-3	~Naphthalene			ug/m^3	SGI-30									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-30 7591 Levi RD Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.0E-06	8.0E-02	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.3E-07	6.3E-03	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-30 7591 Levi RD Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
110-82-7	Cyclohexane	31	0.93	-	1.3E+03		1.5E-04
91-20-3	~Naphthalene	8.3	0.249	8.3E-02	6.3E-01	**3.0E-06**	8.0E-02
					Cumulative:	3.0E-06	8.0E-02

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-30 7591 Levi RD Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
110-82-7	Cyclohexane	31	0.31	-	5.3E+03		1.2E-05
91-20-3	~Naphthalene	8.3	0.083	3.6E-01	2.6E+00	2.3E-07	6.3E-03
					Cumulative:	2.3E-07	6.3E-03

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-31 7502 Martha CT Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-31 7502 Martha CT Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane 28.4%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
34	J	110-82-7	Cyclohexane			ug/m^3	SGP-31									
17	J	110-54-3	Hexane, N-			ug/m^3	SGP-31									
15	J	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m^3	SGP-31									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-31 7502 Martha CT Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	9.5E-04	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	7.5E-05	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-31 7502 Martha CT Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
110-82-7	Cyclohexane	34	1.02	-	1.3E+03		1.6E-04
110-54-3	Hexane, N-	17	0.51	-	1.5E+02		7.0E-04
78-93-3	Methyl Ethyl Ketone (2-Butanone)	15	0.45	-	1.0E+03		8.6E-05
					Cumulative:	0.0E+00	9.5E-04

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-31 7502 Martha CT Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
110-82-7	Cyclohexane	34	0.34	-	5.3E+03		1.3E-05
110-54-3	Hexane, N-	17	0.17	-	6.1E+02		5.5E-05
78-93-3	Methyl Ethyl Ketone (2-Butanone)	15	0.15	-	4.4E+03		6.8E-06
					Cumulative:	0.0E+00	7.5E-05

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGI-34 1005 Leslie DR
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-34 1005 Leslie DR

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 57.9%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
680		71-43-2	Benzene			ug/m^3	SGI-34									
4300		110-82-7	Cyclohexane			ug/m^3	SGI-34									
2800		75-71-8	Dichlorodifluoromethane			ug/m^3	SGI-34									
1800		75-34-3	Dichloroethane, 1,1-			ug/m^3	SGI-34									
210	J	156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGI-34									
1300		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGI-34									
14000		142-82-5	Heptane, N-			ug/m^3	SGI-34									
7100		110-54-3	Hexane, N-			ug/m^3	SGI-34									
26000		7783-06-4	Hydrogen Sulfide			ug/m^3	SGI-34									
2500		115-07-1	Propylene			ug/m^3	SGI-34									
3200		75-01-4	Vinyl Chloride			ug/m^3	SGI-34									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-34 1005 Leslie DR

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	6.6E-04	3.8E+02	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.8E-05	3.0E+01	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-34 1005 Leslie DR

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	680	20.4	3.6E-01	6.3E+00	**5.7E-05**	**6.5E-01**
110-82-7	Cyclohexane	4300	129	-	1.3E+03		2.1E-02
75-71-8	Dichlorodifluoromethane	2800	84	-	2.1E+01		**8.1E-01**
75-34-3	Dichloroethane, 1,1-	1800	54	1.8E+00	-	**3.1E-05**	
156-59-2	Dichloroethylene, cis-1,2-	210	6.3	-	8.3E+00		1.5E-01
75-00-3	Ethyl Chloride (Chloroethane)	1300	39	-	8.3E+02		9.3E-03
142-82-5	Heptane, N-	14000	420	-	8.3E+01		**1.0E+00**
110-54-3	Hexane, N-	7100	213	-	1.5E+02		**2.9E-01**
7783-06-4	Hydrogen Sulfide	26000	780	-	4.2E-01		**3.7E+02**
115-07-1	Propylene	2500	75	-	6.3E+02		2.4E-02
75-01-4	Vinyl Chloride	3200	96	1.7E-01	1.1E+01	**5.7E-04**	**1.8E+00**
					Cumulative:	**6.6E-04**	**3.8E+02**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-34 1005 Leslie DR

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	680	6.8	1.6E+00	2.6E+01	**4.3E-06**	5.2E-02
110-82-7	Cyclohexane	4300	43	-	5.3E+03		1.6E-03
75-71-8	Dichlorodifluoromethane	2800	28	-	8.8E+01		6.4E-02
75-34-3	Dichloroethane, 1,1-	1800	18	7.7E+00	-	**2.3E-06**	
156-59-2	Dichloroethylene, cis-1,2-	210	2.1	-	3.5E+01		1.2E-02
75-00-3	Ethyl Chloride (Chloroethane)	1300	13	-	3.5E+03		7.4E-04
142-82-5	Heptane, N-	14000	140	-	3.5E+02		8.0E-02
110-54-3	Hexane, N-	7100	71	-	6.1E+02		2.3E-02
7783-06-4	Hydrogen Sulfide	26000	260	-	1.8E+00		**3.0E+01**
115-07-1	Propylene	2500	25	-	2.6E+03		1.9E-03
75-01-4	Vinyl Chloride	3200	32	2.8E+00	4.5E+01	**1.1E-05**	1.4E-01
					Cumulative:	1.8E-05	**3.0E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-35 1013 Leslie DR Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-35 1013 Leslie DR Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 55.9%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
120		71-43-2	Benzene			ug/m^3	SGP-35									
3100		110-82-7	Cyclohexane			ug/m^3	SGP-35									
1100		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-35									
880		75-34-3	Dichloroethane, 1,1-			ug/m^3	SGP-35									
200	J	156-59-2	Dichloroethylene, cis-1,2-			ug/m^3	SGP-35									
280	J	156-60-5	Dichloroethylene, trans-1,2-			ug/m^3	SGP-35									
850		75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-35									
12000		142-82-5	Heptane, N-			ug/m^3	SGP-35									
3800		110-54-3	Hexane, N-			ug/m^3	SGP-35									
2700		115-07-1	Propylene			ug/m^3	SGP-35									
500		75-01-4	Vinyl Chloride			ug/m^3	SGP-35									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-35 1013 Leslie DR Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.1E-04	2.1E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.7E-06	1.7E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-35 1013 Leslie DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	120	3.6	3.6E-01	6.3E+00	**1.0E-05**	1.2E-01
110-82-7	Cyclohexane	3100	93	-	1.3E+03		1.5E-02
75-71-8	Dichlorodifluoromethane	1100	33	-	2.1E+01		**3.2E-01**
75-34-3	Dichloroethane, 1,1-	880	26.4	1.8E+00	-	**1.5E-05**	
156-59-2	Dichloroethylene, cis-1,2-	200	6	-	8.3E+00		1.4E-01
156-60-5	Dichloroethylene, trans-1,2-	280	8.4	-	8.3E+00		**2.0E-01**
75-00-3	Ethyl Chloride (Chloroethane)	850	25.5	-	8.3E+02		6.1E-03
142-82-5	Heptane, N-	12000	360	-	8.3E+01		**8.6E-01**
110-54-3	Hexane, N-	3800	114	-	1.5E+02		1.6E-01
115-07-1	Propylene	2700	81	-	6.3E+02		2.6E-02
75-01-4	Vinyl Chloride	500	15	1.7E-01	1.1E+01	**9.0E-05**	**2.8E-01**
					Cumulative:	**1.1E-04**	**2.1E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-35 1013 Leslie DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	120	1.2	1.6E+00	2.6E+01	7.6E-07	9.1E-03
110-82-7	Cyclohexane	3100	31	-	5.3E+03		1.2E-03
75-71-8	Dichlorodifluoromethane	1100	11	-	8.8E+01		2.5E-02
75-34-3	Dichloroethane, 1,1-	880	8.8	7.7E+00	-	**1.1E-06**	
156-59-2	Dichloroethylene, cis-1,2-	200	2	-	3.5E+01		1.1E-02
156-60-5	Dichloroethylene, trans-1,2-	280	2.8	-	3.5E+01		1.6E-02
75-00-3	Ethyl Chloride (Chloroethane)	850	8.5	-	3.5E+03		4.9E-04
142-82-5	Heptane, N-	12000	120	-	3.5E+02		6.8E-02
110-54-3	Hexane, N-	3800	38	-	6.1E+02		1.2E-02
115-07-1	Propylene	2700	27	-	2.6E+03		2.1E-03
75-01-4	Vinyl Chloride	500	5	2.8E+00	4.5E+01	**1.8E-06**	2.2E-02
					Cumulative:	3.7E-06	1.7E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-36 1021 Leslie DR Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-36 1021 Leslie DR Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 62.7%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
2100		71-43-2	Benzene			ug/m^3	SGP-36									
3400		110-82-7	Cyclohexane			ug/m^3	SGP-36									
230	J	106-46-7	Dichlorobenzene, 1,4-			ug/m^3	SGP-36									
1200		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-36									
210	J	75-00-3	Ethyl Chloride (Chloroethane)			ug/m^3	SGP-36									
330	J	100-41-4	Ethylbenzene			ug/m^3	SGP-36									
220	J	109-99-9	~Tetrahydrofuran			ug/m^3	SGP-36									
15000		142-82-5	Heptane, N-			ug/m^3	SGP-36									
4500		110-54-3	Hexane, N-			ug/m^3	SGP-36									
3200		115-07-1	Propylene			ug/m^3	SGP-36									
210	J	108-67-8	Trimethylbenzene, 1,3,5-			ug/m^3	SGP-36									
240		75-01-4	Vinyl Chloride			ug/m^3	SGP-36									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-36 1021 Leslie DR Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.5E-04	3.9E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.7E-05	3.1E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-36 1021 Leslie DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2100	63	3.6E-01	6.3E+00	**1.8E-04**	**2.0E+00**
110-82-7	Cyclohexane	3400	102	-	1.3E+03		1.6E-02
106-46-7	Dichlorobenzene, 1,4-	230	6.9	2.6E-01	1.7E+02	**2.7E-05**	8.3E-03
75-71-8	Dichlorodifluoromethane	1200	36	-	2.1E+01		**3.5E-01**
75-00-3	Ethyl Chloride (Chloroethane)	210	6.3	-	8.3E+02		1.5E-03
100-41-4	Ethylbenzene	330	9.9	1.1E+00	2.1E+02	**8.8E-06**	9.5E-03
109-99-9	~Tetrahydrofuran	220	6.6	-	4.2E+02		3.2E-03
142-82-5	Heptane, N-	15000	450	-	8.3E+01		**1.1E+00**
110-54-3	Hexane, N-	4500	135	-	1.5E+02		1.8E-01
115-07-1	Propylene	3200	96	-	6.3E+02		3.1E-02
108-67-8	Trimethylbenzene, 1,3,5-	210	6.3	-	1.3E+01		1.0E-01
75-01-4	Vinyl Chloride	240	7.2	1.7E-01	1.1E+01	**4.3E-05**	1.4E-01
					Cumulative:	**2.5E-04**	**3.9E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-36 1021 Leslie DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	2100	21	1.6E+00	2.6E+01	**1.3E-05**	1.6E-01
110-82-7	Cyclohexane	3400	34	-	5.3E+03		1.3E-03
106-46-7	Dichlorobenzene, 1,4-	230	2.3	1.1E+00	7.0E+02	**2.1E-06**	6.6E-04
75-71-8	Dichlorodifluoromethane	1200	12	-	8.8E+01		2.7E-02
75-00-3	Ethyl Chloride (Chloroethane)	210	2.1	-	3.5E+03		1.2E-04
100-41-4	Ethylbenzene	330	3.3	4.9E+00	8.8E+02	6.7E-07	7.5E-04
109-99-9	~Tetrahydrofuran	220	2.2	-	1.8E+03		2.5E-04
142-82-5	Heptane, N-	15000	150	-	3.5E+02		8.6E-02
110-54-3	Hexane, N-	4500	45	-	6.1E+02		1.5E-02
115-07-1	Propylene	3200	32	-	2.6E+03		2.4E-03
108-67-8	Trimethylbenzene, 1,3,5-	210	2.1	-	5.3E+01		8.0E-03
75-01-4	Vinyl Chloride	240	2.4	2.8E+00	4.5E+01	8.6E-07	1.1E-02
					Cumulative:	1.7E-05	3.1E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-37 1025 Leslie DR Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-37 1025 Leslie DR Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Methane: 59.5%

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
250		71-43-2	Benzene			ug/m^3	SGP-37									
1900		110-82-7	Cyclohexane			ug/m^3	SGP-37									
2200		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-37									
1300		142-82-5	Heptane, N-			ug/m^3	SGP-37									
2400		110-54-3	Hexane, N-			ug/m^3	SGP-37									
2600		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-37									
930		108-88-3	Toluene			ug/m^3	SGP-37									
170	m+p	1330-20-7	Xylenes			ug/m^3	SGP-37									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-37 1025 Leslie DR Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.1E-05	3.9E+01	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	1.6E-06	3.1E+00	YES
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-37 1025 Leslie DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	250	7.5	3.6E-01	6.3E+00	**2.1E-05**	**2.4E-01**
110-82-7	Cyclohexane	1900	57	-	1.3E+03		9.1E-03
75-71-8	Dichlorodifluoromethane	2200	66	-	2.1E+01		**6.3E-01**
142-82-5	Heptane, N-	1300	39	-	8.3E+01		9.3E-02
110-54-3	Hexane, N-	2400	72	-	1.5E+02		9.9E-02
7783-06-4	Hydrogen Sulfide	2600	78	-	4.2E-01		**3.7E+01**
108-88-3	Toluene	930	27.9	-	1.0E+03		5.4E-03
1330-20-7	Xylenes	170	5.1	-	2.1E+01		4.9E-02
					Cumulative:	2.1E-05	**3.9E+01**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-37 1025 Leslie DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
71-43-2	Benzene	250	2.5	1.6E+00	2.6E+01	**1.6E-06**	1.9E-02
110-82-7	Cyclohexane	1900	19	-	5.3E+03		7.2E-04
75-71-8	Dichlorodifluoromethane	2200	22	-	8.8E+01		5.0E-02
142-82-5	Heptane, N-	1300	13	-	3.5E+02		7.4E-03
110-54-3	Hexane, N-	2400	24	-	6.1E+02		7.8E-03
7783-06-4	Hydrogen Sulfide	2600	26	-	1.8E+00		**3.0E+00**
108-88-3	Toluene	930	9.3	-	4.4E+03		4.2E-04
1330-20-7	Xylenes	170	1.7	-	8.8E+01		3.9E-03
					Cumulative:	1.6E-06	**3.1E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-39 1033 Leslie DR Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-39 1033 Leslie DR Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Location of DUP-6

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
22		75-15-0	Carbon Disulfide			ug/m^3	SGP-39									
20	J	110-82-7	Cyclohexane			ug/m^3	DUP-6									
440		75-71-8	Dichlorodifluoromethane			ug/m^3	SGP-39									
44		142-82-5	Heptane, N-			ug/m^3	DUP-6									
33		110-54-3	Hexane, N-			ug/m^3	DUP-6									
96		7783-06-4	Hydrogen Sulfide			ug/m^3	SGP-39									
7.4	J	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m^3	SGP-39									
14		91-20-3	~Naphthalene			ug/m^3	SGP-39									
26	J	108-88-3	Toluene			ug/m^3	DUP-6									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-39 1033 Leslie DR Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	5.1E-06	1.6E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.9E-07	1.3E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-39 1033 Leslie DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
75-15-0	Carbon Disulfide	22	0.66	-	1.5E+02		9.0E-04
110-82-7	Cyclohexane	20	0.6	-	1.3E+03		9.6E-05
75-71-8	Dichlorodifluoromethane	440	13.2	-	2.1E+01		1.3E-01
142-82-5	Heptane, N-	44	1.32	-	8.3E+01		3.2E-03
110-54-3	Hexane, N-	33	0.99	-	1.5E+02		1.4E-03
7783-06-4	Hydrogen Sulfide	96	2.88	-	4.2E-01		**1.4E+00**
78-93-3	Methyl Ethyl Ketone (2-Butanone)	7.4	0.222	-	1.0E+03		4.3E-05
91-20-3	~Naphthalene	14	0.42	8.3E-02	6.3E-01	**5.1E-06**	1.3E-01
108-88-3	Toluene	26	0.78	-	1.0E+03		1.5E-04
					Cumulative:	5.1E-06	**1.6E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-39 1033 Leslie DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
75-15-0	Carbon Disulfide	22	0.22	-	6.1E+02		7.2E-05
110-82-7	Cyclohexane	20	0.2	-	5.3E+03		7.6E-06
75-71-8	Dichlorodifluoromethane	440	4.4	-	8.8E+01		1.0E-02
142-82-5	Heptane, N-	44	0.44	-	3.5E+02		2.5E-04
110-54-3	Hexane, N-	33	0.33	-	6.1E+02		1.1E-04
7783-06-4	Hydrogen Sulfide	96	0.96	-	1.8E+00		1.1E-01
78-93-3	Methyl Ethyl Ketone (2-Butanone)	7.4	0.074	-	4.4E+03		3.4E-06
91-20-3	~Naphthalene	14	0.14	3.6E-01	2.6E+00	3.9E-07	1.1E-02
108-88-3	Toluene	26	0.26	-	4.4E+03		1.2E-05
					Cumulative:	3.9E-07	1.3E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGI-40 7598 Beverly Dr Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-40 7598 Beverly Dr Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit were entered into the risk calculator

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
6.5	J	142-82-5	Heptane, N-			ug/m^3	SGI-40									
130		7783-06-4	Hydrogen Sulfide			ug/m^3	SGI-40									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-40 7598 Beverly Dr Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	1.9E+00	YES
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	1.5E-01	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-40 7598 Beverly Dr Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
142-82-5	Heptane, N-	6.5	0.195	-	8.3E+01		4.7E-04
7783-06-4	Hydrogen Sulfide	130	3.9	-	4.2E-01		**1.9E+00**
					Cumulative:	0.0E+00	**1.9E+00**

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-40 7598 Beverly Dr Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
142-82-5	Heptane, N-	6.5	0.065	-	3.5E+02		3.7E-05
7783-06-4	Hydrogen Sulfide	130	1.3	-	1.8E+00		1.5E-01
					Cumulative:	0.0E+00	1.5E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGI-42 7590 Beverly DR Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-42 7590 Beverly DR Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit were entered into the risk calculator

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
12	J	142-82-5	Heptane, N-			ug/m^3	SGI-42									
8.5	J	110-54-3	Hexane, N-			ug/m^3	SGI-42									
9		91-20-3	~Naphthalene			ug/m^3	SGI-42									
5.7	J	108-88-3	Toluene			ug/m^3	SGI-42									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-42 7590 Beverly DR Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	3.3E-06	8.8E-02	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	2.5E-07	6.9E-03	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-42 7590 Beverly DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
142-82-5	Heptane, N-	12	0.36	-	8.3E+01		8.6E-04
110-54-3	Hexane, N-	8.5	0.255	-	1.5E+02		3.5E-04
91-20-3	~Naphthalene	9	0.27	8.3E-02	6.3E-01	**3.3E-06**	8.6E-02
108-88-3	Toluene	5.7	0.171	-	1.0E+03		3.3E-05
					Cumulative:	3.3E-06	8.8E-02

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-42 7590 Beverly DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
142-82-5	Heptane, N-	12	0.12	-	3.5E+02		6.8E-05
110-54-3	Hexane, N-	8.5	0.085	-	6.1E+02		2.8E-05
91-20-3	~Naphthalene	9	0.09	3.6E-01	2.6E+00	2.5E-07	6.8E-03
108-88-3	Toluene	5.7	0.057	-	4.4E+03		2.6E-06
					Cumulative:	2.5E-07	6.9E-03

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGI-44 7554 Beverly DR Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-44 7554 Beverly DR Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit were entered into the risk calculator

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
7.7		67-66-3	Chloroform			ug/m^3	SGI-44									
9	J	110-54-3	Hexane, N-			ug/m^3	SGI-44									
68		75-09-2	Methylene Chloride			ug/m^3	SGI-44									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-44 7554 Beverly DR Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	3.7E-04	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	2.9E-05	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-44 7554 Beverly DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
142-82-5	Heptane, N-			-	8.3E+01		
110-54-3	Hexane, N-	9	0.27	-	1.5E+02		3.7E-04
91-20-3	~Naphthalene			8.3E-02	6.3E-01		
108-88-3	Toluene			-	1.0E+03		
					Cumulative:	0.0E+00	3.7E-04

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGI-44 7554 Beverly DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
142-82-5	Heptane, N-			-	3.5E+02		
110-54-3	Hexane, N-	9	0.09	-	6.1E+02		2.9E-05
91-20-3	~Naphthalene			3.6E-01	2.6E+00		
108-88-3	Toluene			-	4.4E+03		
					Cumulative:	0.0E+00	2.9E-05

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-47 7526 Beverly DR Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-47 7526 Beverly DR Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit were entered into the risk calculator

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
5.8	J	110-54-3	Hexane, N-			ug/m^3	SGP-47									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-47 7526 Beverly DR Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	2.4E-04	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	1.9E-05	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-47 7526 Beverly DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
110-54-3	Hexane, N-	5.8	0.174	-	1.5E+02		2.4E-04
					Cumulative:	0.0E+00	2.4E-04

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-47 7526 Beverly DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
110-54-3	Hexane, N-	5.8	0.058	-	6.1E+02		1.9E-05
					Cumulative:	0.0E+00	1.9E-05

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carorlina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	SGP-48 7518 Beverly DR Risk Assessment
Submittal Date:	5/16/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-48 7518 Beverly DR Risk Assessment

Soil Gas Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit were entered into the risk calculator

Note: Chemicals highlighted in orange are non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

Exposure Point Concentration (ug/m^3)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
5.8	J	110-54-3	Hexane, N-			ug/m^3	SGP-47									
5.8	J	78-93-3	Methyl Ethyl Ketone (2-Butanone)			ug/m^3	SGP-48									
6.2	J	108-88-3	Toluene			ug/m^3	SGP-48									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-48 7518 Beverly DR Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	NC	NC	NC
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	3.1E-04	NO
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	0.0E+00	2.4E-05	NO
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Vapor Intrusion - Resident Soil Gas to Indoor Air **Output Form 3B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-48 7518 Beverly DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
110-54-3	Hexane, N-	5.8	0.174	-	1.5E+02		2.4E-04
78-93-3	Methyl Ethyl Ketone (2-Butanone)	5.8	0.174	-	1.0E+03		3.3E-05
108-88-3	Toluene	6.2	0.186	-	1.0E+03		3.6E-05
					Cumulative:	0.0E+00	3.1E-04

DEQ Risk Calculator - Vapor Intrusion - Non-Residential Worker Soil Gas to Indoor Air **Output Form 3E**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: SGP-48 7518 Beverly DR Risk Assessment

Carcinogenic risk and hazard quotient cells highlighted in orange are associated with non-volatile chemicals. Since these chemicals do not pose a vapor intrusion risk, no risk values are calculated for these chemicals.

All concentrations are in ug/m^3

CAS #	Chemical Name:	Soil Gas Concentration (ug/m^3)	Calculated Indoor Air Concentration (ug/m^3)	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 0.2	Calculated Carcinogenic Risk	Calculated Non-Carcinogenic Hazard Quotient
110-54-3	Hexane, N-	5.8	0.058	-	6.1E+02		1.9E-05
78-93-3	Methyl Ethyl Ketone (2-Butanone)	5.8	0.058	-	4.4E+03		2.6E-06
108-88-3	Toluene	6.2	0.062	-	4.4E+03		2.8E-06
					Cumulative:	0.0E+00	2.4E-05

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	MW-1 Risk Assessment
Submittal Date:	5/20/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-1 Risk Assessment

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
22600	F1	7664-41-7	Ammonia			ug/L	MW-1									
25.8		7440-38-2	Arsenic, Inorganic			ug/L	MW-1									
15.3		7440-39-3	Barium			ug/L	MW-1									
14.2		105-60-2	Caprolactam			ug/L	MW-1									
2.85	J	18540-29-9	Chromium(VI)			ug/L	MW-1									
0.46	J	7440-48-4	Cobalt			ug/L	MW-1									
2.07	J	7440-50-8	Copper			ug/L	MW-1									
0.969	J	106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-1									
0.745		123-91-1	Dioxane, 1,4-			ug/L	MW-1									
4.66		99-87-6	Isopropyltoluene, p-			ug/L	MW-1									
0.215	J	7439-92-1	~Lead and Compounds			ug/L	MW-1									
68.3		7439-96-5b	Manganese (Diet)			ug/L	MW-1									
0.585	J	7440-02-0	Nickel Soluble Salts			ug/L	MW-1									
168		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-1									
168		E701177	Nitrate + Nitrite (measured as nitrogen)			ug/L	MW-1									
1.03	J B	7782-49-2	Selenium			ug/L	MW-1									
8.32	J	7440-62-2	Vanadium and Compounds			ug/L	MW-1									
22.7		7440-66-6	Zinc and Compounds			ug/L	MW-1									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-1 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	5.3E-04	2.7E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	1.0E-04	5.9E+00	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Direct Contact - Resident Groundwater Use **Output Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-1 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	22600	22600	22600							**2.2E+01**	**2.2E+01**
7440-38-2	Arsenic, Inorganic	25.8	25.8	25.8	**5.0E-04**	**2.7E-06**		**5.0E-04**	**4.3E+00**	1.9E-02		**4.3E+00**
7440-39-3	Barium	15.3	15.3	15.3					3.8E-03	2.4E-04		4.1E-03
105-60-2	Caprolactam	14.2	14.2	14.2					1.4E-03	1.6E-05		1.4E-03
18540-29-9	Chromium(VI)	2.85	2.85	2.85	**1.8E-05**	**7.8E-06**		**2.6E-05**	1.6E-01	5.6E-02		**2.1E-01**
7440-48-4	Cobalt	0.46	0.46	0.46					7.6E-02	1.3E-04		7.7E-02
7440-50-8	Copper	2.07	2.07	2.07					2.6E-03	1.1E-05		2.6E-03
106-46-7	Dichlorobenzene, 1,4-	0.969	0.969	0.969	6.7E-08	4.6E-08	**1.9E-06**	**2.0E-06**	6.9E-04	4.3E-04	5.8E-04	1.7E-03
123-91-1	Dioxane, 1,4-	0.745	0.745	0.745	9.6E-07	3.3E-09	6.6E-07	**1.6E-06**	1.2E-03	3.9E-06	1.2E-02	1.3E-02
99-87-6	Isopropyltoluene, p-	4.66	4.66	4.66					5.8E-02	1.1E-01	5.6E-02	**2.2E-01**
7439-92-1	~Lead and Compounds	0.215	0.215	0.215					**<SL****	**<SL****	**<SL****	
7439-96-5b	Manganese (Diet)	68.3	68.3	68.3					2.4E-02			2.4E-02
7440-02-0	Nickel Soluble Salts	0.585	0.585	0.585					1.5E-03	3.2E-05		1.5E-03
14797-55-8	Nitrate (measured as nitrogen)	168	168	168					5.2E-03	2.3E-05		5.3E-03
E701177	Nitrate + Nitrite (measured as nitrogen)	168	168	168								
7782-49-2	Selenium	1.03	1.03	1.03					1.0E-02	4.5E-05		1.0E-02
7440-62-2	Vanadium and Compounds	8.32	8.32	8.32					8.2E-02	1.4E-02		9.6E-02
7440-66-6	Zinc and Compounds	22.7	22.7	22.7					3.8E-03	1.0E-05		3.8E-03
						Cumulative:		**5.3E-04**				**2.7E+01**

DEQ Risk Calculator - Direct Contact - Non-Residential Worker Groundwater Use **Output Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-1 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	22600	22600	22600							**5.2E+00**	**5.2E+00**
7440-38-2	Arsenic, Inorganic	25.8	25.8	25.8	**9.8E-05**	**1.6E-06**		**1.0E-04**	**6.1E-01**	9.7E-03		**6.2E-01**
7440-39-3	Barium	15.3	15.3	15.3					5.4E-04	1.2E-04		6.7E-04
105-60-2	Caprolactam	14.2	14.2	14.2					2.0E-04	7.3E-06		2.1E-04
18540-29-9	Chromium(VI)	2.85	2.85	2.85	**1.2E-06**	**1.5E-06**		**2.6E-06**	2.3E-02	2.9E-02		5.1E-02
7440-48-4	Cobalt	0.46	0.46	0.46					1.1E-02	6.9E-05		1.1E-02
7440-50-8	Copper	2.07	2.07	2.07					3.7E-04	5.8E-06		3.7E-04
106-46-7	Dichlorobenzene, 1,4-	0.969	0.969	0.969	1.3E-08	2.7E-08	4.3E-07	4.7E-07	9.8E-05	2.0E-04	1.4E-04	4.4E-04
123-91-1	Dioxane, 1,4-	0.745	0.745	0.745	1.9E-07	1.9E-09	1.5E-07	3.4E-07	1.8E-04	1.8E-06	2.8E-03	3.0E-03
99-87-6	Isopropyltoluene, p-	4.66	4.66	4.66					8.3E-03	5.0E-02	1.3E-02	7.2E-02
7439-92-1	~Lead and Compounds	0.215	0.215	0.215					**<SL****	**<SL****	**<SL****	
7439-96-5b	Manganese (Diet)	68.3	68.3	68.3					3.5E-03			3.5E-03
7440-02-0	Nickel Soluble Salts	0.585	0.585	0.585					2.1E-04	1.6E-05		2.2E-04
14797-55-8	Nitrate (measured as nitrogen)	168	168	168					7.5E-04	1.2E-05		7.6E-04
E701177	Nitrate + Nitrite (measured as nitrogen)	168	168	168								
7782-49-2	Selenium	1.03	1.03	1.03					1.5E-03	2.3E-05		1.5E-03
7440-62-2	Vanadium and Compounds	8.32	8.32	8.32					1.2E-02	7.2E-03		1.9E-02
7440-66-6	Zinc and Compounds	22.7	22.7	22.7					5.4E-04	5.1E-06		5.4E-04
						Cumulative:		**1.0E-04**				**5.9E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	MW-3 Site Assessment
Submittal Date:	5/20/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-3 Site Assessment

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. Location of DUP-01

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
230000		7664-41-7	Ammonia			ug/L	MW-3									
1.64	J	7440-38-2	Arsenic, Inorganic			ug/L	DUP-01									
80.4		7440-39-3	Barium			ug/L	DUP-01									
2.22	J *1	100-52-7	Benzaldehyde			ug/L	DUP-01									
11.3		71-43-2	Benzene			ug/L	MW-3									
0.22	J	7440-43-9	Cadmium (Diet)			ug/L	MW-3									
19.4		105-60-2	Caprolactam			ug/L	MW-3									
15.1		108-90-7	Chlorobenzene			ug/L	MW-3									
3.85	J	18540-29-9	Chromium(VI)			ug/L	MW-3									
3.59		7440-48-4	Cobalt			ug/L	MW-3									
3.64	J	7440-50-8	Copper			ug/L	DUP-01									
12.6		59-50-7	Cresol, p-chloro-m-			ug/L	DUP-01									
3.06		98-82-8	Cumene			ug/L	MW-3									
0.586	J	95-50-1	Dichlorobenzene, 1,2-			ug/L	MW-3									
5.45		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-3									
0.793	J	108-20-3	Diisopropyl Ether			ug/L	DUP-01									
30.6		123-91-1	Dioxane, 1,4-			ug/L	DUP-01									
5.68		100-41-4	Ethylbenzene			ug/L	MW-3									
1.8		99-87-6	Isopropyltoluene, p-			ug/L	MW-3									
9.11		7439-92-1	~Lead and Compounds			ug/L	DUP-01									
69.7		7439-96-5b	Manganese (Diet)			ug/L	MW-3									
0.261	J	1634-04-4	Methyl tert-Butyl Ether (MTBE)			ug/L	MW-3									
13.7		7440-02-0	Nickel Soluble Salts			ug/L	DUP-01									
78.3		14797-55-8	Nitrate (measured as nitrogen)			ug/L	DUP-01									
78.3	J	E701177	Nitrate + Nitrite (measured as nitrogen)			ug/L	DUP-01									
1.27	J	86-30-6	Nitrosodiphenylamine, N-			ug/L	DUP-01									
1.08	J *-	108-95-2	Phenol			ug/L	MW-3									
4.67	J *-	84-74-2	~Dibutyl Phthalate			ug/L	DUP-01									
16	*-	84-66-2	~Diethyl Phthalate			ug/L	DUP-01									
5.35	J	91-57-6	~Methylnaphthalene, 2-			ug/L	DUP-01									
51.2		91-20-3	~Naphthalene			ug/L	MW-3									
2.49		103-65-1	Propyl benzene			ug/L	MW-3									
2.22		108-88-3	Toluene			ug/L	MW-3									
3.39		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-3									
1.75		108-67-8	Trimethylbenzene, 1,3,5-			ug/L	MW-3									
2.31	J	7440-62-2	Vanadium and Compounds			ug/L	MW-3									
23		1330-20-7	Xylenes			ug/L	MW-3									
26.4		7440-66-6	Zinc and Compounds			ug/L	DUP-01									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-3 Site Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	6.1E-04	2.3E+02	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	1.5E-04	5.5E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Direct Contact - Resident Groundwater Use **Output Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-3 Site Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	230000	230000	230000							**2.2E+02**	**2.2E+02**
7440-38-2	Arsenic, Inorganic	1.64	1.64	1.64	**3.2E-05**	1.7E-07		**3.2E-05**	**2.7E-01**	1.2E-03		**2.7E-01**
7440-39-3	Barium	80.4	80.4	80.4					2.0E-02	1.3E-03		2.1E-02
100-52-7	Benzaldehyde	2.22	2.22	2.22	1.1E-07	5.1E-09		1.2E-07	1.1E-03	4.5E-05		1.2E-03
71-43-2	Benzene	11.3	11.3	11.3	**8.0E-06**	**1.1E-06**	**1.6E-05**	**2.5E-05**	1.4E-01	1.9E-02	1.8E-01	**3.4E-01**
7440-43-9	Cadmium (Diet)	0.22	0.22	0.22					1.1E-01			1.1E-01
105-60-2	Caprolactam	19.4	19.4	19.4					1.9E-03	2.2E-05		2.0E-03
108-90-7	Chlorobenzene	15.1	15.1	15.1					3.8E-02	1.2E-02	1.4E-01	1.9E-01
18540-29-9	Chromium(VI)	3.85	3.85	3.85	**2.5E-05**	**1.1E-05**		**3.5E-05**	**2.1E-01**	7.5E-02		**2.9E-01**
7440-48-4	Cobalt	3.59	3.59	3.59					**6.0E-01**	1.1E-03		**6.0E-01**
7440-50-8	Copper	3.64	3.64	3.64					4.5E-03	2.0E-05		4.6E-03
59-50-7	Cresol, p-chloro-m-	12.6	12.6	12.6					6.3E-03	2.4E-03		8.7E-03
98-82-8	Cumene	3.06	3.06	3.06					1.5E-03	1.6E-03	3.7E-03	6.8E-03
95-50-1	Dichlorobenzene, 1,2-	0.586	0.586	0.586					3.2E-04	2.0E-04	1.4E-03	1.9E-03
106-46-7	Dichlorobenzene, 1,4-	5.45	5.45	5.45	3.8E-07	2.6E-07	**1.1E-05**	**1.1E-05**	3.9E-03	2.4E-03	3.3E-03	9.6E-03
108-20-3	Diisopropyl Ether	0.793	0.793	0.793							5.4E-04	5.4E-04
123-91-1	Dioxane, 1,4-	30.6	30.6	30.6	**3.9E-05**	1.3E-07	**2.7E-05**	**6.7E-05**	5.1E-02	1.6E-04	**4.9E-01**	**5.4E-01**
100-41-4	Ethylbenzene	5.68	5.68	5.68	8.0E-07	4.6E-07	**2.5E-06**	**3.8E-06**	5.7E-03	3.0E-03	2.7E-03	1.1E-02
99-87-6	Isopropyltoluene, p-	1.8	1.8	1.8					2.2E-02	4.2E-02	2.2E-02	8.6E-02
7439-92-1	~Lead and Compounds	9.11	9.11	9.11					**<SL****	**<SL****	**<SL****	
7439-96-5b	Manganese (Diet)	69.7	69.7	69.7					2.5E-02			2.5E-02
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.261	0.261	0.261	6.0E-09	1.3E-10	1.2E-08	1.8E-08			4.2E-05	4.2E-05
7440-02-0	Nickel Soluble Salts	13.7	13.7	13.7					3.4E-02	7.5E-04		3.5E-02
14797-55-8	Nitrate (measured as nitrogen)	78.3	78.3	78.3					2.4E-03	1.1E-05		2.5E-03
E701177	Nitrate + Nitrite (measured as nitrogen)	78.3	78.3	78.3								
86-30-6	Nitrosodiphenylamine, N-	1.27	1.27	1.27	8.0E-08	2.4E-08		1.0E-07				
108-95-2	Phenol	1.08	1.08	1.08					1.8E-04	7.7E-06		1.9E-04
84-74-2	~Dibutyl Phthalate	4.67	4.67	4.67					2.3E-03	2.8E-03		5.2E-03
84-66-2	~Diethyl Phthalate	16	16	16					1.0E-03	8.1E-05		1.1E-03
91-57-6	~Methylnaphthalene, 2-	5.35	5.35	5.35					6.7E-02	8.2E-02		1.5E-01
91-20-3	~Naphthalene	51.2	51.2	51.2	**7.9E-05**	**4.9E-05**	**3.1E-04**	**4.4E-04**	1.3E-01	7.3E-02	**8.2E+00**	**8.4E+00**
103-65-1	Propyl benzene	2.49	2.49	2.49					1.2E-03	1.4E-03	1.2E-03	3.8E-03
108-88-3	Toluene	2.22	2.22	2.22					1.4E-03	4.2E-04	2.1E-04	2.0E-03
95-63-6	Trimethylbenzene, 1,2,4-	3.39	3.39	3.39					1.7E-02	1.7E-02	2.7E-02	6.1E-02
108-67-8	Trimethylbenzene, 1,3,5-	1.75	1.75	1.75					8.7E-03	6.3E-03	1.4E-02	2.9E-02
7440-62-2	Vanadium and Compounds	2.31	2.31	2.31					2.3E-02	3.9E-03		2.7E-02
1330-20-7	Xylenes	23	23	23					5.7E-03	3.1E-03	1.1E-01	1.2E-01
7440-66-6	Zinc and Compounds	26.4	26.4	26.4					4.4E-03	1.2E-05		4.4E-03
						Cumulative:		**6.1E-04**				**2.3E+02**

DEQ Risk Calculator - Direct Contact - Non-Residential Worker Groundwater Use **Output Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-3 Site Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	230000	230000	230000							**5.3E+01**	**5.3E+01**
7440-38-2	Arsenic, Inorganic	1.64	1.64	1.64	**6.2E-06**	9.9E-08		**6.3E-06**	3.9E-02	6.2E-04		3.9E-02
7440-39-3	Barium	80.4	80.4	80.4					2.9E-03	6.5E-04		3.5E-03
100-52-7	Benzaldehyde	2.22	2.22	2.22	2.3E-08	3.0E-09		2.6E-08	1.6E-04	2.1E-05		1.8E-04
71-43-2	Benzene	11.3	11.3	11.3	**1.6E-06**	6.8E-07	**3.6E-06**	**5.8E-06**	2.0E-02	8.6E-03	4.3E-02	7.2E-02
7440-43-9	Cadmium (Diet)	0.22	0.22	0.22					1.6E-02			1.6E-02
105-60-2	Caprolactam	19.4	19.4	19.4					2.8E-04	9.9E-06		2.9E-04
108-90-7	Chlorobenzene	15.1	15.1	15.1					5.4E-03	5.4E-03	3.4E-02	4.5E-02
18540-29-9	Chromium(VI)	3.85	3.85	3.85	**1.6E-06**	**2.0E-06**		**3.5E-06**	3.0E-02	3.9E-02		6.9E-02
7440-48-4	Cobalt	3.59	3.59	3.59					8.5E-02	5.4E-04		8.6E-02
7440-50-8	Copper	3.64	3.64	3.64					6.5E-04	1.0E-05		6.6E-04
59-50-7	Cresol, p-chloro-m-	12.6	12.6	12.6					9.0E-04	1.1E-03		2.0E-03
98-82-8	Cumene	3.06	3.06	3.06					2.2E-04	7.4E-04	8.7E-04	1.8E-03
95-50-1	Dichlorobenzene, 1,2-	0.586	0.586	0.586					4.6E-05	9.2E-05	3.3E-04	4.7E-04
106-46-7	Dichlorobenzene, 1,4-	5.45	5.45	5.45	7.5E-08	1.5E-07	**2.4E-06**	**2.7E-06**	5.5E-04	1.1E-03	7.8E-04	2.5E-03
108-20-3	Diisopropyl Ether	0.793	0.793	0.793							1.3E-04	1.3E-04
123-91-1	Dioxane, 1,4-	30.6	30.6	30.6	**7.8E-06**	7.9E-08	**6.2E-06**	**1.4E-05**	7.2E-03	7.4E-05	1.2E-01	1.2E-01
100-41-4	Ethylbenzene	5.68	5.68	5.68	1.6E-07	2.7E-07	5.8E-07	**1.0E-06**	8.1E-04	1.4E-03	6.5E-04	2.8E-03
99-87-6	Isopropyltoluene, p-	1.8	1.8	1.8					3.2E-03	1.9E-02	5.1E-03	2.8E-02
7439-92-1	~Lead and Compounds	9.11	9.11	9.11					**<SL****	**<SL****	**<SL****	
7439-96-5b	Manganese (Diet)	69.7	69.7	69.7					3.5E-03			3.5E-03
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.261	0.261	0.261	1.2E-09	7.7E-11	2.8E-09	4.0E-09			9.9E-06	9.9E-06
7440-02-0	Nickel Soluble Salts	13.7	13.7	13.7					4.9E-03	3.9E-04		5.3E-03
14797-55-8	Nitrate (measured as nitrogen)	78.3	78.3	78.3					3.5E-04	5.5E-06		3.5E-04
E701177	Nitrate + Nitrite (measured as nitrogen)	78.3	78.3	78.3								
86-30-6	Nitrosodiphenylamine, N-	1.27	1.27	1.27	1.6E-08	1.4E-08		3.0E-08				
108-95-2	Phenol	1.08	1.08	1.08					2.6E-05	3.5E-06		2.9E-05
84-74-2	~Dibutyl Phthalate	4.67	4.67	4.67					3.3E-04	1.3E-03		1.6E-03
84-66-2	~Diethyl Phthalate	16	16	16					1.4E-04	3.7E-05		1.8E-04
91-57-6	~Methylnaphthalene, 2-	5.35	5.35	5.35					9.5E-03	3.8E-02		4.7E-02
91-20-3	~Naphthalene	51.2	51.2	51.2	**1.6E-05**	**2.9E-05**	**7.1E-05**	**1.2E-04**	1.8E-02	3.4E-02	**1.9E+00**	**2.0E+00**
103-65-1	Propyl benzene	2.49	2.49	2.49					1.8E-04	6.3E-04	2.8E-04	1.1E-03
108-88-3	Toluene	2.22	2.22	2.22					2.0E-04	1.9E-04	5.1E-05	4.4E-04
95-63-6	Trimethylbenzene, 1,2,4-	3.39	3.39	3.39					2.4E-03	7.8E-03	6.4E-03	1.7E-02
108-67-8	Trimethylbenzene, 1,3,5-	1.75	1.75	1.75					1.2E-03	2.9E-03	3.3E-03	7.5E-03
7440-62-2	Vanadium and Compounds	2.31	2.31	2.31					3.3E-03	2.0E-03		5.2E-03
1330-20-7	Xylenes	23	23	23					8.2E-04	1.4E-03	2.6E-02	2.8E-02
7440-66-6	Zinc and Compounds	26.4	26.4	26.4					6.3E-04	6.0E-06		6.3E-04
						Cumulative:		**1.5E-04**				**5.5E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	MW-5 Risk Assessment
Submittal Date:	5/20/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-5 Risk Assessment

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
30.3	J	7664-41-7	Ammonia			ug/L	MW-5									
7.03		7440-38-2	Arsenic, Inorganic			ug/L	MW-5									
206		7440-39-3	Barium			ug/L	MW-5									
5.04		71-43-2	Benzene			ug/L	MW-5									
1.16		7440-41-7	Beryllium and compounds			ug/L	MW-5									
0.355	J	7440-43-9	Cadmium (Diet)			ug/L	MW-5									
9.07	J	105-60-2	Caprolactam			ug/L	MW-5									
6.31		108-90-7	Chlorobenzene			ug/L	MW-5									
10.6		18540-29-9	Chromium(VI)			ug/L	MW-5									
2.87		7440-48-4	Cobalt			ug/L	MW-5									
7.2		7440-50-8	Copper			ug/L	MW-5									
1.22		98-82-8	Cumene			ug/L	MW-5									
14.2		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-5									
1.3		78-87-5	Dichloropropane, 1,2-			ug/L	MW-5									
1.01		100-41-4	Ethylbenzene			ug/L	MW-5									
20.7		7439-92-1	~Lead and Compounds			ug/L	MW-5									
440		7439-96-5b	Manganese (Diet)			ug/L	MW-5									
0.322	J	1634-04-4	Methyl tert-Butyl Ether (MTBE)			ug/L	MW-5									
27.5		7440-02-0	Nickel Soluble Salts			ug/L	MW-5									
3.91	J	91-20-3	~Naphthalene			ug/L	MW-5									
1.57	J B	7782-49-2	Selenium			ug/L	MW-5									
1.47		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-5									
53		7440-62-2	Vanadium and Compounds			ug/L	MW-5									
1120		7440-66-6	Zinc and Compounds			ug/L	MW-5									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-5 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	3.1E-04	4.9E+00	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	5.6E-05	9.2E-01	NO
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Direct Contact - Resident Groundwater Use **Output Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-5 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	30.3	30.3	30.3							2.9E-02	2.9E-02
7440-38-2	Arsenic, Inorganic	7.03	7.03	7.03	**1.4E-04**	7.2E-07		**1.4E-04**	**1.2E+00**	5.1E-03		**1.2E+00**
7440-39-3	Barium	206	206	206					5.1E-02	3.2E-03		5.5E-02
71-43-2	Benzene	5.04	5.04	5.04	**3.6E-06**	5.1E-07	**7.0E-06**	**1.1E-05**	6.3E-02	8.3E-03	8.1E-02	1.5E-01
7440-41-7	Beryllium and compounds	1.16	1.16	1.16					2.9E-02	1.8E-02		4.7E-02
7440-43-9	Cadmium (Diet)	0.355	0.355	0.355					1.8E-01			1.8E-01
105-60-2	Caprolactam	9.07	9.07	9.07					9.0E-04	1.0E-05		9.1E-04
108-90-7	Chlorobenzene	6.31	6.31	6.31					1.6E-02	4.9E-03	6.1E-02	8.1E-02
18540-29-9	Chromium(VI)	10.6	10.6	10.6	**6.8E-05**	**2.9E-05**		**9.7E-05**	**5.9E-01**	**2.1E-01**		**7.9E-01**
7440-48-4	Cobalt	2.87	2.87	2.87					**4.8E-01**	8.4E-04		**4.8E-01**
7440-50-8	Copper	7.2	7.2	7.2					9.0E-03	4.0E-05		9.0E-03
98-82-8	Cumene	1.22	1.22	1.22					6.1E-04	6.4E-04	1.5E-03	2.7E-03
106-46-7	Dichlorobenzene, 1,4-	14.2	14.2	14.2	9.8E-07	6.7E-07	**2.8E-05**	**2.9E-05**	1.0E-02	6.4E-03	8.5E-03	2.5E-02
78-87-5	Dichloropropane, 1,2-	1.3	1.3	1.3	6.2E-07	5.6E-08	8.6E-07	**1.5E-06**	1.6E-03	1.4E-04	1.6E-01	1.6E-01
100-41-4	Ethylbenzene	1.01	1.01	1.01	1.4E-07	8.1E-08	4.5E-07	6.7E-07	1.0E-03	5.3E-04	4.8E-04	2.0E-03
7439-92-1	~Lead and Compounds	20.7	20.7	20.7					**>SL****	**>SL****	**>SL****	
7439-96-5b	Manganese (Diet)	440	440	440					1.6E-01			1.6E-01
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.322	0.322	0.322	7.4E-09	1.6E-10	1.5E-08	2.3E-08			5.1E-05	5.1E-05
7440-02-0	Nickel Soluble Salts	27.5	27.5	27.5					6.9E-02	1.5E-03		7.0E-02
91-20-3	~Naphthalene	3.91	3.91	3.91	**6.0E-06**	**3.7E-06**	**2.4E-05**	**3.3E-05**	9.7E-03	5.6E-03	**6.2E-01**	**6.4E-01**
7782-49-2	Selenium	1.57	1.57	1.57					1.6E-02	6.9E-05		1.6E-02
95-63-6	Trimethylbenzene, 1,2,4-	1.47	1.47	1.47					7.3E-03	7.3E-03	1.2E-02	2.6E-02
7440-62-2	Vanadium and Compounds	53	53	53					**5.2E-01**	8.9E-02		**6.1E-01**
7440-66-6	Zinc and Compounds	1120	1120	1120					1.9E-01	4.9E-04		1.9E-01
						Cumulative:		**3.1E-04**				**4.9E+00**

DEQ Risk Calculator - Direct Contact - Non-Residential Worker Groundwater Use **Output Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-5 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	30.3	30.3	30.3							6.9E-03	6.9E-03
7440-38-2	Arsenic, Inorganic	7.03	7.03	7.03	**2.7E-05**	4.2E-07		**2.7E-05**	1.7E-01	2.6E-03		1.7E-01
7440-39-3	Barium	206	206	206					7.3E-03	1.7E-03		9.0E-03
71-43-2	Benzene	5.04	5.04	5.04	7.0E-07	3.0E-07	**1.6E-06**	**2.6E-06**	9.0E-03	3.8E-03	1.9E-02	3.2E-02
7440-41-7	Beryllium and compounds	1.16	1.16	1.16					4.1E-03	9.3E-03		1.3E-02
7440-43-9	Cadmium (Diet)	0.355	0.355	0.355					2.5E-02			2.5E-02
105-60-2	Caprolactam	9.07	9.07	9.07					1.3E-04	4.6E-06		1.3E-04
108-90-7	Chlorobenzene	6.31	6.31	6.31					2.2E-03	2.3E-03	1.4E-02	1.9E-02
18540-29-9	Chromium(VI)	10.6	10.6	10.6	**4.3E-06**	**5.5E-06**		**9.8E-06**	8.4E-02	1.1E-01		1.9E-01
7440-48-4	Cobalt	2.87	2.87	2.87					6.8E-02	4.3E-04		6.8E-02
7440-50-8	Copper	7.2	7.2	7.2					1.3E-03	2.0E-05		1.3E-03
98-82-8	Cumene	1.22	1.22	1.22					8.7E-05	2.9E-04	3.5E-04	7.3E-04
106-46-7	Dichlorobenzene, 1,4-	14.2	14.2	14.2	1.9E-07	4.0E-07	**6.4E-06**	**7.0E-06**	1.4E-03	2.9E-03	2.0E-03	6.4E-03
78-87-5	Dichloropropane, 1,2-	1.3	1.3	1.3	1.2E-07	3.3E-08	2.0E-07	3.5E-07	2.3E-04	6.3E-05	3.7E-02	3.7E-02
100-41-4	Ethylbenzene	1.01	1.01	1.01	2.8E-08	4.8E-08	1.0E-07	1.8E-07	1.4E-04	2.4E-04	1.2E-04	5.0E-04
7439-92-1	~Lead and Compounds	20.7	20.7	20.7					**>SL****	**>SL****	**>SL****	
7439-96-5b	Manganese (Diet)	440	440	440					2.2E-02			2.2E-02
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.322	0.322	0.322	1.5E-09	9.5E-11	3.4E-09	5.0E-09			1.2E-05	1.2E-05
7440-02-0	Nickel Soluble Salts	27.5	27.5	27.5					9.8E-03	7.8E-04		1.1E-02
91-20-3	~Naphthalene	3.91	3.91	3.91	**1.2E-06**	**2.2E-06**	**5.4E-06**	**8.8E-06**	1.4E-03	2.6E-03	1.5E-01	1.5E-01
7782-49-2	Selenium	1.57	1.57	1.57					2.2E-03	3.5E-05		2.3E-03
95-63-6	Trimethylbenzene, 1,2,4-	1.47	1.47	1.47					1.0E-03	3.4E-03	2.8E-03	7.2E-03
7440-62-2	Vanadium and Compounds	53	53	53					7.5E-02	4.6E-02		1.2E-01
7440-66-6	Zinc and Compounds	1120	1120	1120					2.7E-02	2.5E-04		2.7E-02
						Cumulative:		5.6E-05				9.2E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	MW-6 Risk Assessment
Submittal Date:	5/20/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-6 Risk Assessment

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator. There was not enough water to sample for Metals by EPA Method 6020

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
10.1	J	67-64-1	Acetone			ug/L	MW-6									
4.85		71-43-2	Benzene			ug/L	MW-6									
0.464	J	92-52-4	Biphenyl, 1,1'-			ug/L	MW-6									
24.3		105-60-2	Caprolactam			ug/L	MW-6									
3		108-90-7	Chlorobenzene			ug/L	MW-6									
1.51	J	59-50-7	Cresol, p-chloro-m-			ug/L	MW-6									
0.816	J	98-82-8	Cumene			ug/L	MW-6									
5.98		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-6									
15.8		156-59-2	Dichloroethylene, cis-1,2-			ug/L	MW-6									
1.88		156-60-5	Dichloroethylene, trans-1,2-			ug/L	MW-6									
1.43		108-20-3	Diisopropyl Ether			ug/L	MW-6									
1.11	J	105-67-9	Dimethylphenol, 2,4-			ug/L	MW-6									
11.6		100-41-4	Ethylbenzene			ug/L	MW-6									
0.73	J	99-87-6	Isopropyltoluene, p-			ug/L	MW-6									
0.349	J	1634-04-4	Methyl tert-Butyl Ether (MTBE)			ug/L	MW-6									
1.88	J	86-30-6	Nitrosodiphenylamine, N-			ug/L	MW-6									
0.715	J	108-95-2	Phenol			ug/L	MW-6									
1.25		108-88-3	Toluene			ug/L	MW-6									
1.15		95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-6									
0.946	J	75-01-4	Vinyl Chloride			ug/L	MW-6									
12.6		1330-20-7	Xylenes			ug/L	MW-6									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-6 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	8.2E-05	1.6E+00	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	9.9E-06	3.5E-01	NO
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Direct Contact - Resident Groundwater Use **Output Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-6 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	10.1	10.1	10.1					5.6E-04	2.3E-06		5.6E-04
71-43-2	Benzene	4.85	4.85	4.85	**3.4E-06**	4.9E-07	**6.7E-06**	**1.1E-05**	6.0E-02	8.0E-03	7.8E-02	1.5E-01
92-52-4	Biphenyl, 1,1'-	0.464	0.464	0.464	4.8E-08	7.1E-08		1.2E-07	4.6E-05	6.3E-05	**5.6E-01**	**5.6E-01**
105-60-2	Caprolactam	24.3	24.3	24.3					2.4E-03	2.7E-05		2.5E-03
108-90-7	Chlorobenzene	3	3	3					7.5E-03	2.3E-03	2.9E-02	3.9E-02
59-50-7	Cresol, p-chloro-m-	1.51	1.51	1.51					7.5E-04	2.9E-04		1.0E-03
98-82-8	Cumene	0.816	0.816	0.816					4.1E-04	4.3E-04	9.8E-04	1.8E-03
106-46-7	Dichlorobenzene, 1,4-	5.98	5.98	5.98	4.1E-07	2.8E-07	**1.2E-05**	**1.2E-05**	4.3E-03	2.7E-03	3.6E-03	1.1E-02
156-59-2	Dichloroethylene, cis-1,2-	15.8	15.8	15.8					**3.9E-01**	4.4E-02	1.9E-01	**6.3E-01**
156-60-5	Dichloroethylene, trans-1,2-	1.88	1.88	1.88					4.7E-03	5.2E-04	2.3E-02	2.8E-02
108-20-3	Diisopropyl Ether	1.43	1.43	1.43							9.8E-04	9.8E-04
105-67-9	Dimethylphenol, 2,4-	1.11	1.11	1.11					2.8E-03	3.6E-04		3.1E-03
100-41-4	Ethylbenzene	11.6	11.6	11.6	**1.6E-06**	9.4E-07	**5.2E-06**	**7.7E-06**	1.2E-02	6.1E-03	5.6E-03	2.3E-02
99-87-6	Isopropyltoluene, p-	0.73	0.73	0.73					9.1E-03	1.7E-02	8.8E-03	3.5E-02
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.349	0.349	0.349	8.1E-09	1.8E-10	1.6E-08	2.4E-08			5.6E-05	5.6E-05
86-30-6	Nitrosodiphenylamine, N-	1.88	1.88	1.88	1.2E-07	3.6E-08		1.5E-07				
108-95-2	Phenol	0.715	0.715	0.715					1.2E-04	5.1E-06		1.2E-04
108-88-3	Toluene	1.25	1.25	1.25					7.8E-04	2.4E-04	1.2E-04	1.1E-03
95-63-6	Trimethylbenzene, 1,2,4-	1.15	1.15	1.15					5.7E-03	5.7E-03	9.2E-03	2.1E-02
75-01-4	Vinyl Chloride	0.946	0.946	0.946	**4.4E-05**	**3.4E-06**	**2.8E-06**	**5.0E-05**	1.6E-02	1.1E-03	8.9E-03	2.6E-02
1330-20-7	Xylenes	12.6	12.6	12.6					3.1E-03	1.7E-03	6.0E-02	6.5E-02
						Cumulative:		8.2E-05				**1.6E+00**

DEQ Risk Calculator - Direct Contact - Non-Residential Worker Groundwater Use **Output Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-6 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
67-64-1	Acetone	10.1	10.1	10.1					8.0E-05	1.1E-06		8.1E-05
71-43-2	Benzene	4.85	4.85	4.85	6.8E-07	2.9E-07	**1.5E-06**	**2.5E-06**	8.6E-03	3.7E-03	1.8E-02	3.1E-02
92-52-4	Biphenyl, 1,1'-	0.464	0.464	0.464	9.4E-09	4.2E-08		5.1E-08	6.6E-06	2.9E-05	1.3E-01	1.3E-01
105-60-2	Caprolactam	24.3	24.3	24.3					3.5E-04	1.2E-05		3.6E-04
108-90-7	Chlorobenzene	3	3	3					1.1E-03	1.1E-03	6.8E-03	9.0E-03
59-50-7	Cresol, p-chloro-m-	1.51	1.51	1.51					1.1E-04	1.3E-04		2.4E-04
98-82-8	Cumene	0.816	0.816	0.816					5.8E-05	2.0E-04	2.3E-04	4.9E-04
106-46-7	Dichlorobenzene, 1,4-	5.98	5.98	5.98	8.2E-08	1.7E-07	**2.7E-06**	**2.9E-06**	6.1E-04	1.2E-03	8.5E-04	2.7E-03
156-59-2	Dichloroethylene, cis-1,2-	15.8	15.8	15.8					5.6E-02	2.0E-02	4.5E-02	1.2E-01
156-60-5	Dichloroethylene, trans-1,2-	1.88	1.88	1.88					6.7E-04	2.4E-04	5.4E-03	6.3E-03
108-20-3	Diisopropyl Ether	1.43	1.43	1.43							2.3E-04	2.3E-04
105-67-9	Dimethylphenol, 2,4-	1.11	1.11	1.11					3.9E-04	1.6E-04		5.6E-04
100-41-4	Ethylbenzene	11.6	11.6	11.6	3.2E-07	5.5E-07	**1.2E-06**	**2.1E-06**	1.6E-03	2.8E-03	1.3E-03	5.8E-03
99-87-6	Isopropyltoluene, p-	0.73	0.73	0.73					1.3E-03	7.9E-03	2.1E-03	1.1E-02
1634-04-4	Methyl tert-Butyl Ether (MTBE)	0.349	0.349	0.349	1.6E-09	1.0E-10	3.7E-09	5.4E-09			1.3E-05	1.3E-05
86-30-6	Nitrosodiphenylamine, N-	1.88	1.88	1.88	2.3E-08	2.1E-08		4.5E-08				
108-95-2	Phenol	0.715	0.715	0.715					1.7E-05	2.3E-06		1.9E-05
108-88-3	Toluene	1.25	1.25	1.25					1.1E-04	1.1E-04	2.9E-05	2.5E-04
95-63-6	Trimethylbenzene, 1,2,4-	1.15	1.15	1.15					8.2E-04	2.6E-03	2.2E-03	5.6E-03
75-01-4	Vinyl Chloride	0.946	0.946	0.946	**1.7E-06**	3.9E-07	1.70E-07	**2.3E-06**	2.2E-03	5.1E-04	2.1E-03	4.9E-03
1330-20-7	Xylenes	12.6	12.6	12.6					4.5E-04	7.7E-04	1.4E-02	1.6E-02
						Cumulative:		9.9E-06				3.5E-01

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	MW-7 Risk Assessment
Submittal Date:	5/20/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-7 Risk Assessment

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
33800		7664-41-7	Ammonia			ug/L	MW-7									
0.88	J	7440-38-2	Arsenic, Inorganic			ug/L	MW-7									
381		7440-39-3	Barium			ug/L	MW-7									
5.39		71-43-2	Benzene			ug/L	MW-7									
0.17	J	7440-43-9	Cadmium (Diet)			ug/L	MW-7									
8.21	J	105-60-2	Caprolactam			ug/L	MW-7									
9.71		108-90-7	Chlorobenzene			ug/L	MW-7									
2.07	J	18540-29-9	Chromium(VI)			ug/L	MW-7									
1.35		7440-48-4	Cobalt			ug/L	MW-7									
2.15	J	7440-50-8	Copper			ug/L	MW-7									
3,.23	J	59-50-7	Cresol, p-chloro-m-			ug/L	MW-7									
2.2		98-82-8	Cumene			ug/L	MW-7									
2.6		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-7									
0.583		123-91-1	Dioxane, 1,4-			ug/L	MW-7									
3.91		100-41-4	Ethylbenzene			ug/L	MW-7									
1.04		99-87-6	Isopropyltoluene, p-			ug/L	MW-7									
11.2		7439-92-1	~Lead and Compounds			ug/L	MW-7									
1150		7439-96-5b	Manganese (Diet)			ug/L	MW-7									
3.35	J	7440-02-0	Nickel Soluble Salts			ug/L	MW-7									
96.3		14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-7									
96.3	J	E701177	Nitrate + Nitrite (measured as nitrogen)			ug/L	MW-7									
1.77	J	86-30-6	Nitrosodiphenylamine, N-			ug/L	MW-7									
0.699	J	108-95-2	Phenol			ug/L	MW-7									
0.839	J	91-57-6	~Methylnaphthalene, 2-			ug/L	MW-7									
13.5		91-20-3	~Naphthalene			ug/L	MW-7									
2.04		103-65-1	Propyl benzene			ug/L	MW-7									
1.08		108-88-3	Toluene			ug/L	MW-7									
0.945	J	95-63-6	Trimethylbenzene, 1,2,4-			ug/L	MW-7									
1.29	J	7440-62-2	Vanadium and Compounds			ug/L	MW-7									
7.3	J	1330-20-7	Xylenes			ug/L	MW-7									
228		7440-66-6	Zinc and Compounds			ug/L	MW-7									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-7 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	1.7E-04	3.6E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	4.1E-05	8.5E+00	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Direct Contact - Resident Groundwater Use **Output Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-7 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	33800	33800	33800							**3.2E+01**	**3.2E+01**
7440-38-2	Arsenic, Inorganic	0.88	0.88	0.88	**1.7E-05**	9.0E-08		**1.7E-05**	1.5E-01	6.4E-04		1.5E-01
7440-39-3	Barium	381	381	381					9.5E-02	6.0E-03		1.0E-01
71-43-2	Benzene	5.39	5.39	5.39	**3.8E-06**	5.5E-07	**7.5E-06**	**1.2E-05**	6.7E-02	8.9E-03	8.6E-02	1.6E-01
7440-43-9	Cadmium (Diet)	0.17	0.17	0.17					8.5E-02			8.5E-02
105-60-2	Caprolactam	8.21	8.21	8.21					8.2E-04	9.1E-06		8.3E-04
108-90-7	Chlorobenzene	9.71	9.71	9.71					2.4E-02	7.6E-03	9.3E-02	1.2E-01
18540-29-9	Chromium(VI)	2.07	2.07	2.07	**1.3E-05**	**5.7E-06**		**1.9E-05**	1.1E-01	4.0E-02		1.6E-01
7440-48-4	Cobalt	1.35	1.35	1.35					**2.2E-01**	4.0E-04		**2.2E-01**
7440-50-8	Copper	2.15	2.15	2.15					2.7E-03	1.2E-05		2.7E-03
98-82-8	Cumene	2.2	2.2	2.2					1.1E-03	1.1E-03	2.6E-03	4.9E-03
106-46-7	Dichlorobenzene, 1,4-	2.6	2.6	2.6	1.8E-07	1.2E-07	**5.1E-06**	**5.4E-06**	1.9E-03	1.2E-03	1.6E-03	4.6E-03
123-91-1	Dioxane, 1,4-	0.583	0.583	0.583	7.5E-07	2.6E-09	5.2E-07	**1.3E-06**	9.7E-04	3.1E-06	9.3E-03	1.0E-02
100-41-4	Ethylbenzene	3.91	3.91	3.91	5.5E-07	3.2E-07	**1.7E-06**	**2.6E-06**	3.9E-03	2.0E-03	1.9E-03	7.8E-03
99-87-6	Isopropyltoluene, p-	1.04	1.04	1.04					1.3E-02	2.4E-02	1.2E-02	5.0E-02
7439-92-1	~Lead and Compounds	11.2	11.2	11.2					**>SL****	**>SL****	**>SL****	
7439-96-5b	Manganese (Diet)	1150	1150	1150					**4.1E-01**			**4.1E-01**
7440-02-0	Nickel Soluble Salts	3.35	3.35	3.35					8.4E-03	1.8E-04		8.5E-03
14797-55-8	Nitrate (measured as nitrogen)	96.3	96.3	96.3					3.0E-03	1.3E-05		3.0E-03
E701177	Nitrate + Nitrite (measured as nitrogen)	96.3	96.3	96.3								
86-30-6	Nitrosodiphenylamine, N-	1.77	1.77	1.77	1.1E-07	3.4E-08		1.5E-07				
108-95-2	Phenol	0.699	0.699	0.699					1.2E-04	5.0E-06		1.2E-04
91-57-6	~Methylnaphthalene, 2-	0.839	0.839	0.839					1.0E-02	1.3E-02		2.3E-02
91-20-3	~Naphthalene	13.5	13.5	13.5	**2.1E-05**	**1.3E-05**	**8.2E-05**	**1.2E-04**	3.4E-02	1.9E-02	**2.2E+00**	**2.2E+00**
103-65-1	Propyl benzene	2.04	2.04	2.04					1.0E-03	1.1E-03	9.8E-04	3.1E-03
108-88-3	Toluene	1.08	1.08	1.08					6.7E-04	2.0E-04	1.0E-04	9.8E-04
95-63-6	Trimethylbenzene, 1,2,4-	0.945	0.945	0.945					4.7E-03	4.7E-03	7.6E-03	1.7E-02
7440-62-2	Vanadium and Compounds	1.29	1.29	1.29					1.3E-02	2.2E-03		1.5E-02
1330-20-7	Xylenes	7.3	7.3	7.3					1.8E-03	9.7E-04	3.5E-02	3.8E-02
7440-66-6	Zinc and Compounds	228	228	228					3.8E-02	1.0E-04		3.8E-02
						Cumulative:		**1.7E-04**				**3.6E+01**

DEQ Risk Calculator - Direct Contact - Non-Residential Worker Groundwater Use **Output Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-7 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	33800	33800	33800							**7.7E+00**	**7.7E+00**
7440-38-2	Arsenic, Inorganic	0.88	0.88	0.88	**3.4E-06**	5.3E-08		**3.4E-06**	2.1E-02	3.3E-04		2.1E-02
7440-39-3	Barium	381	381	381					1.4E-02	3.1E-03		1.7E-02
71-43-2	Benzene	5.39	5.39	5.39	7.5E-07	3.2E-07	**1.7E-06**	**2.8E-06**	9.6E-03	4.1E-03	2.1E-02	3.4E-02
7440-43-9	Cadmium (Diet)	0.17	0.17	0.17					1.2E-02			1.2E-02
105-60-2	Caprolactam	8.21	8.21	8.21					1.2E-04	4.2E-06		1.2E-04
108-90-7	Chlorobenzene	9.71	9.71	9.71					3.5E-03	3.5E-03	2.2E-02	2.9E-02
18540-29-9	Chromium(VI)	2.07	2.07	2.07	8.4E-07	**1.1E-06**		**1.9E-06**	1.6E-02	2.1E-02		3.7E-02
7440-48-4	Cobalt	1.35	1.35	1.35					3.2E-02	2.0E-04		3.2E-02
7440-50-8	Copper	2.15	2.15	2.15					3.8E-04	6.1E-06		3.9E-04
98-82-8	Cumene	2.2	2.2	2.2					1.6E-04	5.3E-04	6.3E-04	1.3E-03
106-46-7	Dichlorobenzene, 1,4-	2.6	2.6	2.6	3.6E-08	7.2E-08	**1.2E-06**	**1.3E-06**	2.6E-04	5.4E-04	3.7E-04	1.2E-03
123-91-1	Dioxane, 1,4-	0.583	0.583	0.583	1.5E-07	1.5E-09	1.2E-07	2.7E-07	1.4E-04	1.4E-06	2.2E-03	2.4E-03
100-41-4	Ethylbenzene	3.91	3.91	3.91	1.1E-07	1.9E-07	4.0E-07	6.9E-07	5.6E-04	9.4E-04	4.5E-04	1.9E-03
99-87-6	Isopropyltoluene, p-	1.04	1.04	1.04					1.8E-03	1.1E-02	3.0E-03	1.6E-02
7439-92-1	~Lead and Compounds	11.2	11.2	11.2					**>SL****	**>SL****	**>SL****	
7439-96-5b	Manganese (Diet)	1150	1150	1150					5.8E-02			5.8E-02
7440-02-0	Nickel Soluble Salts	3.35	3.35	3.35					1.2E-03	9.4E-05		1.3E-03
14797-55-8	Nitrate (measured as nitrogen)	96.3	96.3	96.3					4.3E-04	6.8E-06		4.3E-04
E701177	Nitrate + Nitrite (measured as nitrogen)	96.3	96.3	96.3								
86-30-6	Nitrosodiphenylamine, N-	1.77	1.77	1.77	2.2E-08	2.0E-08		4.2E-08				
108-95-2	Phenol	0.699	0.699	0.699					1.7E-05	2.3E-06		1.9E-05
91-57-6	~Methylnaphthalene, 2-	0.839	0.839	0.839					1.5E-03	5.9E-03		7.4E-03
91-20-3	~Naphthalene	13.5	13.5	13.5	**4.1E-06**	**7.6E-06**	**1.9E-05**	**3.0E-05**	4.8E-03	8.9E-03	**5.1E-01**	**5.3E-01**
103-65-1	Propyl benzene	2.04	2.04	2.04					1.4E-04	5.1E-04	2.3E-04	8.9E-04
108-88-3	Toluene	1.08	1.08	1.08					9.6E-05	9.4E-05	2.5E-05	2.1E-04
95-63-6	Trimethylbenzene, 1,2,4-	0.945	0.945	0.945					6.7E-04	2.2E-03	1.8E-03	4.6E-03
7440-62-2	Vanadium and Compounds	1.29	1.29	1.29					1.8E-03	1.1E-03		2.9E-03
1330-20-7	Xylenes	7.3	7.3	7.3					2.6E-04	4.5E-04	8.3E-03	9.0E-03
7440-66-6	Zinc and Compounds	228	228	228					5.4E-03	5.1E-05		5.5E-03
						Cumulative:		4.1E-05				**8.5E+00**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	MW-8 Risk Assessment
Submittal Date:	5/21/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-8 Risk Assessment

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
100000		7664-41-7	Ammonia			ug/L	MW-8									
4.55		7440-38-2	Arsenic, Inorganic			ug/L	MW-8									
239		7440-39-3	Barium			ug/L	MW-8									
1.24		71-43-2	Benzene			ug/L	MW-8									
9.61	J	105-60-2	Caprolactam			ug/L	MW-8									
1.75		108-90-7	Chlorobenzene			ug/L	MW-8									
2.87	J	18540-29-9	Chromium(VI)			ug/L	MW-8									
1.87		7440-48-4	Cobalt			ug/L	MW-8									
5.95	J	59-50-7	Cresol, p-chloro-m-			ug/L	MW-8									
0.824	J	106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-8									
20.5		123-91-1	Dioxane, 1,4-			ug/L	MW-8									
0.705	J	7439-92-1	~Lead and Compounds			ug/L	MW-8									
245		7439-96-5b	Manganese (Diet)			ug/L	MW-8									
7.35		7440-02-0	Nickel Soluble Salts			ug/L	MW-8									
92.8	J	14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-8									
92.8	J	E701177	Nitrate + Nitrite (measured as nitrogen)			ug/L	MW-8									
0.607	J	86-30-6	Nitrosodiphenylamine, N-			ug/L	MW-8									
8.88	J	108-95-2	Phenol			ug/L	MW-8									
7.53	J	7440-62-2	Vanadium and Compounds			ug/L	MW-8									
14.2	J	7440-66-6	Zinc and Compounds			ug/L	MW-8									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-8 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Soil	NC	NC	NC
	Groundwater Use*	1.6E-04	9.8E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	3.1E-05	2.3E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS

Receptor	Pathway	Carcinogenic Risk	Hazard Index	Risk exceeded?
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS

Pathway	Source	Target Receptor Concentrations Exceeded?	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Direct Contact - Resident Groundwater Use **Output Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-8 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	100000	100000	100000							**9.6E+01**	**9.6E+01**
7440-38-2	Arsenic, Inorganic	4.55	4.55	4.55	**8.8E-05**	4.7E-07		**8.8E-05**	**7.6E-01**	3.3E-03		**7.6E-01**
7440-39-3	Barium	239	239	239					6.0E-02	3.8E-03		6.3E-02
71-43-2	Benzene	1.24	1.24	1.24	8.8E-07	1.3E-07	**1.7E-06**	**2.7E-06**	1.5E-02	2.0E-03	2.0E-02	3.7E-02
105-60-2	Caprolactam	9.61	9.61	9.61					9.6E-04	1.1E-05		9.7E-04
108-90-7	Chlorobenzene	1.75	1.75	1.75					4.4E-03	1.4E-03	1.7E-02	2.3E-02
18540-29-9	Chromium(VI)	2.87	2.87	2.87	**1.8E-05**	**7.9E-06**		**2.6E-05**	1.6E-01	5.6E-02		**2.2E-01**
7440-48-4	Cobalt	1.87	1.87	1.87					**3.1E-01**	5.5E-04		**3.1E-01**
59-50-7	Cresol, p-chloro-m-	5.95	5.95	5.95					3.0E-03	1.1E-03		4.1E-03
106-46-7	Dichlorobenzene, 1,4-	0.824	0.824	0.824	5.7E-08	3.9E-08	**1.6E-06**	**1.7E-06**	5.9E-04	3.7E-04	4.9E-04	1.4E-03
123-91-1	Dioxane, 1,4-	20.5	20.5	20.5	**2.6E-05**	9.0E-08	**1.8E-05**	**4.5E-05**	3.4E-02	1.1E-04	**3.3E-01**	**3.6E-01**
7439-92-1	~Lead and Compounds	0.705	0.705	0.705					**<SL****	**<SL****	**<SL****	
7439-96-5b	Manganese (Diet)	245	245	245					8.7E-02			8.7E-02
7440-02-0	Nickel Soluble Salts	7.35	7.35	7.35					1.8E-02	4.0E-04		1.9E-02
14797-55-8	Nitrate (measured as nitrogen)	92.8	92.8	92.8					2.9E-03	1.3E-05		2.9E-03
E701177	Nitrate + Nitrite (measured as nitrogen)	92.8	92.8	92.8								
86-30-6	Nitrosodiphenylamine, N-	0.607	0.607	0.607	3.8E-08	1.2E-08		5.0E-08				
108-95-2	Phenol	8.88	8.88	8.88					1.5E-03	6.3E-05		1.5E-03
7440-62-2	Vanadium and Compounds	7.53	7.53	7.53					7.4E-02	1.3E-02		8.7E-02
7440-66-6	Zinc and Compounds	14.2	14.2	14.2					2.4E-03	6.2E-06		2.4E-03
						Cumulative:		**1.6E-04**				**9.8E+01**

DEQ Risk Calculator - Direct Contact - Non-Residential Worker Groundwater Use **Output Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-8 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	100000	100000	100000							**2.3E+01**	**2.3E+01**
7440-38-2	Arsenic, Inorganic	4.55	4.55	4.55	**1.7E-05**	2.7E-07		**1.8E-05**	1.1E-01	1.7E-03		1.1E-01
7440-39-3	Barium	239	239	239					8.5E-03	1.9E-03		1.0E-02
71-43-2	Benzene	1.24	1.24	1.24	1.7E-07	7.4E-08	3.9E-07	6.4E-07	2.2E-03	9.4E-04	4.7E-03	7.9E-03
105-60-2	Caprolactam	9.61	9.61	9.61					1.4E-04	4.9E-06		1.4E-04
108-90-7	Chlorobenzene	1.75	1.75	1.75					6.2E-04	6.3E-04	4.0E-03	5.2E-03
18540-29-9	Chromium(VI)	2.87	2.87	2.87	**1.2E-06**	**1.5E-06**		**2.6E-06**	2.3E-02	2.9E-02		5.1E-02
7440-48-4	Cobalt	1.87	1.87	1.87					4.4E-02	2.8E-04		4.5E-02
59-50-7	Cresol, p-chloro-m-	5.95	5.95	5.95					4.2E-04	5.2E-04		9.5E-04
106-46-7	Dichlorobenzene, 1,4-	0.824	0.824	0.824	1.1E-08	2.3E-08	3.7E-07	4.0E-07	8.4E-05	1.7E-04	1.2E-04	3.7E-04
123-91-1	Dioxane, 1,4-	20.5	20.5	20.5	**5.2E-06**	5.3E-08	**4.2E-06**	**9.4E-06**	4.9E-03	4.9E-05	7.8E-02	8.3E-02
7439-92-1	~Lead and Compounds	0.705	0.705	0.705					**<SL****	**<SL****	**<SL****	
7439-96-5b	Manganese (Diet)	245	245	245					1.2E-02			1.2E-02
7440-02-0	Nickel Soluble Salts	7.35	7.35	7.35					2.6E-03	2.1E-04		2.8E-03
14797-55-8	Nitrate (measured as nitrogen)	92.8	92.8	92.8					4.1E-04	6.5E-06		4.2E-04
E701177	Nitrate + Nitrite (measured as nitrogen)	92.8	92.8	92.8								
86-30-6	Nitrosodiphenylamine, N-	0.607	0.607	0.607	7.5E-09	6.8E-09		1.4E-08				
108-95-2	Phenol	8.88	8.88	8.88					2.1E-04	2.9E-05		2.4E-04
7440-62-2	Vanadium and Compounds	7.53	7.53	7.53					1.1E-02	6.5E-03		1.7E-02
7440-66-6	Zinc and Compounds	14.2	14.2	14.2					3.4E-04	3.2E-06		3.4E-04
						Cumulative:		3.1E-05				**2.3E+01**

North Carolina Department of Environmental Quality
Risk Calculator

Version Date:	January 2025
Basis:	November 2024 EPA RSL Table
Site Name:	Cumberland County/Cliffdale Landfill
Site Address:	7583 Lowell Harris Road, Fayetteville, North Carolina
DEQ Section:	Pre-Regulatory Landfill Group
Site ID:	NCD980502900
Exposure Unit ID:	MW-9 Risk Assessment
Submittal Date:	5/21/2025
Prepared By:	Connor Hicks
Reviewed By:	Tom Raymond

Exposure Point Concentrations **Input Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-9 Risk Assessment

Groundwater Exposure Point Concentration Table

Description of Exposure Point Concentration Selection:

Any constituent above the laboratory detection limit was entered into the risk calculator

NOTE: If the chemical list is changed from a prior calculator run, remember to select "See All Chemicals" on the data output sheet or newly added chemicals will not be included in risk calculations

Exposure Point Concentration (ug/L)	Notes:	CAS Number	Chemical	Minimum Concentration (Qualifier)	Maximum Concentration (Qualifier)	Units	Location of Maximum Concentration	Detection Frequency	Range of Detection Limits	Concentration Used for Screening	Background Value	Screening Toxicity Value (Screening Level) (n/c)	Potential ARAR/TBC Value	Potential ARAR/TBC Source	COPC Flag (Y/N)	Rationale for Selection or Deletion
42400		7664-41-7	Ammonia			ug/L	MW-9									
6.03		7440-38-2	Arsenic, Inorganic			ug/L	MW-9									
111		7440-39-3	Barium			ug/L	MW-9									
2.99		71-43-2	Benzene			ug/L	MW-9									
8.31	J	105-60-2	Caprolactam			ug/L	MW-9									
8.56		108-90-7	Chlorobenzene			ug/L	MW-9									
0.61		7440-48-4	Cobalt			ug/L	MW-9									
5.74	J	59-50-7	Cresol, p-chloro-m-			ug/L	MW-9									
1.05		98-82-8	Cumene			ug/L	MW-9									
1.48		106-46-7	Dichlorobenzene, 1,4-			ug/L	MW-9									
5.85		123-91-1	Dioxane, 1,4-			ug/L	MW-9									
137		7439-96-5b	Manganese (Diet)			ug/L	MW-9									
1.1	J	7440-02-0	Nickel Soluble Salts			ug/L	MW-9									
98	J	14797-55-8	Nitrate (measured as nitrogen)			ug/L	MW-9									
98	J	E701177	Nitrate + Nitrite (measured as nitrogen)			ug/L	MW-9									
2.49	J	86-30-6	Nitrosodiphenylamine, N-			ug/L	MW-9									
6.56		91-20-3	~Naphthalene			ug/L	MW-9									
6.27	J	7440-62-2	Vanadium and Compounds			ug/L	MW-9									
6.55	J	7440-66-6	Zinc and Compounds			ug/L	MW-9									

Risk for Individual Pathways **Output Form 1A**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-9 Risk Assessment

DIRECT CONTACT SOIL AND WATER CALCULATORS				
Receptor	**Pathway**	**Carcinogenic Risk**	**Hazard Index**	**Risk exceeded?**
Resident	Soil	NC	NC	NC
	Groundwater Use*	2.0E-04	4.3E+01	YES
Non-Residential Worker	Soil	NC	NC	NC
	Groundwater Use*	4.3E-05	1.0E+01	YES
Construction Worker	Soil	NC	NC	NC
Recreator/Trespasser	Soil	NC	NC	NC
	Surface Water*	NC	NC	NC

VAPOR INTRUSION CALCULATORS				
Receptor	**Pathway**	**Carcinogenic Risk**	**Hazard Index**	**Risk exceeded?**
Resident	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC
Non-Residential Worker	Groundwater to Indoor Air	NC	NC	NC
	Soil Gas to Indoor Air	NC	NC	NC
	Indoor Air	NC	NC	NC

CONTAMINANT MIGRATION CALCULATORS			
Pathway	**Source**	**Target Receptor Concentrations Exceeded?**	
Groundwater	Source Soil	Exceedence of 2L at Receptor?	NC
	Source Groundwater	Exceedence of 2L at Receptor?	NC
Surface Water	Source Soil	Exceedence of 2B at Receptor?	NC
	Source Groundwater	Exceedence of 2B at Receptor?	NC

Notes:

1. If lead concentrations were entered in the exposure point concentration tables, see the individual calculator sheets for lead concentrations in comparison to screening levels. Note that lead is not included in cumulative risk calculations.

2. * = If concentrations in groundwater exceed the NC 2L Standards or IMAC, or concentrations in surface water exceed the NC 2B Standards, appropriate remediation and/or institutional control measures will be necessary to be eligible for a risk-based closure.
3. NM = Not modeled, required contaminant migration parameters were not entered.
4. NC = Pathway not calculated, user did not check this pathway as complete.

DEQ Risk Calculator - Direct Contact - Resident Groundwater Use **Output Form 2B**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-9 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk*	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient*	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	42400	42400	42400							**4.1E+01**	**4.1E+01**
7440-38-2	Arsenic, Inorganic	6.03	6.03	6.03	**1.2E-04**	6.2E-07		**1.2E-04**	**1.0E+00**	4.4E-03		**1.0E+00**
7440-39-3	Barium	111	111	111					2.8E-02	1.7E-03		2.9E-02
71-43-2	Benzene	2.99	2.99	2.99	**2.1E-06**	3.0E-07	**4.2E-06**	**6.6E-06**	3.7E-02	4.9E-03	4.8E-02	9.0E-02
105-60-2	Caprolactam	8.31	8.31	8.31					8.3E-04	9.2E-06		8.4E-04
108-90-7	Chlorobenzene	8.56	8.56	8.56					2.1E-02	6.7E-03	8.2E-02	1.1E-01
7440-48-4	Cobalt	0.61	0.61	0.61					1.0E-01	1.8E-04		1.0E-01
59-50-7	Cresol, p-chloro-m-	5.74	5.74	5.74					2.9E-03	1.1E-03		4.0E-03
98-82-8	Cumene	1.05	1.05	1.05					5.2E-04	5.5E-04	1.3E-03	2.3E-03
106-46-7	Dichlorobenzene, 1,4-	1.48	1.48	1.48	1.0E-07	7.0E-08	**2.9E-06**	**3.1E-06**	1.1E-03	6.6E-04	8.9E-04	2.6E-03
123-91-1	Dioxane, 1,4-	5.85	5.85	5.85	**7.5E-06**	2.6E-08	**5.2E-06**	**1.3E-05**	9.7E-03	3.1E-05	9.3E-02	1.0E-01
7439-96-5b	Manganese (Diet)	137	137	137					4.9E-02			4.9E-02
7440-02-0	Nickel Soluble Salts	1.1	1.1	1.1					2.7E-03	6.0E-05		2.8E-03
14797-55-8	Nitrate (measured as nitrogen)	98	98	98					3.1E-03	1.3E-05		3.1E-03
E701177	Nitrate + Nitrite (measured as nitrogen)	98	98	98								
86-30-6	Nitrosodiphenylamine, N-	2.49	2.49	2.49	1.6E-07	4.8E-08		2.0E-07				
91-20-3	~Naphthalene	6.56	6.56	6.56	**1.0E-05**	**6.3E-06**	**4.0E-05**	**5.6E-05**	1.6E-02	9.4E-03	**1.0E+00**	**1.1E+00**
7440-62-2	Vanadium and Compounds	6.27	6.27	6.27					6.2E-02	1.1E-02		7.3E-02
7440-66-6	Zinc and Compounds	6.55	6.55	6.55					1.1E-03	2.9E-06		1.1E-03
						Cumulative:		**2.0E-04**				**4.3E+01**

DEQ Risk Calculator - Direct Contact - Non-Residential Worker Groundwater Use **Output Form 2D**

Version Date: January 2025

Basis: November 2024 EPA RSL Table

Site ID: NCD980502900

Exposure Unit ID: MW-9 Risk Assessment

** - Note that inhalation on this calculator refers to inhalation associated with tapwater use, not inhalation associated with vapor intrusion from subsurface groundwater sources.*

*** - Note that the EPA has no consensus on reference dose or cancer slope factor values for lead, therefore it is not possible to calculate cancer risk or hazard quotient. Lead concentrations are compared to the EPA Action Level of 15 µg/L.*

CAS #	Chemical Name:	Ingestion Concentration (ug/L)	Dermal Concentration (ug/L)	Inhalation Concentration (ug/L)*	Ingestion Carcinogenic Risk	Dermal Carcinogenic Risk	Inhalation Carcinogenic Risk	Calculated Carcinogenic Risk	Ingestion Hazard Quotient	Dermal Hazard Quotient	Inhalation Hazard Quotient	Calculated Non-Carcinogenic Hazard Quotient
7664-41-7	Ammonia	42400	42400	42400							**9.7E+00**	**9.7E+00**
7440-38-2	Arsenic, Inorganic	6.03	6.03	6.03	**2.3E-05**	3.6E-07		**2.3E-05**	1.4E-01	2.3E-03		1.5E-01
7440-39-3	Barium	111	111	111					3.9E-03	8.9E-04		4.8E-03
71-43-2	Benzene	2.99	2.99	2.99	4.2E-07	1.8E-07	9.5E-07	**1.5E-06**	5.3E-03	2.3E-03	1.1E-02	1.9E-02
105-60-2	Caprolactam	8.31	8.31	8.31					1.2E-04	4.3E-06		1.2E-04
108-90-7	Chlorobenzene	8.56	8.56	8.56					3.0E-03	3.1E-03	2.0E-02	2.6E-02
7440-48-4	Cobalt	0.61	0.61	0.61					1.4E-02	9.2E-05		1.5E-02
59-50-7	Cresol, p-chloro-m-	5.74	5.74	5.74					4.1E-04	5.1E-04		9.1E-04
98-82-8	Cumene	1.05	1.05	1.05					7.5E-05	2.5E-04	3.0E-04	6.3E-04
106-46-7	Dichlorobenzene, 1,4-	1.48	1.48	1.48	2.0E-08	4.1E-08	6.6E-07	7.3E-07	1.5E-04	3.1E-04	2.1E-04	6.7E-04
123-91-1	Dioxane, 1,4-	5.85	5.85	5.85	**1.5E-06**	1.5E-08	**1.2E-06**	**2.7E-06**	1.4E-03	1.4E-05	2.2E-02	2.4E-02
7439-96-5b	Manganese (Diet)	137	137	137					7.0E-03			7.0E-03
7440-02-0	Nickel Soluble Salts	1.1	1.1	1.1					3.9E-04	3.1E-05		4.2E-04
14797-55-8	Nitrate (measured as nitrogen)	98	98	98					4.4E-04	6.9E-06		4.4E-04
E701177	Nitrate + Nitrite (measured as nitrogen)	98	98	98								
86-30-6	Nitrosodiphenylamine, N-	2.49	2.49	2.49	3.1E-08	2.8E-08		5.9E-08				
91-20-3	~Naphthalene	6.56	6.56	6.56	**2.0E-06**	**3.7E-06**	**9.1E-06**	**1.5E-05**	2.3E-03	4.3E-03	**2.5E-01**	**2.6E-01**
7440-62-2	Vanadium and Compounds	6.27	6.27	6.27					8.8E-03	5.4E-03		1.4E-02
7440-66-6	Zinc and Compounds	6.55	6.55	6.55					1.6E-04	1.5E-06		1.6E-04
						Cumulative:		4.3E-05				**1.0E+01**