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MEMO

Project name	**2024-2026 Site Inspection and Groundwater Monitoring Results Summary** **Orange & Rockland Utilities, Inc.** **Former Clove and Maple Avenues MGP Site – OU 1** **NYSDEC Site No. 3-44-049**
Client	**Orange & Rockland Utilities, Inc.**
To	**Matt Levinson**
From	**Ramboll Americas Engineering Solutions, Inc.**

1 Introduction

On behalf of Orange and Rockland Utilities, Inc. (ORU), Ramboll Americas Engineering Solutions, Inc. (Ramboll) has prepared this memorandum to document monitoring activities that were performed for the former Clove and Maple Avenues Manufacturing Gas Plant (MGP) Site (Operable Unit 1 [OU 1]) located in the Village of Haverstraw, New York – New York State Department of Environmental Conservation (NYSDEC) Site No. 3-44-049 (the Site). A Site location map is shown on **Figure 1**.

The monitoring activities were performed following a draft Interim Site Management Plan (ISMP) that was submitted to the NYSDEC on December 21, 2020 (Ramboll, 2020). At the request of the NYSDEC, ORU initiated monitoring activities described in the ISMP while the environmental easement associated with the ISMP is under NYSDEC review. The 2024 through 2026 monitoring results are presented herein and included annual Site inspections and groundwater sampling of four on-Site monitoring wells (MW-01, MW-04, MW-05 and MW-06) in November 2024 and March 2026.

2 Background

The approximately one-acre Site is located in the Village of Haverstraw, Rockland County, New York and is identified as Section 27.62, Block 1, Lot 9 on the Village of Haverstraw Tax Map. The former MGP operated for approximately 48 years, between 1887 and 1935, and the plant structures were demolished in the 1960s. The Site is currently vacant and is owned by ORU. A Site plan is shown on **Figure 2**.

ORU entered into the following Orders on Consent with the NYSDEC to remediate the Site: Index No. D3-0002-94-12, executed on January 8, 1996; Index No. D3-0001-98-03 executed on September 29, 1998; and Index No. D3-0001-99-01 executed on March 11, 1999. The remedial investigation for the Site was completed in 2009 and characterized the extent of MGP-related constituents (primarily Volatile Organic Compounds [VOCs] consisting of benzene, toluene, ethylbenzene and xylenes [BTEX] and polycyclic aromatic hydrocarbons [PAHs])

present on-Site at concentrations exceeding applicable NYSDEC criteria in soil and groundwater (CMX, 2009).

The selected remedy for OU 1 was presented in the Record of Decision (ROD), dated March 2011 (NYSDEC, 2011). The selected remedy included the removal of soil to Part 375 Unrestricted Use Soil Cleanup Objectives (SCOs). Remedial activities were performed starting in May 2018 through December 2019. Details pertaining to the remedial action are summarized in a Construction Completion Report, dated April 2020 (OBG, 2020). Overall, approximately 35,000 tons of MGP-impacted soils were excavated and transported off-Site for disposal. An additional 2,500,000 gallons of water that was encountered in the soil excavations was treated in a temporary on-Site treatment system and discharged with NYSDEC approval. Observable non-aqueous phase liquid (NAPL) was also removed.

Soil samples were collected in March 2018 and December 2019 to document soil conditions that remain after the remedial activities were completed. The sampling results detected MGP-related compounds at concentrations exceeding the Part 375 Unrestricted Use SCOs, primarily in samples that were collected along Maple Ave to the north. NAPL was not encountered.

Since remaining contamination exists at the site, the ROD requires the implementation of institutional controls (ICs) and engineering controls (ECs) to protect human health and the environment. The ISMP was submitted to the NYSDEC on December 21, 2020 to manage ICs and ECs. In an email dated April 13, 2022, the NYSDEC requested that ORU proceed with monitoring activities associated with ISMP while the Site's environmental easement is being reviewed.

ISMP monitoring activities were initiated in August 2022 and have included groundwater monitoring and Site inspections. Overall, prior monitoring activities have documented that the Site cover system remains in place as designed. Prior groundwater monitoring detected benzene and PAHs at concentrations above their NYSDEC Ambient Groundwater Standards (AGS) in groundwater samples collected from MW-04, MW-05 and MW-06. Dense Non-Aqueous Phase Liquid (DNAPL) has also been encountered in MW-04. MW-04, MW-05 and MW-06 are located near the and adjacent to / upgradient of OU 2, which consists of nearby off-Site properties that were affected by the former MGP. Based on information presented in the May 2009 RIR and a Feasibility Study (FS) dated September 2010 (GEI, 2010), NAPL was previously observed in MW-04, as well as in soils and monitoring wells located in OU 2 (in some areas over 2 feet in thickness). Per the ROD, off-Site areas are being addressed separately under OU 2 and OU 3. It is anticipated that the remedy for OU 2 will also address the DNAPL observed in MW-04.

3 Annual Site Inspections

The Monitoring and Sampling Plan of the ISMP requires inspections of the Site and ECs, which include the following:

- A cover system that is comprised of at least 24 inches of clean soil in areas where the upper two feet of exposed surface soil may have exceeded the applicable SCOs. The soil cover was placed over a demarcation layer with the upper six inches consisting of topsoil to maintain a vegetation layer
- The Site's monitoring wells, which are to be maintained and sampled annually in accordance with the draft ISMP

The inspections were performed on November 4, 2024, March 18, 2025 and April 2, 2026. Completed inspection forms are included in **Attachment A**.

Site Cover System Inspection Results

The Site cover system was observed to be in place and as designed. No indications of erosion, degraded vegetation, changes to the cover type, new penetrations, or changes in property use were noted.

Monitoring Well Inspection Results

The Site's monitoring wells (MW-01, MW-04, MW-05 and MW-06) were inspected and were observed to be structurally intact and in usable condition.

4 Groundwater Monitoring

Groundwater monitoring was completed for MW-01, MW-04, MW-05 and MW-06 on November 4, 2024 and April 2, 2026 following the Site's Quality Assurance Project Plan (QAPP).

Monitoring Well Gauging

Table 1 summarizes the depth to water and free product thickness measurements. Groundwater elevation contours based on depth-to-water measurements are shown on **Figure 3** (November 2024) and **Figure 4** (April 2026). Groundwater is observed to flow to the northeast under a calculated hydraulic gradient of approximately 0.2 feet per feet, which is consistent with prior monitoring events.

DNAPL was detected in one monitoring well (MW-04) at thicknesses of 0.75 feet (November 2024) and 0.2 feet (April 2026). The observed DNAPL thickness measurements are within previously observed thickness ranges, which has fluctuated from trace (less than 0.01 feet) to 1.5 feet. Free product thickness measurements do not appear to consistently correlate with seasonal water level elevation fluctuations.

Monitoring Well Sampling

Groundwater samples were collected following USEPA's low-flow purging and sampling method. Water quality parameters were recorded on a data sheet designated for the well, which recorded data pertaining to purging and sampling of the well. Copies of the monitoring well sampling logs are provided in **Attachment B**. Once the parameters stabilized into their appropriate ranges (pH ±0.1 standard units, conductivity ±3 percent, oxidation reduction potential ±10 millivolts, dissolved oxygen ±10 percent, and turbidity ±10 percent), groundwater samples were collected. Monitoring well MW-04 was not sampled due to DNAPL being present in the well.

Groundwater samples were labeled and packed on ice for shipment to a New York State Department of Health Environmental Laboratory Approval Program-certified laboratory. Quality assurance / quality control samples were collected in accordance with the draft ISMP and consisted of one field duplicate, one matrix spike/matrix spike duplicate, and one field blank. The samples were shipped under Chain-of-Custody to the analytical laboratory for VOC (BTEX only) analysis via USEPA method 8260C and PAHs analysis via USEPA method 8260D.

Data Validation

Data validation was performed in accordance with the draft ISMP, the results of which are summarized on Data Usability Summary Reports (DUSR) for each event. The laboratory data packages and DUSRs are provided in **Attachment C**. In summary, there were no issues noted during the sample collection,

by the laboratory following the receipt of samples, or during their analysis that would render the collected data as non-usable.

Groundwater Sampling Results and Discussion

The groundwater sample analytical results are summarized on **Table 2**. The groundwater sampling results were compared to the NYSDEC AGS. The following bullets summarize the sample analytical results:

- November 2024:
  - Benzene was the only BTEX compound detected at a concentration exceeding the NYSDEC AGS of 1 µg/L. The benzene concentration exceedance was observed in the sample collected from MW-05 at a concentration of 2.9 µg/L (2.2 µg/L in the field duplicate)
  - PAHs were not detected at concentrations exceeding the NYSDEC AGS
- April 2026:
  - BTEX compounds were not detected above the NYSDEC AGS
  - Benzo(b)fluoranthene concentrations exceeded the NYSDEC AGS of 0.002 µg/L in the samples collected from MW-01 and MW-06 at a concentration of 0.0444 µg/L and 0.0325 µg/L, respectively
  - Benzo(a)anthracene exceeded the NYSDEC AGS of 0.002 µg/L in the sample collected from MW-06 at a concentration of 0.0298 µg/L

Table 2 also shows groundwater sample analytical results from previous sampling events, including events that occurred before the Site-wide remediation took place in 2018-2019. BTEX concentrations are decreasing over time and were not detected above the NYSDEC AGS during the April 2026 sampling event. PAH concentrations are steady or decreasing over time and were not detected above the NYSDEC AGS during the November 2024 sampling event. Low level PAH concentrations (i.e., less than 0.1 µg/L) exceeded the NYSDEC AGS during the April 2026 sampling event, including an exceedance for benzo(b)fluoranthene in upgradient monitoring well MW-01. While benzo(b)fluoranthene is a MGP-related constituent, it can also be related to background sources such as vehicle exhaust, asphalt or tire wear debris.

While BTEX or PAH periodically fluctuate up to or marginally above the NYSDEC AGS, it is anticipated that overall concentrations will decrease over time because the majority of the on-Site source material was removed during the 2018-2019 soil remediation. It is also anticipated that the DNAPL observed in MW-04 will be addressed as part of the remedy for OU 2.

5 Conclusions

The following monitoring activities were completed in November 2024 through April 2026:

- Annual inspection of the Site's ECs (Site Cover and groundwater monitoring wells)
- Groundwater sampling of monitoring wells MW-01, MW-04, MW-05 and MW-06 for BTEX and PAH laboratory analysis in November 2024 and April 2026. A groundwater sample was not collected from MW-04 during the sampling events because DNAPL was detected in the monitoring well. DNAPL was also observed in MW-04 during prior monitoring events

Based on the results of the annual inspection, the Site cover system was observed to be in place and as designed. The Site's monitoring wells were observed to be structurally intact and in good condition.

BTEX concentrations were not detected above individual NYSDEC AGS during the April 2026 sampling event and PAH concentrations were not detected above individual NYSDEC AGS during the November 2024 sampling event. Overall, BTEX and PAH dissolved concentrations are decreasing or are remaining stable over time.

The observed DNAPL thickness (0.75 feet in November 2024 and 0.2 feet in April 2026) is within historical ranges previously observed in the monitoring well. MW-04 is located near the downgradient property boundary, beyond the limits of the 2018-2019 soil excavations and adjacent to / upgradient of OU 2. Per the ROD, off-Site areas are being addressed separately under OU 2 and OU 3. It is anticipated that the remedy for OU 2 will also address the DNAPL observed in MW-04.

TABLES

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Table 1. Groundwater Elevation and Free Product Monitoring Results Summary

Former Clove & Maple MGP Site - Operable Unit 1
Haverstraw New York
NYSDEC Site Number 3-44-049

Well ID	Top of Well Casing Elevation (NAVD88)	Well Depth (ft bgs)	8/17/2022				3/24/2023				6/22/2023				9/27/2023			
			Depth to Water (ft bgs)	Groundwater Elev. (ft amsl)	Depth to Product (ft bgs)	NAPL Thickness (ft)	Depth to Water (ft bgs)	Groundwater Elev. (ft amsl)	Depth to Product (ft bgs)	NAPL Thickness (ft)	Depth to Water (ft bgs)	Groundwater Elev. (ft amsl)	Depth to Product (ft bgs)	NAPL Thickness (ft)	Depth to Water (ft bgs)	Groundwater Elev. (ft amsl)	Depth to Product (ft bgs)	NAPL Thickness (ft)
MW-01	42.29	29.49	21.36	20.93	ND	0.00	19.19	23.10	ND	0.00	20.34	21.95	ND	0.00	19.45	22.84	ND	0.00
MW-04	18.39	21.40	1.45	16.94	20.45	0.95	0.60	17.79	20.71	0.69	0.95	17.44	Trace*	Trace*	0.01	18.38	19.90	1.50
MW-05	17.83	21.43	0.95	16.88	ND	0.00	0.20	17.63	ND	0.00	0.56	17.27	ND	0.00	0.95	16.88	ND	0.00
MW-06	17.22	19.02	0.66	16.56	ND	0.00	0.80	16.42	ND	0.00	0.01	17.21	ND	0.00	0.01	17.21	ND	0.00

Well ID	Top of Well Casing Elevation (NAVD88)	Well Depth (ft bgs)	12/14/2023				11/4/2024				4/2/2026			
			Depth to Water (ft bgs)	Groundwater Elev. (ft amsl)	Depth to Product (ft bgs)	NAPL Thickness (ft)	Depth to Water (ft bgs)	Groundwater Elev. (ft amsl)	Depth to Product (ft bgs)	NAPL Thickness (ft)	Depth to Water (ft bgs)	Groundwater Elev. (ft amsl)	Depth to Product (ft bgs)	NAPL Thickness (ft)
MW-01	42.29	29.49	20.35	21.94	ND	0.00	23.18	19.11	ND	0.00	20.09	22.20	ND	0.00
MW-04	18.39	21.40	0.81	17.58	Trace*	Trace*	2.90	15.49	20.65	0.75	1.09	17.30	20.65	0.20
MW-05	17.83	21.43	0.20	17.63	ND	0.00	2.31	15.52	ND	0.00	0.50	17.33	ND	0.00
MW-06	17.22	19.02	0.30	16.92	ND	0.00	1.49	15.73	ND	0.00	0.20	17.02	ND	0.00

Notes:

* - Measuremable free product was not detected; however, trace indications of free product was observed on the oil / water interface probe.

feet bgs – feet below ground surface

feet amsl – feet above mean sea level – National Geodetic Vertical Datum of 1929

NAPL - Non-Aqueous Phase Liquid

ND - Not Detected

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Table 2. Groundwater Sample Analytical Results Summary

Former Clove & Maple MGP Site - Operable Unit 1
Haverstraw New York
NYSDEC Site Number 3-44-049

Well ID:	NYSDEC Ambient Groundwater Standards	MW-01									MW-04								
Date Sampled:		6/3/97	2/1/99	12/19/01	8/3/04	6/5/08	8/17/22	9/27/23	11/4/24	4/2/26	2/3/99	12/19/01	12/19/01 (Field Dup)	8/2/04	6/5/08	8/17/22	9/17/23	11/4/24	4/2/26
MS Volatiles (SW846 8260D)																			
Benzene	1	10 U	10 U	10 U	10 U	1.0 U	0.50 U	0.45 J	0.5 U	0.5 U	**320 D**	**120**	**120**	**30**	**34**	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Toluene	5	10 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**65**	**37**	**35**	**19**	**37 J**	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Ethylbenzene	5	10 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**190**	**76**	**73 H**	**26**	**30 J**	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Xylenes	5	10 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**430**	**300**	**310**	**110**	**130**	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Total BTEX		10 U	10 U	10 U	10 U	5.0 U	1.0 U	0.45 J	1.0 U	1.0 U	**1,005**	**533**	**538 H**	**185**	**231 J**	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
MS Semivolatiles (SW846 8260E)																			
Acenaphthene	20	9 U	10 U	10 U	10 U	12 U	0.13 U	0.10 U	0.10 U	0.080 U	21	400 U	500 U	500 U	**20 J**	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Acenaphthylene	20	9 U	10 U	10 U	10 U	12 U	0.13 U	0.10 U	0.10 U	0.080 U	**290 DJ**	400 U	**310 J**	**310 J**	**42 J**	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Anthracene	50	9 U	10 U	10 U	10 U	12 U	0.13 U	0.10 U	0.10 U	0.080 U	16	400 U	500 U	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Benzo(a)anthracene	0.002	9 U	10 U	10 U	10 U	1.2 U	0.064 U	0.050 U	0.050 U	0.040 U	10 U	400 U	500 U	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Benzo(a)pyrene	--	9 U	10 U	10 U	10 U	1.2 U	0.064 U	0.050 U	0.050 U	0.040 U	10 U	400 U	500 U	500 U	13 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Benzo(b)fluoranthene	0.002	9 U	10 U	10 U	10 U	1.2 U	0.064 U	0.050 U	0.050 U	**0.0444**	10 U	400 U	500 U	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Benzo(g,h,i)perylene	--	9 U	10 U	10 U	10 U	1.2 U	0.13 U	0.10 U	0.10 U	0.080 U	10 U	400 U	500 U	500 U	13 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Benzo(k)fluoranthene	0.002	9 U	10 U	10 U	10 U	1.2 U	0.13 U	0.10 U	0.10 U	0.080 U	10 U	400 U	500 U	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Chrysene	0.002	9 U	10 U	10 U	10 U	12 U	0.13 U	0.10 U	0.10 U	0.080 U	10 U	400 U	500 U	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Dibenzo(a,h)anthracene	--	9 U	10 U	10 U	10 U	1.2 U	0.13 U	0.10 U	0.10 U	0.080 U	10 U	400 U	500 U	500 U	13 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Fluoranthene	50	9 U	10 U	10 U	10 U	12 U	0.13 U	0.10 U	0.10 U	0.0495	6 J	400 U	500 U	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Fluorene	50	9 U	10 U	10 U	10 U	12 U	0.13 U	0.10 U	0.10 U	0.080 U	**69**	400 U	**53 J**	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Indeno[1,2,3-cd]pyrene	0.002	9 U	10 U	10 U	10 U	1.2 U	0.13 U	0.10 U	0.10 U	0.080 U	10 U	400 U	500 U	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Naphthalene	10	9 U	10 U	10 U	10 U	12 U	0.0674 J	0.299	0.10 U	0.080 U	**3,100 D**	**2,200 J**	**3,100 J**	**3,000**	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Phenanthrene	50	9 U	10 U	10 U	10 U	12 U	0.064 U	0.050 U	0.050 U	0.080 U	10 U	400 U	**110 J**	**110 J**	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Pyrene	50	9 U	10 U	10 U	10 U	12 U	0.13 U	0.10 U	0.10 U	0.080 U	10 U	400 U	500 U	500 U	130 U	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)
Total BTEX		9 U	10 U	10 U	10 U	12 U	0.0674 J	0.299	0.10 U	0.0939	**3,502 DJ**	**2,200 J**	**3,573 J**	**3,420 J**	**62**	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)	NS (DNAPL)

Notes:

All concentrations are in micrograms per liter (µg/L)

Exceedances to the New York State Department of Environmental Conservation (NYSDEC) Ambient Groundwater Standards are Bolded and Highlighted

D: The sample was diluted prior to analysis

U: Not detected to the listed reporting limit

J: Indicates that the concentration should be considered approximate

H: Indicates holding times were exceeded

NS (DNAPL): Not sampled. Dense Non Aqueous Phase Liqud was detected in the monitoring well

-- A NYSDEC Ambient Groundwater Standard does not exist for the compound

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Table 1. Groundwater Sample Analytical Results Summary (DRAFT)

Former Clove & Maple MGP Site - Operable Unit 1
Haverstraw New York
NYSDEC Site Number 3-44-049

Well ID:	NYSDEC Ambient Groundwater Standards	MW-05										MW-06									
Date Sampled:		2/3/99	12/19/01	8/2/04	6/5/08	8/17/22	9/27/23	11/4/24	11/4/24 (Field Dup)	4/2/26	4/2/2026 (Field Dup)	3/26/99	12/19/01	8/2/04	6/5/08	8/17/22	8/17/22 (Field Dup)	9/23/23	9/23/2023 (Field Dup)	11/4/24	4/2/26
MS Volatiles (SW846 8260D)																					
Benzene	1	1 J	10 U	10 U	1.0 U	**2.5**	0.5 U	**2.9**	**2.2**	0.5 U	0.5 U	10 U	10 U	10 U	1.0 U	**3.2**	**3.3**	0.5 U	0.5 U	0.5 U	0.5 U
Toluene	5	10 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	5	10 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1	0.69 J	1.0 U	1.0 U	10 U	10 U	10 U	5.0 U	1.0 U	1.0	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes	5	10 U	10 U	10 U	5.0 U	1.0 U	1.0 U	1.7	1.4	1.0 U	1.0 U	10 U	10 U	10 U	5.0 U	1.0 U	2.7	1.0 U	1.0 U	1.0 U	1.0 U
Xylenes	5	1 J	10 U	10 U	5.0 U	2.5	1.0 U	5.6	4.29 J	1.0 U	1.0 U	10 U	10 U	10 U	5.0 U	3.2	7.0	1.0 U	1.0 U	1.0 U	1.0 U
MS Semivolatiles (SW846 8260E)																					
Acenaphthene	20	3 J	10 U	10 U	1.2 J	4.89	1.63	3.13	4.21	0.080 U	0.080 U	10 UJ	10 U	11 U	10 U	0.10 U	0.10 U	0.239	0.400	0.10 U	0.080 U
Acenaphthylene	20	20	6 J	**31**	13	6.41	1.14	3.02	3.65	0.080 U	0.080 U	10 U	10 U	11 U	10 U	0.103	0.0828 J	0.456	0.808	0.0709 J	0.0957
Anthracene	50	10 U	10 U	10 U	0.6 J	1.38	0.154	0.658	0.621	0.080 U	0.080 U	10 U	10 U	11 U	10 U	0.123	0.118	0.263	0.482	0.0804 J	0.0714
Benzo(a)anthracene	0.002	10 U	10 U	10 U	1.1 U	**0.0565 J**	0.050 U	0.050 U	0.050 U	0.040 U	0.040 U	10 U	10 U	11 U	2.1 U	0.051 U	0.051 U	**0.281**	**0.869**	0.050 U	**0.0298**
Benzo(a)pyrene	--	10 U	10 U	10 U	11 U	0.065 U	0.050 U	0.050 U	0.050 U	0.040 U	0.040 U	10 U	10 U	11 U	10 U	0.051 U	0.051 U	0.463	1.06	0.050 U	0.040 U
Benzo(b)fluoranthene	0.002	10 U	10 U	10 U	1.1 U	0.065 U	0.050 U	0.050 U	0.050 U	0.040 U	0.040 U	10 U	10 U	11 U	2.1 U	0.051 U	0.051 U	**0.543**	**1.28**	0.050 U	**0.0325**
Benzo(g,h,i)perylene	--	10 U	10 U	10 U	11 U	0.13 U	0.10 U	0.10 U	0.10 U	0.080 U	0.080 U	10 U	10 U	11 U	10 U	0.10 U	0.10 U	0.527	0.931	0.10 U	0.080 U
Benzo(k)fluoranthene	0.002	10 U	10 U	10 U	1.1 U	0.13 U	0.10 U	0.10 U	0.10 U	0.080 U	0.080 U	10 U	10 U	11 U	2.1 U	0.10 U	0.10 U	**0.298**	**0.405**	0.10 U	0.080 U
Chrysene	0.002	10 U	10 U	10 U	11 U	0.13 U	0.10 U	0.10 U	0.10 U	0.080 U	0.080 U	10 U	10 U	11 U	10 U	0.10 U	0.10 U	**0.464**	**1.11**	0.10 U	0.080 U
Dibenzo(a,h)anthracene	--	10 U	10 U	10 U	11 U	0.13 U	0.10 U	0.10 U	0.10 U	0.080 U	0.080 U	10 U	10 U	11 U	10 U	0.10 U	0.10 U	0.118	0.227	0.10 U	0.080 U
Fluoranthene	50	10 U	10 U	10 U	11 U	0.96	0.327	1.64	1.82	0.080 U	0.080 U	2 J	10 U	11 U	10 U	0.10 U	0.10 U	1.04	1.4	0.10 U	0.080 U
Fluorene	50	10 U	10 U	10 U	11 U	0.256	0.0978 J	0.212	0.229	0.080 U	0.080 U	10 U	10 U	11 U	10 U	0.10 U	0.0541 J	0.257	0.356	0.10 U	0.080 U
Indeno[1,2,3-cd]pyrene	0.002	10 U	10 U	10 U	1.1 U	0.13 U	0.10 U	0.10 U	0.10 U	0.080 U	0.080 U	10 U	10 U	11 U	2.1 U	0.10 U	0.10 U	**0.364**	**0.699**	0.10 U	0.080 U
Naphthalene	10	5 J	10 U	10 UJ	11 U	0.488	0.155	0.0725	0.0924 J	0.080 U	0.080 U	10 U	10 U	11 U	10 U	0.0639 J	0.0673 J	1.95	3.36	0.10 U	0.108
Phenanthrene	50	3 J	10 U	1 J	11 U	1.53	0.103	0.0292	0.0287 J	0.080 U	0.080 U	10 U	10 U	11 U	10 U	0.0363 J	0.0558	1.57	1.04	0.0303 J	0.080 U
Pyrene	50	10 U	10 U	10 U	11 U	1.29	0.547	1.91	2.09	0.080 U	0.080 U	6 J	10 U	11 U	10 U	0.10 U	0.10 U	1.35	2.04	0.10 U	0.0528
Xylenes	5	31 J	6 J	32 J	13.6 J	17.77 J	4.15 J	10.67	12.74 J	0.080 U	0.080 U	8 J	10 U	11 U	10 U	0.33 J	0.38 J	10.18	16.47	0.18 J	0.39

Notes:

All concentrations are in micrograms per liter (µg/L)

Exceedances to the New York State Department of Environmental Conservation (NYSDEC) Ambient Groundwater Standards are Bolded and Highlighted

D: The sample was diluted prior to analysis
U: Not detected to the listed reporting limit
J: Indicates that the concentration should be considered approximate
H: Indicates holding times were exceeded
NS (DNAPL): Not sampled. Dense Non Aqueous Phase Liqud was detected in the monitoring well
-- A NYSDEC Ambient Groundwater Standard does not exist for the compound

FIGURES



I:\Con-Ed.8652\STDS\GIS\Figure 1 - Site_Location_Map.mxd

PROJECT: CLOVEMGP | DATED: 2/18/2020 | DESIGNER: BUSTERPJ

LEGEND

Site Location



0 0.5 1 Miles

SITE LOCATION MAP

120 Maple Avenue
Haverstraw, NY

FIGURE 01

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC

RAMBOLL



MONITORING WELL

SITE BOUNDARY

0 20 40 Feet

SITE LAYOUT AND MONITORING WELL LOCATION MAP

ORANGE & ROCKLAND UTILITIES, INC.

120 MAPLE AVENUE
HAVERSTRAW, NEW YORK

FIGURE 02

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.
A RAMBOLL COMPANY

RAMBOLL

C:\Users\kaufmadr\OneDrive - Ramboll\Desktop\Haverstraw\MXD\Haverstraw_SitePlan.mxd

PROJECT: 1940102724 | DATED: 1/27/2023 | DESIGNER: KAUFMADR



I:\Bms 2874\STDS\GIS\Hopewell\Figure 4.mxd

PROJECT: 120MAPLE | DATED: 4/21/2020 | DESIGNER: BUSTER PJ

LEGEND

- Site Boundary
- Existing Monitoring Well
- 20.0 Groundwater Elevation Contour
- Inferred Groundwater Flow Direction

0 150 300 Feet

GROUNDWATER ELEVATION CONTOUR MAP NOVEMBER 4, 2024

120 Maple Avenue,
Haverstraw, NY

FIGURE 03



I:\Bms 2874\STDS\GIS\Hopewell\Figure 4.mxd
PROJECT: 120MAPLE | DATED: 4/21/2020 | DESIGNER: BUSTER.PJ

LEGEND

- Site Boundary
- Existing Monitoring Well
- 20.0 Groundwater Elevation Contour
- Inferred Groundwater Flow Direction

0 150 300 Feet

GROUNDWATER ELEVATION CONTOUR MAP APRIL 2, 2026

120 Maple Avenue,
Haverstraw, NY

FIGURE 04

ATTACHMENT A

Annual Inspection Checklists

Annual Inspection Checklist and Certification

Clove and Maple Avenues Former MGP Site - Operable Unit 1: Village of Haverstraw, New York

Inspection Task	Condition		Comments: Describe Condition, Location and Type of Any Deficiencies, Corrective Actions	Date Completed	Initials
SOIL COVER SYSTEM					
Required Forms Up to Date	Yes [X]	No [ ]		11/04/24	MJ
Vegetation	Complete [X]	Locally Degraded [ ]		11/04/24	MJ
Any Changes in Cover Type	Yes [ ]	No [X]		11/04/24	MJ
New Penetrations	Yes [ ]	No [X]		11/04/24	MJ
Any Changes in Property Usage	Yes [ ]	No [X]		11/04/24	MJ
GROUNDWATER MONITORING WELLS					
Note: Complete Individual Monitoring Well Inspection Logs					
Required Forms Up to Date	Yes [X]	No [ ]		11/04/24	MJ
Any Deficiencies Identified	Yes [ ]	No [X]		11/04/24	MJ

Name / Date: Megan Jarocki 11/04/24

Annual Inspection Checklist and Certification

Clove and Maple Avenues Former MGP Site - Operable Unit 1: Village of Haverstraw, New York

Inspection Task	Condition		Comments: Describe Condition, Location and Type of Any Deficiencies, Corrective Actions	Date Completed	Initials
SOIL COVER SYSTEM					
Required Forms Up to Date	Yes [X]	No [ ]		03/18/25	AF
Vegetation	Complete [X]	Locally Degraded [ ]		03/18/25	AF
Any Changes in Cover Type	Yes [ ]	No [X]		03/18/25	AF
New Penetrations	Yes [ ]	No [X]		03/18/25	AF
Any Changes in Property Usage	Yes [ ]	No [X]		03/18/25	AF
GROUNDWATER MONITORING WELLS					
Note: Complete Individual Monitoring Well Inspection Logs					
Required Forms Up to Date	Yes [X]	No [ ]		03/18/25	AF
Any Deficiencies Identified	Yes [ ]	No [X]		03/18/25	AF

Name / Date: Andrea Felice 03/18/25

Annual Inspection Checklist and Certification
Clove and Maple Avenues Former MGP Site - Operable Unit 1: Village of Haverstraw, New York

Inspection Task	Condition		Comments: Describe Condition, Location and Type of Any Deficiencies, Corrective Actions	Date Completed	Initials
SOIL COVER SYSTEM					
Required Forms Up to Date	Yes ☑	No ☐		4/2/26	SB
Vegetation	Complete ☑	Locally Degraded ☐			
Any Changes in Cover Type	Yes ☐	No ☑			
New Penetrations	Yes ☐	No ☑			
Any Changes in Property Usage	Yes ☐	No ☑			
GROUNDWATER MONITORING WELLS					
Note: Complete Individual Monitoring Well Inspection Logs					
Required Forms Up to Date	Yes ☑	No ☐			
Any Deficiencies Identified	Yes ☑	No ☐			

Name / Date: Sean Booth 04/02/26

ATTACHMENT B

Low Flow Purge and Sample
Ground Water Sampling Logs

Ground Water Purge Log - Oxygen Injection System

Date:	11/4/2024	Personnel:	MJ / EC	Weather:	70's, Sunny
Site Name:	Clove & Maple OU1	Monitoring Equip. Used:	GeoPump / YSI	Well #:	MW-01
Site Location:	Haverstraw, NY	Purge Method:	Low Flow	Project #:	

Well information:

Depth of Well*:	29.36	ft.
Depth to Water*:	23.19	ft.
Length of Water Column:	6.17	ft.
Pump Intake Depth:	27.5	ft.
Well Diameter:	2	in.

Well Diameter Multipliers

2 in. = 0.163 gal/ft
4 in. = 0.653 gal/ft
6 in. = 1.469 gal/ft
8 in. = 2.611 gal/ft

* Measurements taken from

x	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

indicate units

Purge Rate: 300 ml/min

Elapsed Time	Depth To Water (ft bmp)	Temperature (Celsius)	pH (SU)	Specific Conductivity (_mS/cm_)	ORP (mV)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min)
1010	23.19	17.96	6.76	1.781	237	1.88	709.0	300
1015	23.19	17.92	6.48	0.770	232	1.68	732.0	300
1020	23.19	17.94	6.71	0.763	234	1.67	648.0	300
1025	23.19	18.10	6.78	0.751	235	1.66	478.0	300
1030	23.19	18.19	6.87	0.748	232	1.66	411.0	300
1035	23.19	18.30	6.89	0.713	226	1.67	390.0	300
1040	23.19	18.39	6.92	0.743	219	1.84	318.0	300
1045	23.19	18.66	6.93	0.735	208	1.94	600.0	300
1050	23.19	18.77	7.00	0.727	207	1.91	572.0	300
1055	23.19	18.77	7.02	0.743	249	1.87	280.0	300
1100	23.19	19.27	7.11	0.747	260	1.84	80.9	300
1105	23.19	19.47	7.12	0.752	261	1.85	82.0	300
1110	23.19	19.58	7.16	0.751	260	1.84	84.0	300
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	100 ≤ X ≤ 500

End Purge Time: 1110

Water sample: MW-01_110424

Analytical Parameters: BTEX, PAHs

Container Size	Container Type	# Collected	Field Filtered	Preservative	Lab
40ml	glass vial	3	no	HCl	SGS
1L	amber jar	2	no	none	SGS

Notes:

Ground Water Purge Log - Oxygen Injection System

Date:	11/4/2024	Personnel:	MJ / EC	Weather:	70's, Sunny
Site Name:	Clove & Maple OU1	Monitoring Equip. Used:	GeoPump / YSI	Well #:	MW-06
Site Location:	Haverstraw, NY	Purge Method:	Low Flow	Project #:	

Well information:

Depth of Well*:	29.36	ft.
Depth to Water*:	3.69	ft.
Length of Water Column:	25.67	ft.
Pump Intake Depth:	27.5	ft.
Well Diameter:	2	in.

Well Diameter Multipliers

2 in. = 0.163 gal/ft
4 in. = 0.653 gal/ft
6 in. = 1.469 gal/ft
8 in. = 2.611 gal/ft

* Measurements taken from

x	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

indicate units

Purge Rate: 300 ml/min

Elapsed Time	Depth To Water (ft bmp)	Temperature (Celsius)	pH (SU)	Specific Conductivity (_mS/cm_)	ORP (mV)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min)
1235	4.42	17.69	7.87	0.867	35	1.64	6.4	300
1240	5.32	17.27	7.84	0.869	26	0.06	0.0	300
1245	5.94	17.26	7.84	0.870	20	0.00	0.9	300
1250	6.01	17.44	7.85	0.869	9	0.00	1.8	300
1255	6.01	17.30	7.85	0.866	3	0.00	2.0	300
1300	5.49	17.30	7.85	0.868	1	0.00	0.0	300
1305	5.45	17.49	7.86	0.862	-1	0.00	0.0	300
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	100 ≤ X ≤ 500

End Purge Time: 1305

Water sample: MW-06_110429

Analytical Parameters: BTEX, PAHs

Container Size	Container Type	# Collected	Field Filtered	Preservative	Lab
40ml	glass vial	3	no	HCl	SGS
1L	amber jar	2	no	none	SGS

Notes:

Ground Water Purge Log - Oxygen Injection System

Date:	11/4/2024	Personnel:	MJ / EC	Weather:	70's, Sunny
Site Name:	Clove & Maple OU1	Monitoring Equip. Used:	GeoPump / YSI	Well #:	MW-05
Site Location:	Haverstraw, NY	Purge Method:	Low Flow	Project #:	

Well information:

Depth of Well*:	2.31	ft.
Depth to Water*:	21.43	ft.
Length of Water Column:	NM	ft.
Pump Intake Depth:	20.0	ft.
Well Diameter:	2	in.

Well Diameter Multipliers

2 in. = 0.163 gal/ft
4 in. = 0.653 gal/ft
6 in. = 1.469 gal/ft
8 in. = 2.611 gal/ft

* Measurements taken from

x	Top of Well Casing
	Top of Protective Casing
	(Other, Specify)

indicate units

Purge Rate: 300 ml/min

Elapsed Time	Depth To Water (ft bmp)	Temperature (Celsius)	pH (SU)	Specific Conductivity (_mS/cm_)	ORP (mV)	Dissolved Oxygen (mg/l)	Turbidity (NTU)	Flow Rate (ml/min)
1124	4.70	17.10	7.23	1.100	-28	0.79	2.8	500
1129	4.41	16.48	7.29	1.260	-84	0.00	0.0	300
1134	4.39	16.24	7.26	1.270	-79	0.00	0.0	300
1139	4.44	16.28	7.25	1.280	-64	0.00	0.0	300
1144	4.46	16.23	7.24	1.290	62	0.00	0.0	300
1149	4.47	16.40	7.23	1.300	-55	0.00	0.0	300
1154	4.50	15.98	7.24	1.310	-49	0.00	0.0	300
1159	4.52	15.98	7.24	1.320	-44	0.00	0.0	300
1204	4.55	16.03	7.23	1.310	-40	0.00	0.0	300
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	100 ≤ X ≤ 500

End Purge Time: 1255

Water sample: MW-05_110424

Analytical Parameters: BTEX, PAHs

Container Size	Container Type	# Collected	Field Filtered	Preservative	Lab
40ml	glass vial	3	no	HCl	SGS
1L	amber jar	2	no	none	SGS

Notes: Dup Collected here

RAMBOLL

NJ Low Flow Purge and Sample Groundwater Sampling Log

Date: 9/22/26 Personnel: M. Jarosh Weather: Rain

Site Name: River Straw Pump/Controller ID#: 20583 Well #: MW-1

Site Location: River Straw Sampling Method: Low flow Project #:

Monitoring Equip. Used (include ID#): SIFLOW

Well information:

Depth of Well*: 29.3 ft.

Depth to Water*: 20.09 ft.

Length of Water Column: ft.

Pump Intake Depth: ft.

Well Diameter Multipliers

2 in. = 0.163 gal/ft

4 in. = 0.653 gal/ft

6 in. = 1.469 gal/ft

8 in. = 2.611 gal/ft

Well Diameter: in.

* Measurements taken from

Top of Well Casing

Top of Protective Casing

(Other, Specify)

Start Purge Time: 850

Verify temperature Dev% change on Weekly Instrument Report (pg. 2)

Dev0%: Yes or No (if Yes, record here _____)

Elapsed Time	Depth To Water (ft bmp)	Temperature (°C) (SM 2550 B-10)	pH (SU) (SM 4500-H B-11)	Conductivity (mS/cm) (SM 2510 B-11)	ORP (mV)	Dissolved Oxygen (mg/l) (SM 4500-O G-16)	Turbidity (NTU) (SM 2130 B-11)	Flow Rate (ml/min)
850	20.09	12.60	5.89	1.28	176	7.65	550	300
855	20.09	13.03	6.15	1.21	165	6.43	215	300
900	20.09	13.15	6.23	1.20	154	6.12	93.8	300
905	20.09	12.79	6.61	1.20	161	5.66	69.6	300
910	20.09	12.69	6.71	1.19	165	5.42	52.2	300
915	20.09	12.65	6.81	1.22	175	5.31	40.1	300
920	20.09	12.63	6.83	1.24	136	5.08	25.2	300
925	20.09	12.59	6.56	1.19	179	5.29	9.0	300
930	20.09	12.55	6.56	1.23	179	5.27	6.7	300
935	20.09	12.59	6.58	1.29	180	5.30	1.5	300
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	100 ≤ X ≤ 500

End Purge Time: _____

Water sample: MW-1_092226

Time collected: 920

Total volume of purged water removed: _____

Physical appearance at start

Color: Brown

Odor: No

Sheen/Free Product: No

Physical appearance at sampling

Color: clear

Odor: No

Sheen/Free Product: No

Analytical Parameters:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Lab
40 mL	VOA	3	No	HCL	SGS
250 mL	amber	2	No	No	SGS

Notes: MS/MSD

MW-5
21.05

NJ Low Flow Purge and Sample Groundwater Sampling Log

RAMBOLL

Date: 4/2/26 | Personnel: M. Jarocki | Weather: Rain

Site Name: Haverstraw | Pump/Controller ID#: 20583 | Well #: MW-5

Site Location: Haverstraw | Sampling Method: Low Flow | Project #:

Monitoring Equip. Used (include ID#): SI PO454

Well information:

Depth of Well*: 5 ft.

Depth to Water*: 2.54 ft.

Length of Water Column: ft.

Pump Intake Depth: ft.

Well Diameter Multipliers

2 in. = 0.163 gal/ft

4 in. = 0.653 gal/ft

6 in. = 1.469 gal/ft

8 in. = 2.611 gal/ft

Well Diameter: in.

* Measurements taken from

[X] Top of Well Casing

[ ] Top of Protective Casing

[ ]

[ ] (Other, Specify)

Start Purge Time: 1100

Verify temperature Dev% change on Weekly Instrument Report (pg. 2)

Dev0%: Yes or No (if Yes, record here _____)

Elapsed Time	Depth To Water (ft bmp)	Temperature (°C) (SM 2550 B-10)	pH (SU) (SM 4500-H B-11)	Conductivity (mS/cm) (SM 2510 B-11)	ORP (mV)	Dissolved Oxygen (mg/l) (SM 4500-O G-16)	Turbidity (NTU) (SM 2130 B-11)	Flow Rate (ml/min)
1100	1.75	10.80	7.17	0.240	159	2.90	60.2	300
1105	1.77	10.95	6.91	0.222	158	0.00	59.2	500
1110	2.65	11.96	6.79	0.213	133	0.00	45.2	300
1115	2.13	11.63	6.85	0.211	78	0.00	28.6	300
1120	2.13	11.90	6.93	0.220	44	0.00	20.9	300
1125	2.13	11.98	6.98	0.227	32	0.00	14.1	300
1130	2.13	12.00	7.04	0.246	19	0.00	15.5	300
1135	2.13	12.18	7.09	0.286	11	0.00	8.1	300
1140	2.13	12.24	7.10	0.322	4	0.00	6.3	300
1145	2.13	12.28	7.13	0.357	2	0.00	6.6	300
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	100 ≤ X ≤ 500

End Purge Time: 1145

Water sample: MW-5-040226

Time collected: 1145

Physical appearance at start

Color: clear

Odor: NO

Sheen/Free Product: NO

Total volume of purged water removed: _____

Physical appearance at sampling

Color: clear

Odor: NO

Sheen/Free Product: NO

Analytical Parameters:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Lab
VOA	glass	3	NO	HCL	SGS
250	glass/amber	2	NO	NO	SGS

Notes: DUP collected here.

NJ Low Flow Purge and Sample Groundwater Sampling Log

RAMBOLL

Date: 4/2/26 | Personnel: MJ/SB | Weather: Rain
Site Name: Haverstraw | Pump/Controller ID#: 70583 | Well #: MW-6
Site Location: Haverstraw | Sampling Method: Low flow | Project #:
Monitoring Equip. Used (include ID#): Horiba: 51 FOUSB

Well information:
Depth of Well*: ft.
Depth to Water*: 2.1in ft.
Length of Water Column: ft.
Pump Intake Depth: ft.

Well Diameter Multipliers
2 in. = 0.163 gal/ft
4 in. = 0.653 gal/ft
6 in. = 1.469 gal/ft
8 in. = 2.611 gal/ft
Well Diameter: in.

* Measurements taken from
[X] Top of Well Casing
[ ] Top of Protective Casing
[ ]
[ ] (Other, Specify)

Start Purge Time: 1200

Verify temperature Dev% change on Weekly Instrument Report (pg. 2)
Dev0%: Yes or No (if Yes, record here _____)

Elapsed Time	Depth To Water (ft bmp)	Temperature (°C) (SM 2550 B-10)	pH (SU) (SM 4500-H B-11)	Conductivity (mS/cm) (SM 2510 B-11)	ORP (mV)	Dissolved Oxygen (mg/l) (SM 4500-O G-16)	Turbidity (NTU) (SM 2130 B-11)	Flow Rate (ml/min)
1200	1.91	16.99	7.14	0.736	91	0.00	13.6	250
1205	3.19	11.08	7.81	0.776	56	0.08	9.6	250
1210	3.62	11.37	7.80	0.783	41	0.0	9.6	250
1215	4.78	11.63	7.72	0.788	23	0.0	5.3	250
1220	4.95	11.91	7.80	0.791	11	0.0	0.9	250
1225	5.55	11.95	7.81	0.789	2	0.0	0.9	250
1230	6.12	12.06	7.80	0.790	-2	0.0	0.0	250
1235	6.76	12.16	7.84	0.791	-6	0.0	0.0	250
Stabilization	Δ ≤ 0.3'	± 3%	± 0.1	± 3%	± 10 mV	± 10%	± 10%	100 ≤ X ≤ 500

End Purge Time: 1235
Water sample: MW-6_040226
Time collected: 1235
Total volume of purged water removed:

Physical appearance at start
Color: Clear
Odor: no
Sheen/Free Product: no

Physical appearance at sampling
Color: clear
Odor: no
Sheen/Free Product: no

Analytical Parameters:

Container Size	Container Type	# Collected	Field Filtered	Preservative	Lab
40mL	VOA	3	NO	HCL	SGS
250 mL	Amber	2	NO	NO	SGS

Notes:

ATTACHMENT C

Laboratory Analytical Reports and Data Usability Summary Reports

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Ramboll Americas Engineering Solutions

Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

PO 1940103774

SGS Job Number: JD99851

Sampling Date: 11/05/24



Report to:

Ramboll Americas Engineering Solutions
Raritan Plaza 1
Edison, NJ 08837
William.Moore@ramboll.com; Jacob.Greenawalt@Ramboll.com

ATTN: William H. Moore

Total number of pages in report: 2175

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

David Chastain
General Manager

Client Service contact: Tammy McCloskey 732-329-0200
Certifications: NJ(12129),NY(10983),CA,CO,CT,FL,HI,IL,IN,KY,LA (120428),MA,MD,ME,MN,NC,NH,NV, AK (UST-103),AZ (AZ0786),PA(68-00408),RI,SC,TX (T104704234),UT,VA,WA,WV

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EHS.US.CustomerCare@sgs.com

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Sample Summary

Ramboll Americas Engineering Solutions

Job No: JD99851

Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Project No: PO 1940103774

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD99851-1	11/05/24	12:04	EC	11/05/24	AQ	Ground Water	MW-05_110424
JD99851-2	11/05/24	13:30	EC	11/05/24	AQ	Field Blank Water	FB_110424
JD99851-3	11/05/24	13:30	MJ	11/05/24	AQ	Trip Blank Water	TB_110424
JD99851-4	11/05/24	00:00	EC	11/05/24	AQ	Ground Water	DUP_110424
JD99851-5	11/05/24	11:10	MJ	11/05/24	AQ	Ground Water	MW-1_110424
JD99851-5D	11/05/24	11:10	MJ	11/05/24	AQ	Water Dup/MSD	MW-1_110424_MSD
JD99851-5S	11/05/24	11:10	MJ	11/05/24	AQ	Water Matrix Spike	MW-1_110424_MS
JD99851-6	11/05/24	13:03	MJ	11/05/24	AQ	Ground Water	MW-6_110424

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Ramboll Americas Engineering Solutions	**Job No:**	JD99851
Site:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw,	**Report Date**	11/19/2024 12:43:01 P

On 11/05/2024, 4 sample(s), 1 Trip Blank(s), 0 Equip. Blank(s) and 1 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 4.2 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD99851 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260D

Matrix: AQ **Batch ID:** V2S273

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD99851-5MS, JD99851-5MSD were used as the QC samples indicated.
- JD99851-6 for Benzene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- JD99851-3 for Benzene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- JD99851-2 for Benzene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- JD99851-5 for Benzene: Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.
- V2S273-BS for Benzene: High percent recovery and no associated positive reported in the QC batch.

Matrix: AQ **Batch ID:** V5A328

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JE209-3MS, JE209-3MSD were used as the QC samples indicated.

MS Semi-volatiles By Method SW846 8270E BY SIM

Matrix: AQ **Batch ID:** OP59243A

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD99851-5MS, JD99851-5MSD were used as the QC samples indicated.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: JD99851
Account: Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Collected: 11/05/24

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD99851-1	**MW-05_110424**					
Benzene		2.9	0.50	0.43	ug/l	SW846 8260D
Ethylbenzene		1.0	1.0	0.60	ug/l	SW846 8260D
Xylene (total)		1.7	1.0	0.59	ug/l	SW846 8260D
Acenaphthene		3.13	0.10	0.050	ug/l	SW846 8270E BY SIM
Acenaphthylene		3.02	0.10	0.050	ug/l	SW846 8270E BY SIM
Anthracene		0.658	0.10	0.050	ug/l	SW846 8270E BY SIM
Fluoranthene		1.64	0.10	0.050	ug/l	SW846 8270E BY SIM
Fluorene		0.212	0.10	0.050	ug/l	SW846 8270E BY SIM
Naphthalene		0.0725 J	0.10	0.050	ug/l	SW846 8270E BY SIM
Phenanthrene		0.0293 J	0.050	0.023	ug/l	SW846 8270E BY SIM
Pyrene		1.91	0.10	0.050	ug/l	SW846 8270E BY SIM
JD99851-2	**FB_110424**					
No hits reported in this sample.						
JD99851-3	**TB_110424**					
No hits reported in this sample.						
JD99851-4	**DUP_110424**					
Benzene		2.2	0.50	0.43	ug/l	SW846 8260D
Ethylbenzene		0.69 J	1.0	0.60	ug/l	SW846 8260D
Xylene (total)		1.4	1.0	0.59	ug/l	SW846 8260D
Acenaphthene		4.21	0.10	0.050	ug/l	SW846 8270E BY SIM
Acenaphthylene		3.65	0.10	0.050	ug/l	SW846 8270E BY SIM
Anthracene		0.621	0.10	0.050	ug/l	SW846 8270E BY SIM
Fluoranthene		1.82	0.10	0.050	ug/l	SW846 8270E BY SIM
Fluorene		0.229	0.10	0.050	ug/l	SW846 8270E BY SIM
Naphthalene		0.0924 J	0.10	0.050	ug/l	SW846 8270E BY SIM
Phenanthrene		0.0287 J	0.050	0.023	ug/l	SW846 8270E BY SIM
Pyrene		2.09	0.10	0.050	ug/l	SW846 8270E BY SIM
JD99851-5	**MW-1_110424**					
No hits reported in this sample.						
JD99851-6	**MW-6_110424**					
Acenaphthylene		0.0709 J	0.10	0.050	ug/l	SW846 8270E BY SIM
Anthracene		0.0804 J	0.10	0.050	ug/l	SW846 8270E BY SIM
Phenanthrene		0.0303 J	0.050	0.023	ug/l	SW846 8270E BY SIM

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW-05_110424		
Lab Sample ID:	JD99851-1	**Date Sampled:**	11/05/24
Matrix:	AQ - Ground Water	**Date Received:**	11/05/24
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5A11477.D	1	11/11/24 11:42	NW	n/a	n/a	V5A328
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.9	0.50	0.43	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
100-41-4	Ethylbenzene	1.0	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	1.7	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%		80-120%
17060-07-0	1,2-Dichloroethane-D4	102%		80-120%
2037-26-5	Toluene-D8	107%		80-120%
460-00-4	4-Bromofluorobenzene	105%		82-114%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW-05_110424		
Lab Sample ID:	JD99851-1	**Date Sampled:**	11/05/24
Matrix:	AQ - Ground Water	**Date Received:**	11/05/24
Method:	SW846 8270E BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M127157.D	1	11/14/24 07:12	JY	11/12/24 13:00	OP59243A	E4M5971
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	3.13	0.10	0.050	ug/l	
208-96-8	Acenaphthylene	3.02	0.10	0.050	ug/l	
120-12-7	Anthracene	0.658	0.10	0.050	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.043	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.050	ug/l	
218-01-9	Chrysene	ND	0.10	0.050	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.050	ug/l	
206-44-0	Fluoranthene	1.64	0.10	0.050	ug/l	
86-73-7	Fluorene	0.212	0.10	0.050	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.050	ug/l	
91-20-3	Naphthalene	0.0725	0.10	0.050	ug/l	J
85-01-8	Phenanthrene	0.0293	0.050	0.023	ug/l	J
129-00-0	Pyrene	1.91	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	43%		23-127%
321-60-8	2-Fluorobiphenyl	38%		23-114%
1718-51-0	Terphenyl-d14	28%		10-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB_110424		
Lab Sample ID:	JD99851-2	**Date Sampled:**	11/05/24
Matrix:	AQ - Field Blank Water	**Date Received:**	11/05/24
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2S010619.D	1	11/09/24 02:31	KA	n/a	n/a	V2S273
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene [a]	ND	0.50	0.43	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		80-120%
17060-07-0	1,2-Dichloroethane-D4	105%		80-120%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	95%		82-114%

(a) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	FB_110424		
Lab Sample ID:	JD99851-2	**Date Sampled:**	11/05/24
Matrix:	AQ - Field Blank Water	**Date Received:**	11/05/24
Method:	SW846 8270E BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M127158.D	1	11/14/24 07:35	JY	11/12/24 13:00	OP59243A	E4M5971
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.050	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.050	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.043	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.050	ug/l	
218-01-9	Chrysene	ND	0.10	0.050	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.050	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.050	ug/l	
86-73-7	Fluorene	ND	0.10	0.050	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.050	ug/l	
91-20-3	Naphthalene	ND	0.10	0.050	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.023	ug/l	
129-00-0	Pyrene	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	77%		23-127%
321-60-8	2-Fluorobiphenyl	69%		23-114%
1718-51-0	Terphenyl-d14	41%		10-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	TB_110424		
Lab Sample ID:	JD99851-3	**Date Sampled:**	11/05/24
Matrix:	AQ - Trip Blank Water	**Date Received:**	11/05/24
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2S010620.D	1	11/09/24 02:57	KA	n/a	n/a	V2S273
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene [a]	ND	0.50	0.43	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	113%		80-120%
17060-07-0	1,2-Dichloroethane-D4	104%		80-120%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	95%		82-114%

(a) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DUP_110424		
Lab Sample ID:	JD99851-4	**Date Sampled:**	11/05/24
Matrix:	AQ - Ground Water	**Date Received:**	11/05/24
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5A11479.D	1	11/11/24 12:18	NW	n/a	n/a	V5A328
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	2.2	0.50	0.43	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
100-41-4	Ethylbenzene	0.69	1.0	0.60	ug/l	J
1330-20-7	Xylene (total)	1.4	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		80-120%
17060-07-0	1,2-Dichloroethane-D4	101%		80-120%
2037-26-5	Toluene-D8	105%		80-120%
460-00-4	4-Bromofluorobenzene	105%		82-114%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	DUP_110424		
Lab Sample ID:	JD99851-4	**Date Sampled:**	11/05/24
Matrix:	AQ - Ground Water	**Date Received:**	11/05/24
Method:	SW846 8270E BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M127159.D	1	11/14/24 07:58	JY	11/12/24 13:00	OP59243A	E4M5971
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	4.21	0.10	0.050	ug/l	
208-96-8	Acenaphthylene	3.65	0.10	0.050	ug/l	
120-12-7	Anthracene	0.621	0.10	0.050	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.043	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.050	ug/l	
218-01-9	Chrysene	ND	0.10	0.050	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.050	ug/l	
206-44-0	Fluoranthene	1.82	0.10	0.050	ug/l	
86-73-7	Fluorene	0.229	0.10	0.050	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.050	ug/l	
91-20-3	Naphthalene	0.0924	0.10	0.050	ug/l	J
85-01-8	Phenanthrene	0.0287	0.050	0.023	ug/l	J
129-00-0	Pyrene	2.09	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	50%		23-127%
321-60-8	2-Fluorobiphenyl	44%		23-114%
1718-51-0	Terphenyl-d14	30%		10-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW-1_110424		
Lab Sample ID:	JD99851-5	**Date Sampled:**	11/05/24
Matrix:	AQ - Ground Water	**Date Received:**	11/05/24
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2S010613.D	1	11/08/24 23:56	KA	n/a	n/a	V2S273
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene [a]	ND	0.50	0.43	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		80-120%
17060-07-0	1,2-Dichloroethane-D4	108%		80-120%
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	93%		82-114%

(a) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW-1_110424		
Lab Sample ID:	JD99851-5	**Date Sampled:**	11/05/24
Matrix:	AQ - Ground Water	**Date Received:**	11/05/24
Method:	SW846 8270E BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M127133.D	1	11/13/24 21:56	KH	11/12/24 13:00	OP59243A	E4M5970
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.050	ug/l	
208-96-8	Acenaphthylene	ND	0.10	0.050	ug/l	
120-12-7	Anthracene	ND	0.10	0.050	ug/l	
56-55-3	Benzo(a)anthracene	ND	0.050	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.043	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.050	ug/l	
218-01-9	Chrysene	ND	0.10	0.050	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.050	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.050	ug/l	
86-73-7	Fluorene	ND	0.10	0.050	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.050	ug/l	
91-20-3	Naphthalene	ND	0.10	0.050	ug/l	
85-01-8	Phenanthrene	ND	0.050	0.023	ug/l	
129-00-0	Pyrene	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		23-127%
321-60-8	2-Fluorobiphenyl	60%		23-114%
1718-51-0	Terphenyl-d14	39%		10-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW-6_110424		
Lab Sample ID:	JD99851-6	**Date Sampled:**	11/05/24
Matrix:	AQ - Ground Water	**Date Received:**	11/05/24
Method:	SW846 8260D	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2S010631.D	1	11/09/24 07:42	KA	n/a	n/a	V2S273
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene [a]	ND	0.50	0.43	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	112%		80-120%
17060-07-0	1,2-Dichloroethane-D4	102%		80-120%
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	93%		82-114%

(a) Associated CCV outside of control limits high, sample was ND. This compound in blank spike is outside in house QC limits bias high.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	MW-6_110424		
Lab Sample ID:	JD99851-6	**Date Sampled:**	11/05/24
Matrix:	AQ - Ground Water	**Date Received:**	11/05/24
Method:	SW846 8270E BY SIM SW846 3510C	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	4M127160.D	1	11/14/24 08:20	JY	11/12/24 13:00	OP59243A	E4M5971
Run #2							

	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

BN PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.10	0.050	ug/l	
208-96-8	Acenaphthylene	0.0709	0.10	0.050	ug/l	J
120-12-7	Anthracene	0.0804	0.10	0.050	ug/l	J
56-55-3	Benzo(a)anthracene	ND	0.050	0.023	ug/l	
50-32-8	Benzo(a)pyrene	ND	0.050	0.033	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	0.050	0.043	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.10	0.050	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	0.10	0.050	ug/l	
218-01-9	Chrysene	ND	0.10	0.050	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.10	0.050	ug/l	
206-44-0	Fluoranthene	ND	0.10	0.050	ug/l	
86-73-7	Fluorene	ND	0.10	0.050	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.10	0.050	ug/l	
91-20-3	Naphthalene	ND	0.10	0.050	ug/l	
85-01-8	Phenanthrene	0.0303	0.050	0.023	ug/l	J
129-00-0	Pyrene	ND	0.10	0.050	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	73%		23-127%
321-60-8	2-Fluorobiphenyl	63%		23-114%
1718-51-0	Terphenyl-d14	35%		10-121%

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

SGS GW FB TB

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking #:
Bottle Order Control #: PRCM-TM-103124-241
SGS Quote #:
SGS Job #: JD99851

Client / Reporting Information

Company Name: Bamboll
Street Address: 101 Carnegie Dr #200
City: Princeton State: NJ Zip: 08540
Project Contact: Mjanicki@Bamboll.com E-mail:
Phone #: 973 8201044
Sampler(s) Name(s): MJ EC Phone #: 6402165878

Project Information

Project Name: Former Clyde & Maple MGP Site
Street: 120 Maple Ave.
City: Haverstraw State: NY
Project #: [redacted]
Client Purchase Order #:
Project Manager: Tammy McCloskey
Attention: Accounts Payable

Billing Information (if different from Report to)

Company Name:
Street Address:
City: Syracuse State: NY Zip:

Analysis Requested

VOC 8260 STX
8270 SIM PAH

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	# of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
1	MW-15_110424		11/5/24	1204	EC	G	N	GW	5	3				2					
2	FB_110424			1330	EC			FB	4	2				2					
3	TB_110424			0800	MJ			TB	2	2									
4	DUP_110424				EC			GW	5	3				2					
5	MW-1_110424			1110	MJ					3				2					
5	MW-1_110424_MS			1110						3				2					
5	MW-1_110424_MSD			1110						3				2					
6	MW-6_110424			1305						3				2					

Turn Around Time (Business Days)

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [ ] Other

All data available via SGS Engage

Approved By (SGS PM) / Date: STANDARD BAMBOLL TAT

* Approval needed for 1-3 BD TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria
- [ ] CT RCP Criteria
- [ ] State Forms
- [ ] EDD Format

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

*Note all Samples Were taken 11/5/2024

Initial Assessment 4AHR
Label Verification

https://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by:	Date / Time:	Received By:
1	[signature]	1605 11/5/24	1 [signature] 11/5 16:05
2			2
3			3
4			4
5			5

Custody Seal # ☐ Intact ☐ Not Intact ☐ Absent

Therm ID: IR50 On Ice ☐ See Sample Receipt Summary

Cooler Temp. °C: 3.8 0.6

EHSA-QAC-0023-06 Rev.Date:9/24/2024

5.1 5

JD99851: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JD99851 **Client:** RAMBOLL **Project:** FORMER COVE & MAPLE MGP SITE, 120

Date / Time Received: 11/5/2024 4:12:00 PM **Delivery Method:** DROP OFF **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (3.8); Cooler 2: (0.6);

Cooler Temps (Corrected) °C: Cooler 1: (4.2); Cooler 2: (1.0);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR-50		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	2		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☑		☐	☐
2. Trip Blank listed on COC:	☑		☐	☐
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☑		☐	☐

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

Internal Sample Tracking Chronicle

Ramboll Americas Engineering Solutions

Job No: JD99851

Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Project No: PO 1940103774

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD99851-1	Collected: 05-NOV-24 12:04 By: EC			Received: 05-NOV-24	By: JW	
MW-05_110424						
JD99851-1	SW846 8260D	11-NOV-24 11:42	NW			V8260BTX
JD99851-1	SW846 8270E BY SIM	14-NOV-24 07:12	JY	12-NOV-24	GA	B8270SIMPAH
JD99851-2	Collected: 05-NOV-24 13:30 By: EC			Received: 05-NOV-24	By: JW	
FB_110424						
JD99851-2	SW846 8260D	09-NOV-24 02:31	KA			V8260BTX
JD99851-2	SW846 8270E BY SIM	14-NOV-24 07:35	JY	12-NOV-24	GA	B8270SIMPAH
JD99851-3	Collected: 05-NOV-24 13:30 By: MJ			Received: 05-NOV-24	By: JW	
TB_110424						
JD99851-3	SW846 8260D	09-NOV-24 02:57	KA			V8260BTX
JD99851-4	Collected: 05-NOV-24 00:00 By: EC			Received: 05-NOV-24	By: JW	
DUP_110424						
JD99851-4	SW846 8260D	11-NOV-24 12:18	NW			V8260BTX
JD99851-4	SW846 8270E BY SIM	14-NOV-24 07:58	JY	12-NOV-24	GA	B8270SIMPAH
JD99851-5	Collected: 05-NOV-24 11:10 By: MJ			Received: 05-NOV-24	By: JW	
MW-1_110424						
JD99851-5	SW846 8260D	08-NOV-24 23:56	KA			V8260BTX
JD99851-5	SW846 8270E BY SIM	13-NOV-24 21:56	KH	12-NOV-24	GA	B8270SIMPAH
JD99851-6	Collected: 05-NOV-24 13:03 By: MJ			Received: 05-NOV-24	By: JW	
MW-6_110424						
JD99851-6	SW846 8260D	09-NOV-24 07:42	KA			V8260BTX
JD99851-6	SW846 8270E BY SIM	14-NOV-24 08:20	JY	12-NOV-24	GA	B8270SIMPAH

SGS Internal Chain of Custody

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Received: 11/05/24

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD99851-1.1	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-1.2	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-1.2	Secured Storage	Dave Hunkele	11/09/24 15:20	Retrieve from Storage
JD99851-1.2	Dave Hunkele	Secured Staging Area	11/09/24 15:20	Return to Storage
JD99851-1.2	Secured Staging Area	Ellen Dondeo	11/11/24 07:33	Retrieve from Storage
JD99851-1.2	Ellen Dondeo	Bhavin Amin	11/12/24 12:39	Custody Transfer
JD99851-1.2	Bhavin Amin	Secured Storage	11/13/24 07:00	Return to Storage
JD99851-1.2.1	Ellen Dondeo	Organics Prep	11/11/24 07:59	Extract from JD99851-1.2
JD99851-1.2.1	Organics Prep	George Aymes	11/13/24 00:33	Extract from JD99851-1.2
JD99851-1.2.1	George Aymes	Extract Storage	11/13/24 00:33	Return to Storage
JD99851-1.3	Haleigh Rosado	Secured Storage	11/07/24 20:16	Return to Storage
JD99851-1.3	Secured Storage	Kevin Arizapana	11/08/24 17:22	Retrieve from Storage
JD99851-1.3	Kevin Arizapana	GCMS2S	11/08/24 17:23	Load on Instrument
JD99851-1.3	GCMS2S	Kevin Arizapana	11/11/24 13:57	Unload from Instrument
JD99851-1.3	Kevin Arizapana	Secured Storage	11/11/24 13:57	Return to Storage
JD99851-1.4	Haleigh Rosado	Secured Storage	11/07/24 20:16	Return to Storage
JD99851-1.4	Secured Storage	Edward Durner	11/11/24 15:31	Retrieve from Storage
JD99851-1.4	Edward Durner	GCMS4A	11/11/24 15:31	Load on Instrument
JD99851-1.4	GCMS4A	Nicholas Weigand	11/14/24 17:28	Unload from Instrument
JD99851-1.4	Nicholas Weigand	Secured Storage	11/14/24 17:28	Return to Storage
JD99851-1.5	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-2.1	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-2.2	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-2.2	Secured Storage	Dave Hunkele	11/09/24 15:20	Retrieve from Storage
JD99851-2.2	Dave Hunkele	Secured Staging Area	11/09/24 15:20	Return to Storage
JD99851-2.2	Secured Staging Area	Ellen Dondeo	11/11/24 07:33	Retrieve from Storage
JD99851-2.2	Ellen Dondeo	Bhavin Amin	11/12/24 12:39	Custody Transfer
JD99851-2.2	Bhavin Amin	Secured Storage	11/13/24 07:00	Return to Storage
JD99851-2.2.1	Ellen Dondeo	Organics Prep	11/11/24 07:59	Extract from JD99851-2.2
JD99851-2.2.1	Organics Prep	George Aymes	11/13/24 00:33	Extract from JD99851-2.2
JD99851-2.2.1	George Aymes	Extract Storage	11/13/24 00:33	Return to Storage
JD99851-2.3	Haleigh Rosado	Secured Storage	11/07/24 20:16	Return to Storage
JD99851-2.3	Secured Storage	Kevin Arizapana	11/08/24 17:22	Retrieve from Storage
JD99851-2.3	Kevin Arizapana	GCMS2S	11/08/24 17:23	Load on Instrument
JD99851-2.3	GCMS2S	Kevin Arizapana	11/11/24 13:57	Unload from Instrument

SGS Internal Chain of Custody

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Received: 11/05/24

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD99851-2.3	Kevin Arizapana	Secured Storage	11/11/24 13:57	Return to Storage
JD99851-2.4	Haleigh Rosado	Secured Storage	11/07/24 20:16	Return to Storage
JD99851-3.1	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-3.1	Secured Storage	Kevin Arizapana	11/08/24 17:22	Retrieve from Storage
JD99851-3.1	Kevin Arizapana	GCMS2S	11/08/24 17:23	Load on Instrument
JD99851-3.1	GCMS2S	Kevin Arizapana	11/11/24 13:57	Unload from Instrument
JD99851-3.1	Kevin Arizapana	Secured Storage	11/11/24 13:57	Return to Storage
JD99851-3.2	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-4.1	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-4.2	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-4.2	Secured Storage	Dave Hunkele	11/09/24 15:20	Retrieve from Storage
JD99851-4.2	Dave Hunkele	Secured Staging Area	11/09/24 15:20	Return to Storage
JD99851-4.2	Secured Staging Area	Ellen Dondeo	11/11/24 07:33	Retrieve from Storage
JD99851-4.2	Ellen Dondeo	Bhavin Amin	11/12/24 12:39	Custody Transfer
JD99851-4.2	Bhavin Amin	Secured Storage	11/13/24 07:00	Return to Storage
JD99851-4.2.1	Ellen Dondeo	Organics Prep	11/11/24 07:59	Extract from JD99851-4.2
JD99851-4.2.1	Organics Prep	George Aymes	11/13/24 00:33	Extract from JD99851-4.2
JD99851-4.2.1	George Aymes	Extract Storage	11/13/24 00:33	Return to Storage
JD99851-4.3	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-4.3	Secured Storage	Kevin Arizapana	11/08/24 17:22	Retrieve from Storage
JD99851-4.3	Kevin Arizapana	GCMS2S	11/08/24 17:23	Load on Instrument
JD99851-4.3	GCMS2S	Kevin Arizapana	11/11/24 13:57	Unload from Instrument
JD99851-4.3	Kevin Arizapana	Secured Storage	11/11/24 13:57	Return to Storage
JD99851-4.4	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-4.4	Secured Storage	Edward Durner	11/11/24 15:31	Retrieve from Storage
JD99851-4.4	Edward Durner	GCMS4A	11/11/24 15:31	Load on Instrument
JD99851-4.4	GCMS4A	Nicholas Weigand	11/14/24 17:28	Unload from Instrument
JD99851-4.4	Nicholas Weigand	Secured Storage	11/14/24 17:28	Return to Storage
JD99851-4.5	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.1	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-5.1	Secured Storage	Dave Hunkele	11/09/24 15:20	Retrieve from Storage
JD99851-5.1	Dave Hunkele	Secured Staging Area	11/09/24 15:20	Return to Storage
JD99851-5.1	Secured Staging Area	Ellen Dondeo	11/11/24 07:33	Retrieve from Storage
JD99851-5.1	Ellen Dondeo	Bhavin Amin	11/12/24 12:39	Custody Transfer

SGS Internal Chain of Custody

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Received: 11/05/24

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD99851-5.1	Bhavin Amin	Secured Storage	11/13/24 07:00	Return to Storage
JD99851-5.1.1	Ellen Dondeo	Organics Prep	11/11/24 07:59	Extract from JD99851-5.1
JD99851-5.1.1	Organics Prep	George Aymes	11/13/24 00:33	Extract from JD99851-5.1
JD99851-5.1.1	George Aymes	Extract Storage	11/13/24 00:33	Return to Storage
JD99851-5.2	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-5.2	Secured Storage	Dave Hunkele	11/09/24 15:20	Retrieve from Storage
JD99851-5.2	Dave Hunkele	Secured Staging Area	11/09/24 15:20	Return to Storage
JD99851-5.2	Secured Staging Area	Ellen Dondeo	11/11/24 07:33	Retrieve from Storage
JD99851-5.2	Ellen Dondeo	Bhavin Amin	11/12/24 12:39	Custody Transfer
JD99851-5.2	Bhavin Amin	Secured Storage	11/13/24 07:00	Return to Storage
JD99851-5.3	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-5.4	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-5.4	Secured Storage	Dave Hunkele	11/09/24 15:20	Retrieve from Storage
JD99851-5.4	Dave Hunkele	Secured Staging Area	11/09/24 15:20	Return to Storage
JD99851-5.4	Secured Staging Area	Ellen Dondeo	11/11/24 07:33	Retrieve from Storage
JD99851-5.4	Ellen Dondeo	Bhavin Amin	11/12/24 12:39	Custody Transfer
JD99851-5.4	Bhavin Amin	Secured Storage	11/13/24 07:00	Return to Storage
JD99851-5.5	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-5.6	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-5.7	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.8	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.9	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.10	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.11	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.12	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.12	Secured Storage	Kevin Arizapana	11/08/24 17:22	Retrieve from Storage
JD99851-5.12	Kevin Arizapana	GCMS2S	11/08/24 17:23	Load on Instrument
JD99851-5.12	GCMS2S	Kevin Arizapana	11/11/24 13:57	Unload from Instrument
JD99851-5.12	Kevin Arizapana	Secured Storage	11/11/24 13:57	Return to Storage
JD99851-5.13	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.13	Secured Storage	Kevin Arizapana	11/08/24 17:22	Retrieve from Storage

SGS Internal Chain of Custody

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Received: 11/05/24

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD99851-5.13	Kevin Arizapana	GCMS2S	11/08/24 17:23	Load on Instrument
JD99851-5.13	GCMS2S	Kevin Arizapana	11/11/24 13:57	Unload from Instrument
JD99851-5.13	Kevin Arizapana	Secured Storage	11/11/24 13:57	Return to Storage
JD99851-5.14	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-5.14	Secured Storage	Kevin Arizapana	11/08/24 17:22	Retrieve from Storage
JD99851-5.14	Kevin Arizapana	GCMS2S	11/08/24 17:23	Load on Instrument
JD99851-5.14	GCMS2S	Kevin Arizapana	11/11/24 13:57	Unload from Instrument
JD99851-5.14	Kevin Arizapana	Secured Storage	11/11/24 13:57	Return to Storage
JD99851-5.15	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-6.1	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-6.1	Secured Storage	Dave Hunkele	11/09/24 15:20	Retrieve from Storage
JD99851-6.1	Dave Hunkele	Secured Staging Area	11/09/24 15:20	Return to Storage
JD99851-6.1	Secured Staging Area	Ellen Dondeo	11/11/24 07:33	Retrieve from Storage
JD99851-6.1	Ellen Dondeo	Bhavin Amin	11/12/24 12:39	Custody Transfer
JD99851-6.1	Bhavin Amin	Secured Storage	11/13/24 07:00	Return to Storage
JD99851-6.1.1	Ellen Dondeo	Organics Prep	11/11/24 07:59	Extract from JD99851-6.1
JD99851-6.1.1	Organics Prep	George Aymes	11/13/24 00:33	Extract from JD99851-6.1
JD99851-6.1.1	George Aymes	Extract Storage	11/13/24 00:33	Return to Storage
JD99851-6.2	Seamus D'angiolillo	Secured Storage	11/07/24 18:50	Return to Storage
JD99851-6.3	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-6.3	Secured Storage	Kevin Arizapana	11/08/24 17:22	Retrieve from Storage
JD99851-6.3	Kevin Arizapana	GCMS2S	11/08/24 17:23	Load on Instrument
JD99851-6.3	GCMS2S	Kevin Arizapana	11/11/24 13:57	Unload from Instrument
JD99851-6.3	Kevin Arizapana	Secured Storage	11/11/24 13:57	Return to Storage
JD99851-6.4	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage
JD99851-6.5	Haleigh Rosado	Secured Storage	11/07/24 20:12	Return to Storage

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2S273-MB	2S010612.D	1	11/08/24	KA	n/a	n/a	V2S273

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD99851-2, JD99851-3, JD99851-5, JD99851-6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	115%	80-120%
17060-07-0	1,2-Dichloroethane-D4	105%	80-120%
2037-26-5	Toluene-D8	97%	80-120%
460-00-4	4-Bromofluorobenzene	93%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Method Blank Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5A328-MB	5A11475.D	1	11/11/24	NW	n/a	n/a	V5A328

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD99851-1, JD99851-4

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.43	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.60	ug/l	
108-88-3	Toluene	ND	1.0	0.49	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.59	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	112%	80-120%
17060-07-0	1,2-Dichloroethane-D4	110%	80-120%
2037-26-5	Toluene-D8	105%	80-120%
460-00-4	4-Bromofluorobenzene	104%	82-114%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.23	49	ug/l	J
	Total TIC, Volatile		0	ug/l	

Blank Spike Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2S273-BS	2S010610.D	1	11/08/24	KA	n/a	n/a	V2S273

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD99851-2, JD99851-3, JD99851-5, JD99851-6

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	61.1	122* [a]	80-115
100-41-4	Ethylbenzene	50	55.3	111	78-116
108-88-3	Toluene	50	58.2	116	79-116
1330-20-7	Xylene (total)	150	171	114	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	101%	80-120%
17060-07-0	1,2-Dichloroethane-D4	98%	80-120%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	98%	82-114%

(a) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5A328-BS	5A11473.D	1	11/11/24	NW	n/a	n/a	V5A328

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD99851-1, JD99851-4

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	49.2	98	80-115
100-41-4	Ethylbenzene	50	51.3	103	78-116
108-88-3	Toluene	50	50.6	101	79-116
1330-20-7	Xylene (total)	150	154	103	80-119

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	108%	80-120%
17060-07-0	1,2-Dichloroethane-D4	106%	80-120%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	106%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD99851-5MS	2S010615.D	1	11/09/24	KA	n/a	n/a	V2S273
JD99851-5MSD	2S010616.D	1	11/09/24	KA	n/a	n/a	V2S273
JD99851-5	2S010613.D	1	11/08/24	KA	n/a	n/a	V2S273

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD99851-2, JD99851-3, JD99851-5, JD99851-6

CAS No.	Compound	JD99851-5 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		50	62.2	124	50	63.7	127	2	49-137/12
100-41-4	Ethylbenzene	ND		50	57.3	115	50	57.5	115	0	37-144/12
108-88-3	Toluene	ND		50	60.1	120	50	59.8	120	1	46-139/12
1330-20-7	Xylene (total)	ND		150	176	117	150	176	117	0	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JD99851-5	Limits
1868-53-7	Dibromofluoromethane	99%	101%	115%	80-120%
17060-07-0	1,2-Dichloroethane-D4	97%	98%	108%	80-120%
2037-26-5	Toluene-D8	100%	99%	98%	80-120%
460-00-4	4-Bromofluorobenzene	99%	98%	93%	82-114%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JE209-3MS	5A11493.D	1	11/11/24	NW	n/a	n/a	V5A328
JE209-3MSD	5A11495.D	1	11/11/24	NW	n/a	n/a	V5A328
JE209-3	5A11489.D	1	11/11/24	NW	n/a	n/a	V5A328
JE209-3	5A11485.D	50	11/11/24	NW	n/a	n/a	V5A328

The QC reported here applies to the following samples: **Method:** SW846 8260D

JD99851-1, JD99851-4

CAS No.	Compound	JE209-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		50	48.8	98	50	49.1	98	1	49-137/12
100-41-4	Ethylbenzene	ND		50	54.4	109	50	53.4	107	2	37-144/12
108-88-3	Toluene	ND		50	54.3	109	50	51.3	103	6	46-139/12
1330-20-7	Xylene (total)	ND		150	162	108	150	160	107	1	38-147/12

CAS No.	Surrogate Recoveries	MS	MSD	JE209-3	JE209-3	Limits
1868-53-7	Dibromofluoromethane	110%	105%	107%	111%	80-120%
17060-07-0	1,2-Dichloroethane-D4	110%	104%	111%	111%	80-120%
2037-26-5	Toluene-D8	100%	97%	94%	102%	80-120%
460-00-4	4-Bromofluorobenzene	106%	101%	101%	97%	82-114%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample:	V2S228-BFB	**Injection Date:**	09/30/24
Lab File ID:	2S009366.D	**Injection Time:**	16:01
Instrument ID:	GCMS2S		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	38040	20.4		Pass
75	30.0 - 60.0% of mass 95	88811	47.7		Pass
95	Base peak, 100% relative abundance	186325	100.0		Pass
96	5.0 - 9.0% of mass 95	12371	6.64		Pass
173	Less than 2.0% of mass 174	1001	0.54	(0.69) [a]	Pass
174	50.0 - 120.0% of mass 95	145648	78.2		Pass
175	5.0 - 9.0% of mass 174	10446	5.61	(7.17) [a]	Pass
176	95.0 - 101.0% of mass 174	140048	75.2	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	9352	5.02	(6.68) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2S228-IC228	2S009368.D	09/30/24	16:40	00:39	Initial cal 0.2
V2S228-IC228	2S009370.D	09/30/24	17:06	01:05	Initial cal 0.5
V2S228-IC228	2S009372.D	09/30/24	17:32	01:31	Initial cal 1
V2S228-IC228	2S009374.D	09/30/24	17:57	01:56	Initial cal 2
V2S228-IC228	2S009376.D	09/30/24	18:23	02:22	Initial cal 4
V2S228-IC228	2S009378.D	09/30/24	18:49	02:48	Initial cal 8
V2S228-IC228	2S009380.D	09/30/24	19:15	03:14	Initial cal 20
V2S228-ICC228	2S009382.D	09/30/24	19:41	03:40	Initial cal 50
V2S228-IC228	2S009384.D	09/30/24	20:07	04:06	Initial cal 100
V2S228-IC228	2S009386.D	09/30/24	20:33	04:32	Initial cal 200
V2S228-ICV228	2S009392.D	09/30/24	21:50	05:49	Initial cal verification 50
V2S228-ICV228	2S009394.D	09/30/24	22:16	06:15	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample:	V2S228-BFB2	**Injection Date:**	10/01/24
Lab File ID:	2S009398.D	**Injection Time:**	15:24
Instrument ID:	GCMS2S		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	38627	20.2		Pass
75	30.0 - 60.0% of mass 95	90099	47.1		Pass
95	Base peak, 100% relative abundance	191211	100.0		Pass
96	5.0 - 9.0% of mass 95	12617	6.60		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 150.0% of mass 95	149304	78.1		Pass
175	5.0 - 9.0% of mass 174	11143	5.83	(7.46) [a]	Pass
176	95.0 - 101.0% of mass 174	144176	75.4	(96.6) [a]	Pass
177	5.0 - 9.0% of mass 176	9411	4.92	(6.53) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2S228-ICV228	2S009400.D	10/01/24	16:08	00:44	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample:	V2S272-BFB	**Injection Date:**	11/08/24
Lab File ID:	2S010580.D	**Injection Time:**	09:04
Instrument ID:	GCMS2S		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	31723	20.5		Pass
75	30.0 - 60.0% of mass 95	74211	48.0		Pass
95	Base peak, 100% relative abundance	154501	100.0		Pass
96	5.0 - 9.0% of mass 95	10065	6.51		Pass
173	Less than 2.0% of mass 174	1225	0.79	(0.98) [a]	Pass
174	50.0 - 120.0% of mass 95	125635	81.3		Pass
175	5.0 - 9.0% of mass 174	8988	5.82	(7.15) [a]	Pass
176	95.0 - 101.0% of mass 174	121472	78.6	(96.7) [a]	Pass
177	5.0 - 9.0% of mass 176	7935	5.14	(6.53) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2S272-CC228	2S010580.D	11/08/24	09:04	00:00	Continuing cal 20
V2S272-CC228	2S010581.D	11/08/24	09:57	00:53	Continuing cal 2
V2S272-BS	2S010582.D	11/08/24	10:22	01:18	Blank Spike
V2S272-BSD	2S010583.D	11/08/24	10:48	01:44	Blank Spike Duplicate
V2S272-MB	2S010585.D	11/08/24	11:40	02:36	Method Blank
ZZZZZZ	2S010586.D	11/08/24	12:09	03:05	(unrelated sample)
JD99612-2	2S010587.D	11/08/24	12:35	03:31	(used for QC only; not part of job JD99851)
ZZZZZZ	2S010588.D	11/08/24	13:01	03:57	(unrelated sample)
JD99612-2MS	2S010589.D	11/08/24	13:35	04:31	Matrix Spike
JD99612-2MSD	2S010590.D	11/08/24	14:01	04:57	Matrix Spike Duplicate
ZZZZZZ	2S010592.D	11/08/24	14:53	05:49	(unrelated sample)
ZZZZZZ	2S010593.D	11/08/24	15:19	06:15	(unrelated sample)
ZZZZZZ	2S010594.D	11/08/24	15:45	06:41	(unrelated sample)
ZZZZZZ	2S010595.D	11/08/24	16:10	07:06	(unrelated sample)
ZZZZZZ	2S010596.D	11/08/24	16:36	07:32	(unrelated sample)
ZZZZZZ	2S010597.D	11/08/24	17:02	07:58	(unrelated sample)
ZZZZZZ	2S010598.D	11/08/24	17:28	08:24	(unrelated sample)
ZZZZZZ	2S010599.D	11/08/24	17:54	08:50	(unrelated sample)
ZZZZZZ	2S010600.D	11/08/24	18:20	09:16	(unrelated sample)
ZZZZZZ	2S010601.D	11/08/24	18:46	09:42	(unrelated sample)
ZZZZZZ	2S010602.D	11/08/24	19:12	10:08	(unrelated sample)
ZZZZZZ	2S010603.D	11/08/24	19:37	10:33	(unrelated sample)
ZZZZZZ	2S010604.D	11/08/24	20:03	10:59	(unrelated sample)
ZZZZZZ	2S010605.D	11/08/24	20:29	11:25	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample:	V2S272-BFB	**Injection Date:**	11/08/24
Lab File ID:	2S010580.D	**Injection Time:**	09:04
Instrument ID:	GCMS2S		

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2S273-CC228	2S010608.D	11/08/24	21:47	12:43	Continuing cal 50
V2S273-CC228	2S010609.D	11/08/24	22:13	13:09	Continuing cal 1
V2S273-BS	2S010610.D	11/08/24	22:39	13:35	Blank Spike
V2S273-MB	2S010612.D	11/08/24	23:30	14:26	Method Blank
JD99851-5	2S010613.D	11/08/24	23:56	14:52	MW-1_110424
JD99851-5MS	2S010615.D	11/09/24	00:48	15:44	Matrix Spike
JD99851-5MSD	2S010616.D	11/09/24	01:14	16:10	Matrix Spike Duplicate
ZZZZZZ	2S010617.D	11/09/24	01:40	16:36	(unrelated sample)
ZZZZZZ	2S010618.D	11/09/24	02:06	17:02	(unrelated sample)
JD99851-2	2S010619.D	11/09/24	02:31	17:27	FB_110424
JD99851-3	2S010620.D	11/09/24	02:57	17:53	TB_110424
ZZZZZZ	2S010621.D	11/09/24	03:23	18:19	(unrelated sample)
ZZZZZZ	2S010622.D	11/09/24	03:49	18:45	(unrelated sample)
ZZZZZZ	2S010623.D	11/09/24	04:15	19:11	(unrelated sample)
ZZZZZZ	2S010625.D	11/09/24	05:07	20:03	(unrelated sample)
ZZZZZZ	2S010626.D	11/09/24	05:33	20:29	(unrelated sample)
ZZZZZZ	2S010627.D	11/09/24	05:58	20:54	(unrelated sample)
ZZZZZZ	2S010628.D	11/09/24	06:24	21:20	(unrelated sample)
JD99851-6	2S010631.D	11/09/24	07:42	22:38	MW-6_110424
ZZZZZZ	2S010632.D	11/09/24	08:08	23:04	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample:	V5A284-BFB	**Injection Date:**	09/09/24
Lab File ID:	5A9709.D	**Injection Time:**	17:08
Instrument ID:	GCMS5A		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	18431	21.6		Pass
75	30.0 - 60.0% of mass 95	40091	46.9		Pass
95	Base peak, 100% relative abundance	85443	100.0		Pass
96	5.0 - 9.0% of mass 95	5588	6.54		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	78139	91.5		Pass
175	5.0 - 9.0% of mass 174	6784	7.94	(8.68) [a]	Pass
176	95.0 - 101.0% of mass 174	75659	88.5	(96.8) [a]	Pass
177	5.0 - 9.0% of mass 176	4914	5.75	(6.49) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5A284-IC284	5A9711.D	09/09/24	17:55	00:47	Initial cal 0.2
V5A284-IC284	5A9713.D	09/09/24	18:31	01:23	Initial cal 0.5
V5A284-IC284	5A9715.D	09/09/24	19:07	01:59	Initial cal 1
V5A284-IC284	5A9717.D	09/09/24	19:43	02:35	Initial cal 2
V5A284-IC284	5A9719.D	09/09/24	20:19	03:11	Initial cal 4
V5A284-IC284	5A9721.D	09/09/24	20:55	03:47	Initial cal 8
V5A284-IC284	5A9723.D	09/09/24	21:30	04:22	Initial cal 20
V5A284-ICC284	5A9725.D	09/09/24	22:06	04:58	Initial cal 50
V5A284-IC284	5A9727.D	09/09/24	22:41	05:33	Initial cal 100
V5A284-IC284	5A9729.D	09/09/24	23:17	06:09	Initial cal 200
V5A284-ICV284	5A9735.D	09/10/24	01:05	07:57	Initial cal verification 50

Instrument Performance Check (BFB)

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample:	V5A284-BFB2	**Injection Date:**	09/13/24
Lab File ID:	5A9741.D	**Injection Time:**	16:36
Instrument ID:	GCMS5A		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	17592	21.5		Pass
75	30.0 - 60.0% of mass 95	39085	47.8		Pass
95	Base peak, 100% relative abundance	81701	100.0		Pass
96	5.0 - 9.0% of mass 95	5611	6.87		Pass
173	Less than 2.0% of mass 174	0	0.00	(0.00) [a]	Pass
174	50.0 - 120.0% of mass 95	77083	94.3		Pass
175	5.0 - 9.0% of mass 174	5959	7.29	(7.73) [a]	Pass
176	95.0 - 101.0% of mass 174	74752	91.5	(97.0) [a]	Pass
177	5.0 - 9.0% of mass 176	5085	6.22	(6.80) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V5A284-ICV284	5A9743.D	09/13/24	17:12	00:36	Initial cal verification 50

Internal Standard Area Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Check Std:	V2S273-CC228	**Injection Date:**	11/08/24
Lab File ID:	2S010608.D	**Injection Time:**	21:47
Instrument ID:	GCMS2S	**Method:**	SW846 8260D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	123002	2.73	218011	4.62	432914	4.93	366205	6.51	188784	7.59
Upper Limit [a]	246004	3.23	436022	5.12	865828	5.43	732410	7.01	377568	8.09
Lower Limit [b]	61501	2.23	109006	4.12	216457	4.43	183103	6.01	94392	7.09
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
V2S273-BS	119311	2.73	220289	4.62	437177	4.94	369604	6.51	189528	7.59
V2S273-MB	82067	2.73	190049	4.62	393689	4.94	336988	6.51	181845	7.59
JD99851-5	90505	2.74	190431	4.62	388122	4.94	335953	6.51	180850	7.59
JD99851-5MS	138815	2.74	226220	4.62	445859	4.94	374104	6.51	192002	7.59
JD99851-5MSD	137568	2.74	226337	4.62	450765	4.94	379002	6.51	195170	7.59
ZZZZZZ	100136	2.73	215031	4.62	425001	4.93	370581	6.51	197035	7.59
ZZZZZZ	91832	2.73	203984	4.62	405096	4.93	354766	6.51	190224	7.59
JD99851-2	90215	2.73	199670	4.62	401479	4.93	352458	6.51	186259	7.59
JD99851-3	87164	2.73	199522	4.62	407476	4.93	346373	6.51	186052	7.59
ZZZZZZ	88655	2.73	196380	4.62	397779	4.93	340985	6.51	185697	7.59
ZZZZZZ	87566	2.73	196886	4.62	401983	4.93	343945	6.51	182616	7.59
ZZZZZZ	85408	2.73	194450	4.62	388403	4.93	340421	6.51	182668	7.59
ZZZZZZ	83420	2.73	189772	4.62	383967	4.94	330490	6.51	177475	7.59
ZZZZZZ	90210	2.73	189831	4.62	387849	4.93	338980	6.51	183109	7.59
ZZZZZZ	85501	2.73	191550	4.62	390358	4.94	338206	6.51	179200	7.59
ZZZZZZ	83535	2.73	187847	4.62	384243	4.93	332513	6.51	179137	7.59
JD99851-6	76026	2.73	193717	4.62	389019	4.93	339726	6.51	183025	7.59
ZZZZZZ	90292	2.73	213935	4.62	407318	4.93	360334	6.51	189670	7.59

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Internal Standard Area Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Check Std:	V5A328-CC284	**Injection Date:**	11/11/24
Lab File ID:	5A11469.D	**Injection Time:**	08:47
Instrument ID:	GCMS5A	**Method:**	SW846 8260D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	77358	2.64	125031	3.65	225389	4.12	190082	5.99	82753	7.58
Upper Limit [a]	154716	3.14	250062	4.15	450778	4.62	380164	6.49	165506	8.08
Lower Limit [b]	38679	2.14	62516	3.15	112695	3.62	95041	5.49	41377	7.08

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
V5A328-BS	81566	2.63	119727	3.65	223967	4.12	194613	5.99	83582	7.58
V5A328-MB	72485	2.64	129180	3.65	232551	4.12	196330	5.99	88380	7.58
JD99851-1	68494	2.63	130545	3.65	244800	4.12	191922	6.00	85135	7.58
JD99851-4	66898	2.63	121584	3.65	231030	4.12	186916	6.00	83667	7.58
ZZZZZZ	79015	2.63	120073	3.65	222691	4.12	189008	6.00	82922	7.58
ZZZZZZ	69772	2.63	107897	3.65	195491	4.12	187916	6.00	78663	7.58
JE209-3	62909	2.64	111417	3.65	199721	4.12	166032	6.00	79270	7.58
ZZZZZZ	56967	2.63	111046	3.65	196753	4.12	165218	6.00	77253	7.58
JE209-3	62268	2.63	107057	3.65	198571	4.12	177478	6.00	88587	7.58
ZZZZZZ	63149	2.63	108820	3.65	195375	4.12	158356	6.00	79946	7.58
JE209-3MS	69069	2.63	101749	3.65	186667	4.12	159997	6.00	71831	7.58
JE209-3MSD	71785	2.63	105751	3.65	188326	4.12	161964	6.00	76349	7.58
ZZZZZZ	60562	2.63	114604	3.65	201880	4.12	166960	6.00	77480	7.58
ZZZZZZ	70367	2.63	115305	3.65	202627	4.12	174071	6.00	80229	7.58
ZZZZZZ	65236	2.63	112875	3.65	197409	4.12	168435	6.00	77959	7.58
ZZZZZZ	57723	2.63	114036	3.65	203912	4.12	167813	6.00	76494	7.58
ZZZZZZ	61975	2.63	112815	3.65	198904	4.12	164452	6.00	84323	7.58
ZZZZZZ	65608	2.63	113440	3.65	196312	4.12	165357	6.00	75157	7.58

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Method: SW846 8260D **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JD99851-1	5A11477.D	108	102	107	105
JD99851-2	2S010619.D	113	105	96	95
JD99851-3	2S010620.D	113	104	98	95
JD99851-4	5A11479.D	114	101	105	105
JD99851-5	2S010613.D	115	108	98	93
JD99851-6	2S010631.D	112	102	96	93
JD99851-5MS	2S010615.D	99	97	100	99
JD99851-5MSD	2S010616.D	101	98	99	98
JE209-3MS	5A11493.D	110	110	100	106
JE209-3MSD	5A11495.D	105	104	97	101
V2S273-BS	2S010610.D	101	98	99	98
V2S273-MB	2S010612.D	115	105	97	93
V5A328-BS	5A11473.D	108	106	99	106
V5A328-MB	5A11475.D	112	110	105	104

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	80-120%
S2 = 1,2-Dichloroethane-D4	80-120%
S3 = Toluene-D8	80-120%
S4 = 4-Bromofluorobenzene	82-114%

Initial Calibration Summary

Job Number: JD99851 **Sample:** V2S228-ICC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009382.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Response Factor Report GCMS S

Method : C:\msdchem\1\methods\m2s228.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Tue Oct 01 15:53:48 2024
Response via : Initial Calibration

Calibration Files
4 =2S009376.D 0.5 =2S009370.D 8 =2S009378.D 50 =2S009382.D
100 =2S009384.D 1 =2S009372.D 200 =2S009386.D 20 =2S009380.D
2 =2S009374.D 0.2 =2S009368.D = =

Compound	4	0.5	8	50	100	1	200	20	2	0.2	Avg	%RSD
1) I tert butyl alcohol-d9	ISTD											
2) ethanol	0.131		0.107	0.092	0.083	0.225	0.067	0.098	0.160		0.120	42.56
----- Quadratic regression ----- Coefficient = 0.9999												
Response Ratio = 0.02565 + 0.09617 *A + -0.00074 *A^2												
3) tertiary butyl alcohol	0.948		1.009	1.075	1.083	1.217	1.057	0.994	0.900		1.035	9.37
4) 1,4-dioxane	0.073		0.073	0.078	0.073		0.064	0.076	0.067		0.072	6.97
5) I pentafluorobenzene	ISTD											
6) chlorodifluoromethane	0.568	0.530	0.542	0.639	0.671	0.513	0.643	0.633	0.520		0.584	10.54
7) dichlorodifluoromethane	0.670		0.655	0.768	0.789	0.727	0.766	0.741	0.638		0.719	8.00
8) chloromethane	0.593	0.643	0.583	0.658	0.666	0.729	0.644	0.647	0.574		0.637	7.60
9) vinyl chloride	0.543		0.553	0.637	0.663	0.632	0.644	0.617	0.516		0.601	9.16
10) 1,3-butadiene	0.415	0.436	0.378	0.432	0.472	0.357	0.447	0.433	0.373		0.416	9.25
11) bromomethane	0.165		0.168	0.233	0.265		0.275	0.198	0.143		0.207	25.01
----- Quadratic regression ----- Coefficient = 0.9982												
Response Ratio = -0.00525 + 0.22899 *A + 0.01246 *A^2												
12) chloroethane	0.294	0.281	0.304	0.340	0.348	0.355	0.332	0.328	0.283		0.318	8.89
13) trichlorofluoromethane	0.577		0.582	0.676	0.708	0.622	0.675	0.658	0.568		0.633	8.44
14) ethyl ether	0.196	0.210	0.215	0.260	0.278	0.225	0.280	0.244	0.186		0.233	14.90
15) acrolein	0.097		0.104	0.116	0.122	0.099	0.123	0.107	0.103		0.109	9.47
16) freon 113	0.245		0.239	0.299	0.320		0.313	0.286	0.215		0.274	14.94
17) 1,1-dichloroethene	0.561	0.516	0.552	0.659	0.688	0.517	0.668	0.633	0.501		0.588	12.52
18) acetone	0.041		0.043	0.054	0.059		0.061	0.050	0.038		0.049	18.39
19) acetonitrile	0.060		0.060	0.064	0.065		0.065	0.062	0.065		0.063	3.60
20) iodomethane												

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      0.224       0.250 0.391 0.417       0.410 0.336 0.180        0.315   30.76
            ----- Linear regression -----  Coefficient =  0.9978
              Response Ratio = -0.01409 + 0.41209 *A

21)  carbon disulfide
      1.036 1.099 1.005 1.179 1.234 1.001 1.193 1.150 0.982        1.098    8.65
22)  methylene chloride
      0.441       0.415 0.449 0.461 0.632 0.454 0.446 0.493        0.474   14.21
23)  methyl acetate
      0.067       0.070 0.096 0.106       0.112 0.085              0.089   20.58
            ----- Linear regression -----  Coefficient =  0.9969
              Response Ratio = -0.00526 + 0.10938 *A

24)  methyl tert butyl ether
      0.840       0.904 1.203 1.308 0.891       1.079 0.753        0.997   20.45
         ----- Quadratic regression -----                Coefficient =  0.9989
              Response Ratio = -0.00789 + 1.03055 *A + 0.14471 *A^2

25)  trans-1,2-dichloroethene
      0.380 0.367 0.351 0.432 0.450 0.312 0.449 0.404 0.318        0.385   13.68
26)  hexane
      0.803       0.823 1.067 1.139       1.121 0.983 0.741        0.954   17.17
27)  di-isopropyl ether
      1.207 1.305 1.253 1.574 1.677 1.266 1.665 1.424 1.064        1.382   15.63
28)  ethyl tert-butyl ether
      1.074 1.045 1.136 1.498 1.613 1.131 1.626 1.334 0.986        1.271   19.80
29)  2-butanone
      0.041       0.047 0.072 0.079       0.083 0.060 0.038        0.060   30.66
         ----- Quadratic regression -----                Coefficient =  0.9983
              Response Ratio = -0.00804 + 0.07006 *A + 0.00089 *A^2

30)  1,1-dichloroethane
      0.743 0.763 0.740 0.871 0.902 0.724 0.873 0.844 0.686        0.794    9.91
31)  chloroprene
      0.599       0.577 0.777 0.832       0.795 0.721 0.521        0.689   17.68
32)  acrylonitrile
      0.163       0.173 0.210 0.207 0.163 0.207 0.193 0.166        0.185   11.42
33)  vinyl acetate
      0.052       0.071 0.104 0.113       0.123 0.087              0.092   29.28
         ----- Quadratic regression -----                Coefficient =  0.9997
              Response Ratio = -0.00464 + 0.10235 *A + 0.00561 *A^2

34)  ethyl acetate
      0.036       0.046 0.073 0.079       0.081 0.060              0.062   29.34
            ----- Linear regression -----  Coefficient =  0.9982
              Response Ratio = -0.00477 + 0.08074 *A

35)  2,2-dichloropropane
      0.486 0.496 0.474 0.602 0.636 0.395 0.629 0.543 0.431        0.521   16.61
36)  cis-1,2-dichloroethene
      0.401 0.362 0.403 0.475 0.495 0.414 0.488 0.446 0.353        0.426   12.30
37)  propionitrile
      0.073       0.078 0.092 0.095 0.090 0.097 0.085 0.075        0.086   10.87
38)  methyl acrylate
      0.051       0.060 0.093 0.103       0.104 0.078              0.081   27.31
            ----- Linear regression -----  Coefficient =  0.9980
              Response Ratio = -0.00584 + 0.10389 *A

39)  bromochloromethane
      0.191 0.171 0.201 0.233 0.236 0.189 0.226 0.219 0.187        0.206   11.36
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40)  tetrahydrofuran
                0.054 0.077 0.084       0.089 0.063             0.073   19.87
41)  chloroform
      0.197     0.186 0.210 0.214 0.210 0.205 0.205 0.180       0.201    6.14
42)  dibromofluoromethane (s)
      0.622 0.615 0.618 0.602 0.601 0.628 0.606 0.619 0.624 0.630  0.617    1.67
43)  methacrylonitrile
                0.172 0.228 0.251       0.255 0.207             0.223   15.41
44)  1,1,1-trichloroethane
      0.561 0.486 0.554 0.696 0.733 0.500 0.729 0.656 0.481       0.600   17.43
45)  cyclohexane
      0.531     0.550 0.674 0.710 0.522 0.697 0.624 0.487       0.599   14.62
46)  1,1-dichloropropene
      0.457     0.448 0.604 0.639 0.388 0.624 0.561 0.391       0.514   20.38
         ----- Quadratic regression -----              Coefficient =  0.9984
              Response Ratio = -0.00785 + 0.60290 *A + 0.00726 *A^2

47)  carbon tetrachloride
      0.483     0.484 0.610 0.649 0.421 0.643 0.581 0.426       0.537   17.58
48)  isobutyl alcohol
      0.009     0.010 0.016 0.019       0.022 0.012             0.015   34.55
         ----- Quadratic regression -----              Coefficient =  0.9990
              Response Ratio = -0.00635 + 0.01480 *A + 0.00019 *A^2

49)  tert-amyl alcohol
      0.018     0.022 0.026 0.027       0.029 0.023             0.024   15.41

50) I   1,4-difluorobenzene   ----------------ISTD--------------------
51)  1,2-dichloroethane-d4 (s)
      0.375 0.373 0.381 0.361 0.361 0.376 0.360 0.380 0.374 0.373  0.371    2.09
52)  iso-octane
      0.661     0.641 0.827 0.900       0.890 0.756 0.567       0.749   17.37
53)  benzene
      0.740 0.717 0.748 0.909 0.955 0.708 0.918 0.838 0.669       0.800   13.25
54)  tert-amyl methyl ether
      0.455 0.523 0.478 0.604 0.655 0.525 0.670 0.531 0.417       0.540   16.16
55)  heptane
      0.145     0.145 0.170 0.179       0.173 0.162 0.121       0.156   13.17
56)  isopropyl acetate
      0.036     0.041 0.061 0.070       0.073 0.051             0.055   27.24
           ----- Linear regression -----  Coefficient =  0.9959
              Response Ratio = -0.00427 + 0.07179 *A

57)  1,2-dichloroethane
      0.309 0.414 0.306 0.345 0.348 0.350 0.338 0.333 0.284       0.336   10.90
58)  n-butyl alcohol
      0.003     0.003 0.006 0.007       0.007 0.004             0.005   34.33
         ----- Quadratic regression -----              Coefficient =  0.9976
              Response Ratio = -0.01357 + 0.00547 *A + 0.00001 *A^2

59)  ethyl acrylate
      0.275     0.306 0.393 0.420       0.421 0.348             0.361   16.97
60)  trichloroethene
      0.192 0.186 0.190 0.245 0.259 0.181 0.252 0.224 0.165       0.210   16.56
61)  2-nitropropane
      0.067     0.066 0.089 0.098 0.089 0.085 0.077 0.074       0.080   14.43
62)  2-chloroethyl vinyl ether
      0.122 0.116 0.136 0.168 0.178 0.127 0.175 0.153 0.107       0.143   18.75
63)  methyl methacrylate
      0.053     0.062 0.078 0.083       0.085 0.067 0.047       0.068   22.13
```

```
            ----- Linear regression -----  Coefficient =  0.9978
              Response Ratio = -0.00234 + 0.08399 *A

64)  1,2-dichloropropane
      0.214 0.208 0.210 0.263 0.271 0.208 0.264 0.236 0.190        0.229   13.07
65)  methylcyclohexane
      0.160       0.155 0.196 0.212       0.207 0.177 0.148        0.179   14.50
66)  dibromomethane
      0.128 0.147 0.133 0.148 0.152 0.154 0.151 0.140 0.120        0.142    8.44
67)  bromodichloromethane
      0.256 0.279 0.262 0.322 0.330 0.272 0.322 0.294 0.232        0.286   11.89
68)  epichlorohydrin
      0.021       0.026 0.032 0.036       0.038 0.029              0.030   20.86
            ----- Linear regression -----  Coefficient =  0.9973
              Response Ratio = -0.00882 + 0.03696 *A

69)  cis-1,3-dichloropropene
      0.280 0.299 0.299 0.385 0.407 0.275 0.401 0.343 0.246        0.326   18.29
70)  4-methyl-2-pentanone
      0.086       0.092 0.123 0.130 0.084       0.109 0.073        0.100   21.66
         ----- Quadratic regression -----                Coefficient =  0.9988
              Response Ratio = -0.00404 + 0.10724 *A + 0.00305 *A^2

71)  3-methyl-1-butanol
      0.003       0.003 0.005 0.006       0.007 0.004 0.004        0.005   30.09
         ----- Quadratic regression -----                Coefficient =  0.9977
              Response Ratio = -0.00201 + 0.00471 *A + 0.00003 *A^2


72) I   chlorobenzene-d5      ----------------ISTD---------------------
73)  toluene-d8 (s)
      1.325 1.327 1.341 1.362 1.348 1.313 1.337 1.329 1.324 1.325  1.333    1.07
74)  toluene
      0.555 0.571 0.558 0.667 0.692 0.562 0.670 0.622 0.492        0.599   11.23
75)  ethyl methacrylate
      0.246       0.275 0.350 0.366 0.276 0.357 0.314 0.214        0.300   18.66
76)  trans-1,3-dichloropropene
      0.298       0.329 0.431 0.449 0.316 0.432 0.378 0.277        0.364   18.62
77)  1,1,2-trichloroethane
      0.166 0.173 0.176 0.218 0.224 0.188 0.217 0.196 0.150        0.190   13.73
78)  tetrachloroethene
      0.235 0.202 0.231 0.281 0.291 0.199 0.278 0.260 0.215        0.244   14.50
79)  2-hexanone
      0.103       0.115 0.146 0.151 0.112 0.146 0.133 0.087        0.124   18.75
80)  1,3-dichloropropane
      0.343 0.378 0.364 0.445 0.459 0.367 0.442 0.407 0.322        0.392   12.43
81)  butyl acetate
      0.142       0.154 0.214 0.231       0.231 0.183              0.192   20.18
            ----- Linear regression -----  Coefficient =  0.9986
              Response Ratio = -0.01024 + 0.23172 *A

82)  dibromochloromethane
      0.234 0.273 0.249 0.310 0.324 0.268 0.317 0.281 0.215        0.275   13.82
83)  1,2-dibromoethane
      0.219 0.204 0.223 0.277 0.285 0.234 0.280 0.247 0.198        0.241   13.89
84)  n-butyl ether
      1.029 0.963 1.096 1.308 1.335 0.951 1.252 1.234 0.887        1.117   15.12
85)  chlorobenzene
      0.613 0.644 0.626 0.730 0.753 0.631 0.720 0.680 0.557        0.662    9.64
86)  1,1,1,2-tetrachloroethane
```

```
      0.201 0.195 0.213 0.264 0.276 0.197 0.266 0.240 0.175        0.225   16.37
 87)  ethylbenzene
      1.058 1.237 1.039 1.211 1.245 1.099 1.176 1.158 0.989        1.135    8.14
 88)  m,p-xylene
      0.419 0.403 0.416 0.485 0.490 0.407 0.459 0.465 0.370        0.435    9.51
 89)  o-xylene
      0.394 0.360 0.396 0.465 0.475 0.377 0.451 0.426 0.341        0.410   11.60
 90)  styrene
      0.665 0.618 0.675 0.807 0.822 0.648 0.787 0.753 0.571        0.705   12.76
 91)  bromoform
      0.168 0.185 0.175 0.215 0.228 0.176 0.225 0.197 0.154        0.191   13.70
 92)  butyl acrylate
      0.425 0.430 0.463 0.605 0.623 0.452 0.599 0.531 0.365        0.499   18.64
 93)  isopropylbenzene
      0.909 0.830 0.888 1.079 1.095 0.853 1.045 1.013 0.796        0.945   12.05
 94)  cis-1,4-dichloro-2-butene
      0.099       0.107 0.170 0.174       0.168 0.181              0.150   24.40
           ----- Linear regression -----  Coefficient =  0.9977
             Response Ratio = -0.00613 + 0.17340 *A


 95) I   1,4-dichlorobenzene-d ----------------ISTD--------------------
 96)  4-bromofluorobenzene (s)
      0.949 0.937 0.936 0.956 0.954 0.918 0.961 0.953 0.947 0.935  0.945    1.35
 97)  bromobenzene
      0.458 0.437 0.452 0.549 0.564 0.492 0.560 0.514 0.406        0.492   11.75
 98)  1,1,2,2-tetrachloroethane
      0.510 0.541 0.547 0.675 0.706 0.523 0.715 0.622 0.485        0.591   15.07
 99)  trans-1,4-dichloro-2-butene
      0.200 0.214 0.203 0.253 0.259 0.209 0.260 0.225 0.168        0.221   14.10
100)  1,2,3-trichloropropane
      0.163       0.173 0.215 0.227 0.183 0.229 0.201 0.155        0.193   15.03
101)  n-propylbenzene
      2.277 2.236 2.211 2.758 2.819 2.225 2.719 2.603 2.029        2.431   12.03
102)  2-chlorotoluene
      0.457 0.444 0.460 0.543 0.560 0.430 0.543 0.540 0.385        0.485   12.99
103)  4-chlorotoluene
      1.480 1.411 1.435 1.750 1.775 1.402 1.711 1.649 1.336        1.550   10.97
104)  1,3,5-trimethylbenzene
      1.650 1.635 1.626 2.000 2.012 1.612 1.926 1.883 1.438        1.754   11.66
105)  tert-butylbenzene
      1.362 1.315 1.334 1.677 1.719 1.316 1.704 1.565 1.229        1.469   13.29
106)  1,2,4-trimethylbenzene
      1.705 1.616 1.684 2.071 2.085 1.642 1.987 1.936 1.432        1.795   12.84
107)  sec-butylbenzene
      1.968 1.832 1.913 2.418 2.479 1.744 2.388 2.286 1.740        2.085   14.60
108)  1,3-dichlorobenzene
      0.973 0.975 0.930 1.141 1.156 0.950 1.128 1.068 0.868 0.838  1.003   11.40
109)  p-isopropyltoluene
      1.752 1.624 1.699 2.124 2.189 1.528 2.088 2.003 1.529        1.837   14.39
110)  1,4-dichlorobenzene
      0.977 1.047 0.953 1.132 1.154 0.997 1.129 1.072 0.896 0.965  1.032    8.53
111)  1,2-dichlorobenzene
      0.913 0.974 0.914 1.087 1.100 0.980 1.076 1.020 0.838        0.989    9.09
112)  1,2,3-trimethylbenzene
      1.803 1.881 1.764 2.149 2.162 1.871 2.063 2.034 1.639        1.930    9.42
113)  n-butylbenzene
      0.904 0.885 0.880 1.135 1.181 0.809 1.132 1.068 0.805        0.978   15.33
114)  1,2-dibromo-3-chloropropane
      0.156       0.154 0.188 0.199 0.160 0.199 0.171 0.133        0.170   13.91
```

Initial Calibration Summary

Job Number: JD99851 **Sample:** V2S228-ICC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009382.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

```
115)  1,3,5-trichlorobenzene
       0.663 0.658 0.659 0.815 0.833 0.635 0.798 0.753 0.586        0.711   12.62
116)  1,2,4-trichlorobenzene
       0.575 0.616 0.595 0.748 0.765 0.596 0.741 0.679 0.539        0.650   12.96
117)  hexachlorobutadiene
       0.242       0.238 0.293 0.304 0.228 0.298 0.273 0.226        0.263   12.53
118)  naphthalene
       1.815 1.953 1.927 2.439 2.470 2.018 2.373 2.206 1.626        2.092   14.16
119)  1,2,3-trichlorobenzene
       0.553 0.579 0.571 0.704 0.719 0.586 0.694 0.655 0.532        0.621   11.53
120)  hexachloroethane
       0.272       0.257 0.364 0.383       0.391 0.315 0.220        0.315   21.43
             ----- Linear regression -----  Coefficient =  0.9978
               Response Ratio = -0.01046 + 0.38632 *A

121)  benzyl chloride
       0.196       0.192 0.271 0.290       0.295 0.234              0.246   18.56
122)  2-methylnaphthalene
       0.896 1.054 0.906 1.103 1.157 0.986 1.207 0.993 0.795        1.011   13.21
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           m2s228.m          Tue Oct 01 15:54:31 2024
```

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009392.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\Initials\VS228\2S009392.D Vial: 30
Acq On : 30 Sep 2024 09:50 pm Operator: edwardd
Sample : icv228-50 Inst : GCMS S
Misc : MS81509,V2S228,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\m2s228.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Tue Oct 01 15:53:48 2024
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	108	0.00	2.74
		True	Calc.	% Drift			
2	ethanol	5000.000	4046.544	19.1	89	0.00	2.01
		AvgRF	CCRF	% Dev			
3 M	tertiary butyl alcohol	1.035	1.071	-3.5	107	0.00	2.80
4	1,4-dioxane	0.072	0.066	8.3	91	0.00	5.35
5 I	pentafluorobenzene	1.000	1.000	0.0	100	0.00	4.62
6	chlorodifluoromethane		NA				
7	dichlorodifluoromethane	0.719	0.567	21.1	74	0.00	1.19
8	chloromethane	0.637	0.606	4.9	92	0.00	1.31
9	vinyl chloride	0.601	0.580	3.5	91	0.00	1.36
10	1,3-butadiene	0.416	0.463	-11.3	107	0.00	1.37
		True	Calc.	% Drift			
11	bromomethane	50.000	47.496	5.0	96	0.00	1.56
		AvgRF	CCRF	% Dev			
12	chloroethane	0.318	0.345	-8.5	102	0.00	1.64
13	trichlorofluoromethane	0.633	0.620	2.1	92	0.00	1.73
14	ethyl ether	0.233	0.270	-15.9	104	0.00	1.92
15	acrolein	0.109	0.120	-10.1	103	0.00	2.31
16	freon 113	0.274	0.295	-7.7	99	0.00	2.10
17	1,1-dichloroethene	0.588	0.645	-9.7	98	0.00	2.07
18	acetone		NA				
19	acetonitrile	0.063	0.065	-3.2	102	0.00	2.94
		True	Calc.	% Drift			
20	iodomethane	50.000	41.375	17.3	84	0.00	2.17
		AvgRF	CCRF	% Dev			
21	carbon disulfide	1.098	1.030	6.2	87	0.00	2.10
22	methylene chloride	0.474	0.450	5.1	100	0.00	2.50
		True	Calc.	% Drift			
23	methyl acetate	50.000	47.258	5.5	103	0.00	2.64
24	methyl tert butyl ether	50.000	52.556	-5.1	103	0.00	2.73
		AvgRF	CCRF	% Dev			
25	trans-1,2-dichloroethene	0.385	0.423	-9.9	98	0.00	2.64

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009392.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

26		hexane	0.954	1.027	-7.7	96	0.00	2.71
27		di-isopropyl ether	1.382	1.501	-8.6	95	0.00	3.09
28		ethyl tert-butyl ether	1.271	1.415	-11.3	95	0.00	3.46
			True	Calc.	% Drift			
29		2-butanone	200.000	235.028	-17.5	118	0.00	4.35
			AvgRF	CCRF	% Dev			
30	M	1,1-dichloroethane	0.794	0.853	-7.4	98	0.00	3.20
31		chloroprene	0.689	0.780	-13.2	101	0.00	3.18
32		acrylonitrile	0.185	0.224	-21.1	107	0.00	3.24
			True	Calc.	% Drift			
33		vinyl acetate	50.000	36.642	26.7	71	0.00	3.46
34		ethyl acetate	50.000	47.161	5.7	98	0.00	4.21
			AvgRF	CCRF	% Dev			
35		2,2-dichloropropane	0.521	0.584	-12.1	97	0.00	3.88
36		cis-1,2-dichloroethene	0.426	0.479	-12.4	101	0.00	3.76
37		propionitrile	0.086	0.096	-11.6	105	0.00	4.56
			True	Calc.	% Drift			
38		methyl acrylate	50.000	47.829	4.3	101	0.00	4.21
			AvgRF	CCRF	% Dev			
39		bromochloromethane	0.206	0.230	-11.7	99	0.00	3.98
40		tetrahydrofuran	0.073	0.081	-11.0	105	0.00	4.22
41		chloroform	0.201	0.214	-6.5	102	0.00	4.08
42	S	dibromofluoromethane (s)	0.617	0.600	2.8	100	0.00	4.25
43		methacrylonitrile	0.223	0.232	-4.0	102	0.00	4.58
44		1,1,1-trichloroethane	0.600	0.704	-17.3	101	0.00	4.27
45		cyclohexane	0.599	0.638	-6.5	95	0.00	3.99
			True	Calc.	% Drift			
46		1,1-dichloropropene	50.000	49.494	1.0	99	0.00	4.37
			AvgRF	CCRF	% Dev			
47		carbon tetrachloride	0.537	0.608	-13.2	100	0.00	4.21
			True	Calc.	% Drift			
48		isobutyl alcohol	500.000	523.695	-4.7	107	0.00	4.72
			AvgRF	CCRF	% Dev			
49		tert-amyl alcohol	0.024	0.027	-12.5	107	0.00	4.77
50	I	1,4-difluorobenzene	1.000	1.000	0.0	101	0.00	4.94
51	S	1,2-dichloroethane-d4 (s)	0.371	0.368	0.8	103	0.00	4.64
52		iso-octane	0.749	0.766	-2.3	93	0.00	4.47
53	M	benzene	0.800	0.895	-11.9	99	0.00	4.56
54		tert-amyl methyl ether	0.540	0.578	-7.0	97	0.00	4.64
55		heptane	0.156	0.165	-5.8	97	0.00	4.55
			True	Calc.	% Drift			
56		isopropyl acetate	50.000	45.201	9.6	100	0.00	4.85
			AvgRF	CCRF	% Dev			
57		1,2-dichloroethane	0.336	0.340	-1.2	100	0.00	4.69
			True	Calc.	% Drift			
58		n-butyl alcohol	2500.000	2489.024	0.4	102	0.00	5.11

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009392.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

		AvgRF	CCRF	% Dev			
59	ethyl acrylate	0.361	0.397	-10.0	102	0.00	5.22
60	trichloroethene	0.210	0.253	-20.5	104	0.00	4.92
61	2-nitropropane	0.080	0.098	-22.5	111	0.00	5.86
62	2-chloroethyl vinyl ether	0.143	0.168	-17.5	101	0.00	5.57

		True	Calc.	% Drift			
63	methyl methacrylate	50.000	51.073	-2.1	108	0.00	5.33

		AvgRF	CCRF	% Dev			
64	1,2-dichloropropane	0.229	0.254	-10.9	97	0.00	5.20
65	methylcyclohexane	0.179	0.200	-11.7	103	0.00	4.92
66	dibromomethane	0.142	0.150	-5.6	102	0.00	5.14
67	bromodichloromethane	0.286	0.321	-12.2	100	0.00	5.24

		True	Calc.	% Drift			
68	epichlorohydrin	250.000	242.340	3.1	106	0.00	5.73

		AvgRF	CCRF	% Dev			
69	cis-1,3-dichloropropene	0.326	0.380	-16.6	99	0.00	5.60

		True	Calc.	% Drift			
70	4-methyl-2-pentanone	200.000	208.516	-4.3	102	0.00	5.93
71	3-methyl-1-butanol	1000.000	1048.011	-4.8	105	0.00	5.83

		AvgRF	CCRF	% Dev			
72 I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	6.51
73 S	toluene-d8 (s)	1.333	1.343	-0.8	99	0.00	5.71
74	toluene	0.599	0.654	-9.2	99	0.00	5.73
75	ethyl methacrylate	0.300	0.321	-7.0	92	0.00	6.04
76	trans-1,3-dichloropropene	0.364	0.436	-19.8	102	0.00	5.96
77	1,1,2-trichloroethane	0.190	0.217	-14.2	101	0.00	6.04
78	tetrachloroethene		----------NA----------				
79	2-hexanone	0.124	0.160	-29.0	110	0.00	6.36
80	1,3-dichloropropane	0.392	0.453	-15.6	102	0.00	6.19

		True	Calc.	% Drift			
81	butyl acetate	50.000	49.994	0.0	104	0.00	6.31

		AvgRF	CCRF	% Dev			
82	dibromochloromethane	0.275	0.312	-13.5	101	0.00	6.14
83	1,2-dibromoethane	0.241	0.276	-14.5	100	0.00	6.26
84	n-butyl ether	1.117	1.277	-14.3	98	0.00	6.46
85	chlorobenzene	0.662	0.716	-8.2	99	0.00	6.52
86	1,1,1,2-tetrachloroethane	0.225	0.270	-20.0	103	0.00	6.55
87	ethylbenzene	1.135	1.222	-7.7	102	0.00	6.53
88	m,p-xylene	0.435	0.485	-11.5	101	0.00	6.60
89	o-xylene	0.410	0.481	-17.3	104	0.00	6.80
90	styrene	0.705	0.762	-8.1	95	0.00	6.83
91	bromoform	0.191	0.220	-15.2	103	0.00	6.85
92	butyl acrylate	0.499	0.603	-20.8	100	0.00	6.87
93	isopropylbenzene	0.945	1.184	-25.3	110	0.00	6.95

		True	Calc.	% Drift			
94	cis-1,4-dichloro-2-butene	50.000	49.684	0.6	98	0.00	7.10

		AvgRF	CCRF	% Dev			

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009392.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

95	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	101	0.00	7.59
96	S	4-bromofluorobenzene (s)	0.945	0.952	-0.7	101	0.00	7.08
97		bromobenzene	0.492	0.568	-15.4	105	0.00	7.13
98		1,1,2,2-tetrachloroethane	0.591	0.653	-10.5	98	0.00	7.17
99		trans-1,4-dichloro-2-bute	0.221	0.261	-18.1	104	0.00	7.24
100		1,2,3-trichloropropane	0.193	0.231	-19.7	109	0.00	7.23
101		n-propylbenzene	2.431	2.739	-12.7	101	0.00	7.14
102		2-chlorotoluene	0.485	0.584	-20.4	109	0.00	7.22
103		4-chlorotoluene	1.550	1.731	-11.7	100	0.00	7.29
104		1,3,5-trimethylbenzene	1.754	2.016	-14.9	102	0.00	7.22
105		tert-butylbenzene	1.469	1.807	-23.0	109	0.00	7.37
106		1,2,4-trimethylbenzene	1.795	2.121	-18.2	104	0.00	7.40
107		sec-butylbenzene	2.085	2.466	-18.3	103	0.00	7.45
108		1,3-dichlorobenzene	1.003	1.109	-10.6	98	0.00	7.55
109		p-isopropyltoluene	1.837	2.158	-17.5	103	0.00	7.51
110		1,4-dichlorobenzene	1.032	1.116	-8.1	100	0.00	7.60
111		1,2-dichlorobenzene	0.989	1.067	-7.9	100	0.00	7.78
112		1,2,3-trimethylbenzene		----------NA----------				
113		n-butylbenzene	0.978	1.161	-18.7	104	0.00	7.70
114		1,2-dibromo-3-chloropropa	0.170	0.193	-13.5	104	0.00	8.13
115		1,3,5-trichlorobenzene	0.711	0.862	-21.2	107	0.00	8.15
116		1,2,4-trichlorobenzene	0.650	0.745	-14.6	101	0.00	8.43
117		hexachlorobutadiene	0.263	0.291	-10.6	101	0.00	8.41
118		naphthalene	2.092	2.429	-16.1	101	0.00	8.58
119		1,2,3-trichlorobenzene	0.621	0.706	-13.7	102	0.00	8.67
		----------	True	Calc.	% Drift	----------		
120		hexachloroethane	50.000	47.823	4.4	100	0.00	7.77
		----------	AvgRF	CCRF	% Dev	----------		
121		benzyl chloride	0.246	0.271	-10.2	101	0.00	7.70
122		2-methylnaphthalene	1.011	1.103	-9.1	101	0.00	9.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2S009382.D m2s228.m Wed Oct 02 17:23:44 2024

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009394.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\Initials\VS228\2S009394.D Vial: 32
Acq On : 30 Sep 2024 10:16 pm Operator: edwardd
Sample : icv228-50 Inst : GCMS S
Misc : MS81509,V2S228,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\m2s228.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Tue Oct 01 15:09:31 2024
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	65	0.00	2.74
	----------	True	Calc.	% Drift	----------		
2	ethanol		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
3 M	tertiary butyl alcohol		----------NA----------				
4	1,4-dioxane		----------NA----------				
5 I	pentafluorobenzene	1.000	1.000	0.0	95	0.00	4.62
6	chlorodifluoromethane	0.584	0.630	-7.9	94	0.00	1.22
7	dichlorodifluoromethane		----------NA----------				
8	chloromethane		----------NA----------				
9	vinyl chloride		----------NA----------				
10	1,3-butadiene		----------NA----------				
	----------	True	Calc.	% Drift	----------		
11	bromomethane		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
12	chloroethane		----------NA----------				
13	trichlorofluoromethane		----------NA----------				
14	ethyl ether		----------NA----------				
15	acrolein		----------NA----------				
16	freon 113		----------NA----------				
17	1,1-dichloroethene		----------NA----------				
	----------	True	Calc.	% Drift	----------		
18	acetone		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
19	acetonitrile	0.063	0.066	-4.8	98	0.00	2.94
	----------	True	Calc.	% Drift	----------		
20	iodomethane		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
21	carbon disulfide		----------NA----------				
22	methylene chloride		----------NA----------				
	----------	True	Calc.	% Drift	----------		
23	methyl acetate		----------NA----------				

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009394.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

24		methyl tert butyl ether		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
25		trans-1,2-dichloroethene		----------NA----------				
26		hexane		----------NA----------				
27		di-isopropyl ether		----------NA----------				
28		ethyl tert-butyl ether		----------NA----------				
		----------	True	Calc.	% Drift	----------		
29		2-butanone		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
30	M	1,1-dichloroethane		----------NA----------				
31		chloroprene		----------NA----------				
32		acrylonitrile	0.185	0.224	-21.1	101	0.00	3.24
		----------	True	Calc.	% Drift	----------		
33		vinyl acetate		----------NA----------				
34		ethyl acetate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
35		2,2-dichloropropane		----------NA----------				
36		cis-1,2-dichloroethene		----------NA----------				
37		propionitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
38		methyl acrylate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
39		bromochloromethane		----------NA----------				
40		tetrahydrofuran		----------NA----------				
41		chloroform		----------NA----------				
42	S	dibromofluoromethane (s)	0.617	0.621	-0.6	98	0.00	4.25
43		methacrylonitrile		----------NA----------				
44		1,1,1-trichloroethane		----------NA----------				
45		cyclohexane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
46		1,1-dichloropropene		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
47		carbon tetrachloride		----------NA----------				
		----------	True	Calc.	% Drift	----------		
48		isobutyl alcohol		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
49		tert-amyl alcohol		----------NA----------				
50	I	1,4-difluorobenzene	1.000	1.000	0.0	95	0.00	4.94
51	S	1,2-dichloroethane-d4 (s)	0.371	0.369	0.5	97	0.00	4.64
52		iso-octane		----------NA----------				
53	M	benzene		----------NA----------				
54		tert-amyl methyl ether		----------NA----------				
55		heptane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
56		isopropyl acetate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009394.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

57	1,2-dichloroethane		----------NA----------				
		True	Calc.	% Drift			
58	n-butyl alcohol		----------NA----------				
		AvgRF	CCRF	% Dev			
59	ethyl acrylate		----------NA----------				
60	trichloroethene		----------NA----------				
61	2-nitropropane		----------NA----------				
62	2-chloroethyl vinyl ether		----------NA----------				
		True	Calc.	% Drift			
63	methyl methacrylate		----------NA----------				
		AvgRF	CCRF	% Dev			
64	1,2-dichloropropane		----------NA----------				
65	methylcyclohexane		----------NA----------				
66	dibromomethane		----------NA----------				
67	bromodichloromethane		----------NA----------				
		True	Calc.	% Drift			
68	epichlorohydrin		----------NA----------				
		AvgRF	CCRF	% Dev			
69	cis-1,3-dichloropropene		----------NA----------				
		True	Calc.	% Drift			
70	4-methyl-2-pentanone		----------NA----------				
71	3-methyl-1-butanol		----------NA----------				
		AvgRF	CCRF	% Dev			
72 I	chlorobenzene-d5	1.000	1.000	0.0	96	0.00	6.51
73 S	toluene-d8 (s)	1.333	1.318	1.1	93	0.00	5.71
74	toluene		----------NA----------				
75	ethyl methacrylate		----------NA----------				
76	trans-1,3-dichloropropene		----------NA----------				
77	1,1,2-trichloroethane		----------NA----------				
78	tetrachloroethene	0.244	0.280	-14.8	96	0.00	5.95
79	2-hexanone		----------NA----------				
80	1,3-dichloropropane		----------NA----------				
		True	Calc.	% Drift			
81	butyl acetate		----------NA----------				
		AvgRF	CCRF	% Dev			
82	dibromochloromethane		----------NA----------				
83	1,2-dibromoethane		----------NA----------				
84	n-butyl ether		----------NA----------				
85	chlorobenzene		----------NA----------				
86	1,1,1,2-tetrachloroethane		----------NA----------				
87	ethylbenzene		----------NA----------				
88	m,p-xylene		----------NA----------				
89	o-xylene		----------NA----------				
90	styrene		----------NA----------				
91	bromoform		----------NA----------				
92	butyl acrylate		----------NA----------				
93	isopropylbenzene		----------NA----------				
		True	Calc.	% Drift			

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009394.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

			AvgRF	CCRF	% Dev			
94		cis-1,4-dichloro-2-butene		----------NA----------				
			AvgRF	CCRF	% Dev			
95	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	7.59
96	S	4-bromofluorobenzene (s)	0.945	0.924	2.2	98	0.00	7.08
97		bromobenzene		----------NA----------				
98		1,1,2,2-tetrachloroethane		----------NA----------				
99		trans-1,4-dichloro-2-bute		----------NA----------				
100		1,2,3-trichloropropane		----------NA----------				
101		n-propylbenzene		----------NA----------				
102		2-chlorotoluene		----------NA----------				
103		4-chlorotoluene		----------NA----------				
104		1,3,5-trimethylbenzene		----------NA----------				
105		tert-butylbenzene		----------NA----------				
106		1,2,4-trimethylbenzene		----------NA----------				
107		sec-butylbenzene		----------NA----------				
108		1,3-dichlorobenzene		----------NA----------				
109		p-isopropyltoluene		----------NA----------				
110		1,4-dichlorobenzene		----------NA----------				
111		1,2-dichlorobenzene		----------NA----------				
112		1,2,3-trimethylbenzene	1.930	2.359	-22.2	112	0.00	7.60
113		n-butylbenzene		----------NA----------				
114		1,2-dibromo-3-chloropropa		----------NA----------				
115		1,3,5-trichlorobenzene		----------NA----------				
116		1,2,4-trichlorobenzene		----------NA----------				
117		hexachlorobutadiene		----------NA----------				
118		naphthalene		----------NA----------				
119		1,2,3-trichlorobenzene		----------NA----------				
			True	Calc.	% Drift			
120		hexachloroethane		----------NA----------				
			AvgRF	CCRF	% Dev			
121		benzyl chloride		----------NA----------				
122		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2S009382.D m2s228.m Tue Oct 01 15:52:30 2024

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009400.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\Initials\VS228\2S009400.D Vial: 38
Acq On : 01 Oct 2024 04:08 pm Operator: edwardd
Sample : icv228-50 Inst : GCMS S
Misc : MS81509,V2S228,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\m2s228.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Tue Oct 01 15:53:48 2024
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	110	0.00	2.73
	----------	True	Calc.	% Drift	----------		
2	ethanol		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
3 M	tertiary butyl alcohol		----------NA----------				
4	1,4-dioxane		----------NA----------				
5 I	pentafluorobenzene	1.000	1.000	0.0	98	0.00	4.62
6	chlorodifluoromethane		----------NA----------				
7	dichlorodifluoromethane		----------NA----------				
8	chloromethane		----------NA----------				
9	vinyl chloride		----------NA----------				
10	1,3-butadiene		----------NA----------				
	----------	True	Calc.	% Drift	----------		
11	bromomethane		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
12	chloroethane		----------NA----------				
13	trichlorofluoromethane		----------NA----------				
14	ethyl ether		----------NA----------				
15	acrolein		----------NA----------				
16	freon 113		----------NA----------				
17	1,1-dichloroethene		----------NA----------				
18	acetone	0.049	0.056	-14.3	101	0.00	2.53
19	acetonitrile		----------NA----------				
	----------	True	Calc.	% Drift	----------		
20	iodomethane		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
21	carbon disulfide		----------NA----------				
22	methylene chloride		----------NA----------				
	----------	True	Calc.	% Drift	----------		
23	methyl acetate		----------NA----------				
24	methyl tert butyl ether		----------NA----------				
	----------	AvgRF	CCRF	% Dev	----------		
25	trans-1,2-dichloroethene		----------NA----------				

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009400.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

26		hexane		----------NA----------				
27		di-isopropyl ether		----------NA----------				
28		ethyl tert-butyl ether		----------NA----------				
		----------	True	Calc.	% Drift	----------		
29		2-butanone		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
30	M	1,1-dichloroethane		----------NA----------				
31		chloroprene		----------NA----------				
32		acrylonitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
33		vinyl acetate		----------NA----------				
34		ethyl acetate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
35		2,2-dichloropropane		----------NA----------				
36		cis-1,2-dichloroethene		----------NA----------				
37		propionitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
38		methyl acrylate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
39		bromochloromethane		----------NA----------				
40		tetrahydrofuran		----------NA----------				
41		chloroform		----------NA----------				
42	S	dibromofluoromethane (s)	0.617	0.619	-0.3	100	0.00	4.25
43		methacrylonitrile		----------NA----------				
44		1,1,1-trichloroethane		----------NA----------				
45		cyclohexane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
46		1,1-dichloropropene		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
47		carbon tetrachloride		----------NA----------				
		----------	True	Calc.	% Drift	----------		
48		isobutyl alcohol		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
49		tert-amyl alcohol		----------NA----------				
50	I	1,4-difluorobenzene	1.000	1.000	0.0	99	0.00	4.94
51	S	1,2-dichloroethane-d4 (s)	0.371	0.364	1.9	100	0.00	4.64
52		iso-octane		----------NA----------				
53	M	benzene		----------NA----------				
54		tert-amyl methyl ether		----------NA----------				
55		heptane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
56		isopropyl acetate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
57		1,2-dichloroethane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
58		n-butyl alcohol		----------NA----------				

			AvgRF	CCRF	% Dev		
59		ethyl acrylate		NA			
60		trichloroethene		NA			
61		2-nitropropane		NA			
62		2-chloroethyl vinyl ether		NA			
			True	Calc.	% Drift		
63		methyl methacrylate		NA			
			AvgRF	CCRF	% Dev		
64		1,2-dichloropropane		NA			
65		methylcyclohexane		NA			
66		dibromomethane		NA			
67		bromodichloromethane		NA			
			True	Calc.	% Drift		
68		epichlorohydrin		NA			
			AvgRF	CCRF	% Dev		
69		cis-1,3-dichloropropene		NA			
			True	Calc.	% Drift		
70		4-methyl-2-pentanone		NA			
71		3-methyl-1-butanol		NA			
			AvgRF	CCRF	% Dev		
72	I	chlorobenzene-d5	1.000	1.000	0.0	99	0.00 6.51
73	S	toluene-d8 (s)	1.333	1.342	-0.7	98	0.00 5.70
74		toluene		NA			
75		ethyl methacrylate		NA			
76		trans-1,3-dichloropropene		NA			
77		1,1,2-trichloroethane		NA			
78		tetrachloroethene		NA			
79		2-hexanone		NA			
80		1,3-dichloropropane		NA			
			True	Calc.	% Drift		
81		butyl acetate		NA			
			AvgRF	CCRF	% Dev		
82		dibromochloromethane		NA			
83		1,2-dibromoethane		NA			
84		n-butyl ether		NA			
85		chlorobenzene		NA			
86		1,1,1,2-tetrachloroethane		NA			
87		ethylbenzene		NA			
88		m,p-xylene		NA			
89		o-xylene		NA			
90		styrene		NA			
91		bromoform		NA			
92		butyl acrylate		NA			
93		isopropylbenzene		NA			
			True	Calc.	% Drift		
94		cis-1,4-dichloro-2-butene		NA			
			AvgRF	CCRF	% Dev		

Initial Calibration Verification

Job Number: JD99851 **Sample:** V2S228-ICV228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S009400.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

95	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	102	0.00	7.59
96	S	4-bromofluorobenzene (s)	0.945	0.939	0.6	100	0.00	7.08
97		bromobenzene		----------NA----------				
98		1,1,2,2-tetrachloroethane		----------NA----------				
99		trans-1,4-dichloro-2-bute		----------NA----------				
100		1,2,3-trichloropropane		----------NA----------				
101		n-propylbenzene		----------NA----------				
102		2-chlorotoluene		----------NA----------				
103		4-chlorotoluene		----------NA----------				
104		1,3,5-trimethylbenzene		----------NA----------				
105		tert-butylbenzene		----------NA----------				
106		1,2,4-trimethylbenzene		----------NA----------				
107		sec-butylbenzene		----------NA----------				
108		1,3-dichlorobenzene		----------NA----------				
109		p-isopropyltoluene		----------NA----------				
110		1,4-dichlorobenzene		----------NA----------				
111		1,2-dichlorobenzene		----------NA----------				
112		1,2,3-trimethylbenzene		----------NA----------				
113		n-butylbenzene		----------NA----------				
114		1,2-dibromo-3-chloropropa		----------NA----------				
115		1,3,5-trichlorobenzene		----------NA----------				
116		1,2,4-trichlorobenzene		----------NA----------				
117		hexachlorobutadiene		----------NA----------				
118		naphthalene		----------NA----------				
119		1,2,3-trichlorobenzene		----------NA----------				

		---------- True	Calc.	% Drift	----------			
120		hexachloroethane		----------NA----------				

		---------- AvgRF	CCRF	% Dev	----------			
121		benzyl chloride		----------NA----------				
122		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2S009382.D m2s228.m Wed Oct 02 13:34:51 2024

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V2S273-CC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S010608.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : X:\Dayton VOA GCMS\k...024\V2S273\2S010608.D Vial: 30
Acq On : 08 Nov 2024 09:47 pm Operator: KevinA
Sample : cc228-50 Inst : GCMS S
Misc : MS86904,V2S273,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\m2s228.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Tue Oct 01 15:53:48 2024
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert butyl alcohol-d9	1.000	1.000	0.0	108	0.00	2.73
		True	Calc.	% Drift			
2	ethanol	5000.000	7396.857	-47.9#	151	0.00	2.01
		AvgRF	CCRF	% Dev			
3 M	tertiary butyl alcohol	1.035	1.222	-18.1	122	0.00	2.80
4	1,4-dioxane	0.072	0.103	-43.1#	141	0.00	5.35
5 I	pentafluorobenzene	1.000	1.000	0.0	78	0.00	4.62
6	chlorodifluoromethane	0.584	0.692	-18.5	85	0.00	1.21
7	dichlorodifluoromethane	0.719	0.811	-12.8	82	0.00	1.18
8	chloromethane	0.637	0.784	-23.1#	93	0.00	1.32
9	vinyl chloride	0.601	0.702	-16.8	86	0.00	1.36
10	1,3-butadiene	0.416	0.532	-27.9#	96	0.00	1.36
		True	Calc.	% Drift			
11	bromomethane	50.000	35.303	29.4#	55	0.00	1.56
		AvgRF	CCRF	% Dev			
12	chloroethane	0.318	0.372	-17.0	85	0.00	1.64
13	trichlorofluoromethane	0.633	0.717	-13.3	83	0.00	1.72
14	ethyl ether	0.233	0.285	-22.3#	85	0.00	1.92
15	acrolein	0.109	0.132	-21.1#	89	0.00	2.30
16	freon 113	0.274	0.291	-6.2	76	0.00	2.09
17	1,1-dichloroethene	0.588	0.674	-14.6	80	0.00	2.06
18	acetone	0.049	0.106	-116.3#	152	0.00	2.53
19	acetonitrile	0.063	0.103	-63.5#	125	0.00	2.93
		True	Calc.	% Drift			
20	iodomethane	50.000	20.586	58.8#	31	0.00	2.17
		AvgRF	CCRF	% Dev			
21	carbon disulfide	1.098	1.179	-7.4	78	0.00	2.10
22	methylene chloride	0.474	0.496	-4.6	86	0.00	2.49
		True	Calc.	% Drift			
23	methyl acetate	50.000	56.861	-13.7	97	0.00	2.64
24	methyl tert butyl ether	50.000	53.317	-6.6	81	-0.01	2.72
		AvgRF	CCRF	% Dev			
25	trans-1,2-dichloroethene	0.385	0.460	-19.5	83	0.00	2.63

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V2S273-CC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S010608.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

26	hexane	0.954	1.147	-20.2#	84	0.00	2.70
27	di-isopropyl ether	1.382	1.747	-26.4#	87	0.00	3.08
28	ethyl tert-butyl ether	1.271	1.574	-23.8#	82	0.00	3.45
		True	Calc.	% Drift			
29	2-butanone	200.000	264.707	-32.4#	105	0.00	4.35
		AvgRF	CCRF	% Dev			
30 M	1,1-dichloroethane	0.794	0.962	-21.2#	86	-0.01	3.19
31	chloroprene	0.689	0.813	-18.0	82	-0.01	3.17
32	acrylonitrile	0.185	0.267	-44.3#	99	0.00	3.23
		True	Calc.	% Drift			
33	vinyl acetate	50.000	44.676	10.6	69	0.00	3.45
34	ethyl acetate	50.000	52.679	-5.4	86	0.00	4.20
		AvgRF	CCRF	% Dev			
35	2,2-dichloropropane	0.521	0.579	-11.1	75	0.00	3.88
36	cis-1,2-dichloroethene	0.426	0.501	-17.6	82	0.00	3.76
37	propionitrile	0.086	0.133	-54.7#	113	0.00	4.56
		True	Calc.	% Drift			
38	methyl acrylate	50.000	50.911	-1.8	84	0.00	4.21
		AvgRF	CCRF	% Dev			
39	bromochloromethane	0.206	0.251	-21.8#	84	-0.01	3.98
40	tetrahydrofuran	0.073	0.091	-24.7#	93	0.00	4.21
41	chloroform	0.201	0.236	-17.4	88	0.00	4.07
42 S	dibromofluoromethane (s)	0.617	0.626	-1.5	81	0.00	4.25
43	methacrylonitrile	0.223	0.268	-20.2#	92	0.00	4.58
44	1,1,1-trichloroethane	0.600	0.711	-18.5	80	0.00	4.26
45	cyclohexane	0.599	0.706	-17.9	82	0.00	3.99
		True	Calc.	% Drift			
46	1,1-dichloropropene	50.000	52.493	-5.0	82	0.00	4.37
		AvgRF	CCRF	% Dev			
47	carbon tetrachloride	0.537	0.637	-18.6	82	0.00	4.20
		True	Calc.	% Drift			
48	isobutyl alcohol	500.000	728.709	-45.7#	123	0.00	4.71
		AvgRF	CCRF	% Dev			
49	tert-amyl alcohol	0.024	0.044	-83.3#	133	0.00	4.77
50 I	1,4-difluorobenzene	1.000	1.000	0.0	81	0.00	4.93
51 S	1,2-dichloroethane-d4 (s)	0.371	0.368	0.8	83	0.00	4.64
52	iso-octane	0.749	0.803	-7.2	79	0.00	4.47
53 M	benzene	0.800	0.977	-22.1#	87	0.00	4.55
54	tert-amyl methyl ether	0.540	0.605	-12.0	81	0.00	4.64
55	heptane	0.156	0.169	-8.3	81	0.00	4.54
		True	Calc.	% Drift			
56	isopropyl acetate	50.000	46.673	6.7	83	0.00	4.85
		AvgRF	CCRF	% Dev			
57	1,2-dichloroethane	0.336	0.369	-9.8	87	0.00	4.68
		True	Calc.	% Drift			
58	n-butyl alcohol	2500.000	3921.434	-56.9#	138	0.00	5.10

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V2S273-CC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S010608.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

		AvgRF	CCRF	% Dev			
59	ethyl acrylate	0.361	0.435	-20.5#	90	0.00	5.22
60	trichloroethene	0.210	0.257	-22.4#	85	0.00	4.92
61	2-nitropropane	0.080	0.091	-13.7	83	0.00	5.85
62	2-chloroethyl vinyl ether	0.143	0.153	-7.0	74	0.00	5.56

		True	Calc.	% Drift			
63	methyl methacrylate	50.000	48.178	3.6	82	0.00	5.33

		AvgRF	CCRF	% Dev			
64	1,2-dichloropropane	0.229	0.284	-24.0#	88	0.00	5.20
65	methylcyclohexane	0.179	0.187	-4.5	77	0.00	4.91
66	dibromomethane	0.142	0.161	-13.4	88	0.00	5.14
67	bromodichloromethane	0.286	0.334	-16.8	84	0.00	5.24

		True	Calc.	% Drift			
68	epichlorohydrin	250.000	294.239	-17.7	104	0.00	5.74

		AvgRF	CCRF	% Dev			
69	cis-1,3-dichloropropene	0.326	0.398	-22.1#	84	0.00	5.60

		True	Calc.	% Drift			
70	4-methyl-2-pentanone	200.000	234.037	-17.0	93	0.00	5.93
71	3-methyl-1-butanol	1000.000	1383.051	-38.3#	116	0.00	5.82

			AvgRF	CCRF	% Dev			
72	I	chlorobenzene-d5	1.000	1.000	0.0	82	0.00	6.51
73	S	toluene-d8 (s)	1.333	1.323	0.8	80	0.00	5.70
74		toluene	0.599	0.691	-15.4	85	0.00	5.74
75		ethyl methacrylate	0.300	0.353	-17.7	83	0.00	6.03
76		trans-1,3-dichloropropene	0.364	0.446	-22.5#	85	0.00	5.96
77		1,1,2-trichloroethane	0.190	0.236	-24.2#	89	0.00	6.04
78		tetrachloroethene	0.244	0.283	-16.0	83	0.00	5.94
79		2-hexanone	0.124	0.178	-43.5#	100	0.00	6.36
80		1,3-dichloropropane	0.392	0.472	-20.4#	87	0.00	6.18

		True	Calc.	% Drift			
81	butyl acetate	50.000	52.295	-4.6	89	0.00	6.31

		AvgRF	CCRF	% Dev			
82	dibromochloromethane	0.275	0.319	-16.0	85	0.00	6.13
83	1,2-dibromoethane	0.241	0.286	-18.7	85	0.00	6.26
84	n-butyl ether	1.117	1.380	-23.5#	87	0.00	6.46
85	chlorobenzene	0.662	0.751	-13.4	85	0.00	6.52
86	1,1,1,2-tetrachloroethane	0.225	0.269	-19.6	84	0.00	6.55
87	ethylbenzene	1.135	1.243	-9.5	84	0.00	6.53
88	m,p-xylene	0.435	0.492	-13.1	83	0.00	6.59
89	o-xylene	0.410	0.459	-12.0	81	0.00	6.80
90	styrene	0.705	0.819	-16.2	83	0.00	6.83
91	bromoform	0.191	0.225	-17.8	86	0.00	6.85
92	butyl acrylate	0.499	0.636	-27.5#	86	0.00	6.87
93	isopropylbenzene	0.945	1.076	-13.9	82	0.00	6.95

		True	Calc.	% Drift			
94	cis-1,4-dichloro-2-butene	50.000	42.986	14.0	69	0.00	7.10

		AvgRF	CCRF	% Dev			

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V2S273-CC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S010608.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

95	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	82	0.00	7.59
96	S	4-bromofluorobenzene (s)	0.945	0.934	1.2	80	0.00	7.08
97		bromobenzene	0.492	0.569	-15.7	85	0.00	7.14
98		1,1,2,2-tetrachloroethane	0.591	0.719	-21.7#	87	0.00	7.17
99		trans-1,4-dichloro-2-bute	0.221	0.236	-6.8	76	0.00	7.24
100		1,2,3-trichloropropane	0.193	0.231	-19.7	87	0.00	7.23
101		n-propylbenzene	2.431	2.839	-16.8	84	0.00	7.14
102		2-chlorotoluene	0.485	0.544	-12.2	82	0.00	7.21
103		4-chlorotoluene	1.550	1.775	-14.5	83	0.00	7.29
104		1,3,5-trimethylbenzene	1.754	2.006	-14.4	82	0.00	7.22
105		tert-butylbenzene	1.469	1.665	-13.3	81	0.00	7.37
106		1,2,4-trimethylbenzene	1.795	2.101	-17.0	83	0.00	7.40
107		sec-butylbenzene	2.085	2.413	-15.7	81	0.00	7.45
108		1,3-dichlorobenzene	1.003	1.186	-18.2	85	0.00	7.55
109		p-isopropyltoluene	1.837	2.103	-14.5	81	0.00	7.51
110		1,4-dichlorobenzene	1.032	1.184	-14.7	85	0.00	7.59
111		1,2-dichlorobenzene	0.989	1.125	-13.8	84	0.00	7.79
112		1,2,3-trimethylbenzene	1.930	2.203	-14.1	84	0.00	7.60
113		n-butylbenzene	0.978	1.133	-15.8	81	0.00	7.70
114		1,2-dibromo-3-chloropropa	0.170	0.190	-11.8	82	0.00	8.13
115		1,3,5-trichlorobenzene	0.711	0.812	-14.2	81	0.00	8.15
116		1,2,4-trichlorobenzene	0.650	0.726	-11.7	79	0.00	8.43
117		hexachlorobutadiene	0.263	0.262	0.4	73	0.00	8.41
118		naphthalene	2.092	2.400	-14.7	80	0.00	8.58
119		1,2,3-trichlorobenzene	0.621	0.713	-14.8	83	0.00	8.66
			True	Calc.	% Drift			
120		hexachloroethane	50.000	47.759	4.5	80	0.00	7.77
			AvgRF	CCRF	% Dev			
121		benzyl chloride	0.246	0.265	-7.7	80	0.00	7.70
122		2-methylnaphthalene	1.011	0.846	16.3	63	0.00	9.05

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2S009382.D m2s228.m Mon Nov 11 14:35:46 2024

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V2S273-CC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S010609.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

```
Data File : X:\Dayton VOA GCMS\k...024\V2S273\2S010609.D Vial: 31
Acq On    : 08 Nov 2024  10:13 pm                  Operator: KevinA
Sample    : cc228-1                                Inst    : GCMS S
Misc      : MS86904,V2S273,5,,,,1                  Multiplr: 1.00
MS Integration Params: rteint.p

Method       : C:\msdchem\1\methods\m2s228.m (RTE Integrator)
Title        : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update  : Tue Oct 01 15:53:48 2024
Response via : Multiple Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  50%  Max. R.T. Dev  0.50min
Max. RRF Dev : 200%     Max. Rel. Area : 200%
```

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	91	0.00	2.73
		----------	True	Calc.	% Drift	----------		
2		ethanol		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
3	M	tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	72	0.00	4.62
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
		----------	True	Calc.	% Drift	----------		
11		bromomethane	1.000	1.676	-67.6	0	0.00	1.56
		----------	AvgRF	CCRF	% Dev	----------		
12		chloroethane		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		ethyl ether		----------NA----------				
15		acrolein		----------NA----------				
16		freon 113		----------NA----------				
17		1,1-dichloroethene		----------NA----------				
18		acetone		----------NA----------				
19		acetonitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
20		iodomethane	1.000	1.998	-99.8	0	0.00	2.18
		----------	AvgRF	CCRF	% Dev	----------		
21		carbon disulfide		----------NA----------				
22		methylene chloride		----------NA----------				
		----------	True	Calc.	% Drift	----------		
23		methyl acetate		----------NA----------				
24		methyl tert butyl ether		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
25		trans-1,2-dichloroethene		----------NA----------				

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V2S273-CC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S010609.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

26		hexane		----------NA----------				
27		di-isopropyl ether		----------NA----------				
28		ethyl tert-butyl ether		----------NA----------				
		----------	True	Calc.	% Drift	----------		
29		2-butanone		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
30	M	1,1-dichloroethane		----------NA----------				
31		chloroprene		----------NA----------				
32		acrylonitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
33		vinyl acetate		----------NA----------				
34		ethyl acetate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
35		2,2-dichloropropane		----------NA----------				
36		cis-1,2-dichloroethene		----------NA----------				
37		propionitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
38		methyl acrylate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
39		bromochloromethane		----------NA----------				
40		tetrahydrofuran		----------NA----------				
41		chloroform		----------NA----------				
42	S	dibromofluoromethane (s)	0.617	0.699	-13.3	80	0.00	4.25
43		methacrylonitrile		----------NA----------				
44		1,1,1-trichloroethane		----------NA----------				
45		cyclohexane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
46		1,1-dichloropropene		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
47		carbon tetrachloride		----------NA----------				
		----------	True	Calc.	% Drift	----------		
48		isobutyl alcohol		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
49		tert-amyl alcohol		----------NA----------				
50	I	1,4-difluorobenzene	1.000	1.000	0.0	76	0.00	4.93
51	S	1,2-dichloroethane-d4 (s)	0.371	0.389	-4.9	78	0.00	4.64
52		iso-octane		----------NA----------				
53	M	benzene		----------NA----------				
54		tert-amyl methyl ether		----------NA----------				
55		heptane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
56		isopropyl acetate		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
57		1,2-dichloroethane		----------NA----------				
		----------	True	Calc.	% Drift	----------		
58		n-butyl alcohol		----------NA----------				

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V2S273-CC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S010609.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

		AvgRF	CCRF	% Dev			
59	ethyl acrylate		NA				
60	trichloroethene		NA				
61	2-nitropropane		NA				
62	2-chloroethyl vinyl ether		NA				
		True	Calc.	% Drift			
63	methyl methacrylate		NA				
		AvgRF	CCRF	% Dev			
64	1,2-dichloropropane		NA				
65	methylcyclohexane		NA				
66	dibromomethane		NA				
67	bromodichloromethane		NA				
		True	Calc.	% Drift			
68	epichlorohydrin		NA				
		AvgRF	CCRF	% Dev			
69	cis-1,3-dichloropropene		NA				
		True	Calc.	% Drift			
70	4-methyl-2-pentanone		NA				
71	3-methyl-1-butanol		NA				
		AvgRF	CCRF	% Dev			
72 I	chlorobenzene-d5	1.000	1.000	0.0	78	0.00	6.51
73 S	toluene-d8 (s)	1.333	1.287	3.5	76	0.00	5.70
74	toluene		NA				
75	ethyl methacrylate		NA				
76	trans-1,3-dichloropropene		NA				
77	1,1,2-trichloroethane		NA				
78	tetrachloroethene		NA				
79	2-hexanone		NA				
80	1,3-dichloropropane		NA				
		True	Calc.	% Drift			
81	butyl acetate		NA				
		AvgRF	CCRF	% Dev			
82	dibromochloromethane		NA				
83	1,2-dibromoethane		NA				
84	n-butyl ether		NA				
85	chlorobenzene		NA				
86	1,1,1,2-tetrachloroethane		NA				
87	ethylbenzene		NA				
88	m,p-xylene		NA				
89	o-xylene		NA				
90	styrene		NA				
91	bromoform		NA				
92	butyl acrylate		NA				
93	isopropylbenzene		NA				
		True	Calc.	% Drift			
94	cis-1,4-dichloro-2-butene		NA				
		AvgRF	CCRF	% Dev			

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V2S273-CC228
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2S010609.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

95	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	76	0.00	7.59
96	S	4-bromofluorobenzene (s)	0.945	0.879	7.0	72	0.00	7.08
97		bromobenzene		----------NA----------				
98		1,1,2,2-tetrachloroethane		----------NA----------				
99		trans-1,4-dichloro-2-bute		----------NA----------				
100		1,2,3-trichloropropane		----------NA----------				
101		n-propylbenzene		----------NA----------				
102		2-chlorotoluene		----------NA----------				
103		4-chlorotoluene		----------NA----------				
104		1,3,5-trimethylbenzene		----------NA----------				
105		tert-butylbenzene		----------NA----------				
106		1,2,4-trimethylbenzene		----------NA----------				
107		sec-butylbenzene		----------NA----------				
108		1,3-dichlorobenzene		----------NA----------				
109		p-isopropyltoluene		----------NA----------				
110		1,4-dichlorobenzene		----------NA----------				
111		1,2-dichlorobenzene		----------NA----------				
112		1,2,3-trimethylbenzene		----------NA----------				
113		n-butylbenzene		----------NA----------				
114		1,2-dibromo-3-chloropropa		----------NA----------				
115		1,3,5-trichlorobenzene		----------NA----------				
116		1,2,4-trichlorobenzene		----------NA----------				
117		hexachlorobutadiene		----------NA----------				
118		naphthalene		----------NA----------				
119		1,2,3-trichlorobenzene		----------NA----------				
		---------- True		Calc.	% Drift	----------		
120		hexachloroethane		----------NA----------				
		---------- AvgRF		CCRF	% Dev	----------		
121		benzyl chloride		----------NA----------				
122		2-methylnaphthalene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2S009372.D m2s228.m Mon Nov 11 14:41:22 2024

Initial Calibration Summary

Job Number: JD99851 **Sample:** V5A284-ICC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9725.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Response Factor Report GCMS4A5A

Method : C:\msdchem\1\methods\M5a284.M (RTE Integrator)
Title : SW846 Method V8260C/D and EPA 624.1, column ZB-624 60m x 0.25mm x 1.4 um
Last Update : Mon Oct 14 09:29:11 2024
Response via : Initial Calibration

Calibration Files
8 =5A9721.D 0.5 =5A9713.D 4 =5A9719.D 50 =5A9725.D
100 =5A9727.D 1 =5A9715.D 200 =5A9729.D 20 =5A9723.D
2 =5A9717.D 0.2 =5A9711.D = =

Compound	8	0.5	4	50	100	1	200	20	2	0.2	Avg	%RSD
1) I tert Butyl Alcohol-d9	ISTD											
2) 1,4-dioxane	0.059	0.061	0.052	0.054	0.055	0.058	0.057				0.056	5.44
3) ethanol	0.081	0.079	0.065	0.067	0.095	0.062	0.069	0.076			0.074	14.57
4) tertiary butyl alcohol	1.368	1.052	1.283	1.228	1.315	1.199	1.261	1.234	1.173		1.235	7.34
5) I pentafluorobenzene	ISTD											
6) chlorodifluoromethane	0.648	0.703	0.595	0.630	0.629	0.641	0.575	0.635	0.534		0.621	7.77
7) dichlorodifluoromethane	0.590	0.542	0.596	0.688	0.703	0.757	0.647	0.692	0.646		0.651	10.24
8) chloromethane	0.509	0.770	0.548	0.584	0.598	0.819	0.548	0.611	0.648		0.626	16.68
9) vinyl chloride	0.508	0.501	0.527	0.573	0.593	0.674	0.539	0.583	0.523		0.558	9.80
10) 1,3-butadiene	0.538	0.559	0.525	0.486	0.468	0.635	0.418	0.528	0.511		0.519	11.71
11) bromomethane	0.141	0.139	0.192	0.216	0.147	0.210	0.173	0.163			0.173	17.75
12) chloroethane	0.252	0.281	0.281	0.274	0.420	0.245	0.292	0.334			0.297	19.07
13) trichlorofluoromethane	0.645	0.698	0.632	0.704	0.690	0.898	0.615	0.712	0.741	0.639	0.697	11.66
14) ethyl ether	0.299	0.266	0.281	0.295	0.278	0.279	0.253	0.298	0.239		0.277	7.45
15) acrolein	0.108	0.124	0.133	0.139	0.129	0.128	0.140				0.129	8.38
16) freon 113	0.418	0.308	0.334	0.370	0.354	0.388	0.317	0.391	0.329		0.357	10.52
17) 1,1-dichloroethene	0.425	0.362	0.384	0.368	0.361	0.432	0.320	0.391	0.355		0.378	9.27
18) acetone	0.129	0.140	0.125	0.113	0.110	0.126	0.092	0.116	0.114		0.118	11.52
19) acetonitrile	0.060	0.061	0.058	0.055	0.047	0.057	0.063				0.057	9.51
20) iodomethane	0.343	0.244	0.451	0.476	0.446	0.407	0.184				0.364	30.87
----- Linear regression ----- Coefficient = 0.9985												
Response Ratio = -0.01385 + 0.45932 *A												
21) iso-butyl alcohol	0.041	0.038	0.047	0.038	0.047	0.032	0.037	0.031			0.039	15.52

Initial Calibration Summary

Job Number: JD99851 **Sample:** V5A284-ICC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9725.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

22) carbon disulfide
1.231 1.202 1.158 1.143 1.142 1.330 1.052 1.216 1.093 1.174 6.99
23) methylene chloride
0.438 0.411 0.393 0.401 0.513 0.369 0.421 0.370 0.414 11.18
24) methyl acetate
0.120 0.129 0.133 0.129 0.119 0.133 0.103 0.124 8.68
25) methyl tert butyl ether
1.530 1.304 1.406 1.406 1.385 1.494 1.250 1.499 1.213 1.543 1.403 8.32
26) trans-1,2-dichloroethene
0.460 0.425 0.420 0.418 0.413 0.547 0.365 0.450 0.365 0.429 12.76
27) hexane
0.759 0.813 0.739 0.729 0.712 0.818 0.662 0.776 0.648 0.740 8.06
28) di-isopropyl ether
2.194 2.111 2.033 1.939 1.906 2.134 1.675 2.118 1.794 2.208 2.011 8.86
29) ethyl tert-butyl ether
1.868 1.685 1.739 1.747 1.743 1.710 1.577 1.857 1.583 2.032 1.754 7.79
30) 2-butanone
0.124 0.092 0.110 0.112 0.112 0.110 0.095 0.114 0.091 0.107 10.61
31) 1,1-dichloroethane
0.993 0.836 0.929 0.870 0.842 1.016 0.748 0.960 0.802 1.004 0.900 10.37
32) chloroprene
0.954 0.969 0.926 0.845 0.823 0.995 0.745 0.962 0.807 0.892 9.88
33) acrylonitrile
0.258 0.277 0.291 0.302 0.274 0.285 0.278 0.256 0.278 5.62
34) vinyl acetate
0.092 0.089 0.079 0.072 0.080 0.062 0.086 0.067 0.078 13.44
35) ethyl acetate
0.185 0.202 0.171 0.150 0.179 0.138 0.167 0.146 0.167 12.90
36) 2,2-dichloropropane
0.711 0.673 0.601 0.581 0.679 0.521 0.668 0.664 0.637 9.96
37) cis-1,2-dichloroethene
0.518 0.459 0.498 0.455 0.437 0.522 0.396 0.492 0.476 0.510 0.476 8.41
38) propionitrile
0.145 0.128 0.136 0.130 0.124 0.136 0.102 0.136 0.126 0.129 9.24
39) methyl acrylate
0.110 0.099 0.108 0.105 0.102 0.093 0.112 0.080 0.101 10.40
40) bromochloromethane
0.255 0.233 0.225 0.216 0.208 0.225 0.187 0.233 0.219 0.222 8.40
41) tetrahydrofuran
0.115 0.118 0.114 0.115 0.126 0.101 0.115 0.137 0.118 8.89
42) chloroform
0.856 0.838 0.764 0.751 1.061 0.681 0.806 0.804 0.820 13.62
43) dibromofluoromethane (s)
0.497 0.534 0.515 0.494 0.491 0.537 0.478 0.517 0.522 0.545 0.513 4.34
44) methacrylonitrile
0.330 0.308 0.306 0.305 0.344 0.277 0.313 0.274 0.307 7.68
45) 1,1,1-trichloroethane
0.696 0.653 0.647 0.638 0.641 0.743 0.595 0.679 0.626 0.695 0.661 6.41
46) cyclohexane
0.564 0.613 0.593 0.575 0.793 0.533 0.618 0.645 0.617 12.85
47) 1,1-dichloropropene
0.683 0.605 0.598 0.599 0.576 0.733 0.519 0.635 0.547 0.610 10.79
48) carbon tetrachloride
0.606 0.598 0.573 0.564 0.561 0.648 0.514 0.601 0.574 0.582 6.39
49) isopropyl acetate
0.133 0.115 0.129 0.129 0.124 0.118 0.130 0.090 0.121 11.55
50) tert amyl alcohol
0.041 0.041 0.039 0.037 0.030 0.036 0.043 0.038 11.34

51) I 1,4-difluorobenzene ----------ISTD----------

52) 1,2-dichloroethane-d4 (s)
0.357 0.352 0.356 0.339 0.321 0.358 0.307 0.359 0.351 0.340 0.344 5.06
53) tert-amyl methyl ether
0.845 0.703 0.787 0.770 0.763 0.824 0.712 0.807 0.646 0.641 0.750 9.53
54) 2,2,4-trimethylpentane
0.757 0.600 0.660 0.666 0.641 0.770 0.602 0.709 0.650 0.673 9.06
55) n-butyl alcohol
0.012 0.011 0.013 0.013 0.012 0.011 0.012 0.010 0.012 10.23
56) benzene
1.111 1.005 1.026 0.975 0.961 1.087 0.901 1.039 0.881 1.085 1.007 7.77
57) heptane
0.162 0.143 0.151 0.140 0.138 0.153 0.133 0.148 0.125 0.144 7.70
58) 1,2-dichloroethane
0.425 0.486 0.401 0.372 0.366 0.440 0.338 0.409 0.353 0.399 11.79
59) trichloroethene
0.303 0.290 0.266 0.267 0.264 0.279 0.250 0.284 0.247 0.268 0.272 6.34
60) ethyl acrylate
0.620 0.542 0.559 0.565 0.501 0.514 0.584 0.464 0.544 9.13
61) 2-nitropropane
0.150 0.144 0.132 0.137 0.127 0.127 0.106 0.132 10.83
62) 2-chloroethyl vinyl ether
0.217 0.157 0.185 0.198 0.198 0.155 0.178 0.206 0.149 0.183 13.33
63) methyl methacrylate
0.096 0.096 0.094 0.092 0.088 0.098 0.082 0.092 6.15
64) 1,2-dichloropropane
0.355 0.325 0.307 0.291 0.285 0.334 0.261 0.314 0.260 0.304 0.303 10.03
65) methylcyclohexane
0.389 0.304 0.347 0.361 0.357 0.365 0.339 0.377 0.327 0.352 7.32
66) dibromomethane
0.175 0.164 0.163 0.154 0.153 0.187 0.145 0.164 0.139 0.160 9.11
67) bromodichloromethane
0.369 0.308 0.347 0.326 0.330 0.389 0.312 0.342 0.299 0.336 8.80
68) cis-1,3-dichloropropene
0.495 0.405 0.437 0.441 0.437 0.403 0.409 0.455 0.376 0.407 0.426 7.84
69) epichlorohydrin
0.061 0.058 0.057 0.056 0.061 0.048 0.054 0.044 0.055 11.20
70) 4-methyl-2-pentanone
0.196 0.153 0.184 0.180 0.177 0.167 0.155 0.184 0.148 0.171 9.59
71) 3-methyl-1-butanol
0.010 0.009 0.010 0.010 0.009 0.008 0.009 0.007 0.009 10.71

72) I chlorobenzene-d5 ----------ISTD----------
73) toluene-d8 (s)
1.191 1.201 1.199 1.178 1.165 1.211 1.234 1.157 1.188 1.213 1.194 1.94
74) toluene
0.732 0.602 0.671 0.661 0.669 0.650 0.674 0.669 0.574 0.717 0.662 7.10
75) trans-1,3-dichloropropene
0.490 0.408 0.456 0.460 0.446 0.406 0.436 0.468 0.370 0.438 8.53
76) ethyl methacrylate
0.422 0.391 0.405 0.404 0.369 0.381 0.407 0.312 0.386 8.91
77) 1,1,2-trichloroethane
0.263 0.201 0.230 0.226 0.229 0.253 0.220 0.235 0.206 0.229 8.67
78) 2-hexanone
0.243 0.159 0.229 0.218 0.210 0.209 0.182 0.232 0.173 0.206 13.93
79) tetrachloroethene
0.361 0.347 0.311 0.324 0.328 0.330 0.324 0.318 0.269 0.324 7.85
80) 1,3-dichloropropane
0.513 0.363 0.467 0.452 0.443 0.438 0.414 0.483 0.403 0.442 10.13
81) butyl acetate
0.312 0.305 0.292 0.295 0.294 0.271 0.307 0.234 0.289 8.89

82) dibromochloromethane
0.324 0.310 0.280 0.305 0.307 0.298 0.301 0.310 0.272 0.301 5.30
83) 1,2-dibromoethane
0.331 0.251 0.276 0.296 0.299 0.255 0.287 0.298 0.276 0.285 8.68
84) n-butyl ether
1.531 1.320 1.356 1.379 1.371 1.415 1.224 1.433 1.210 1.360 7.38
85) chlorobenzene
0.793 0.820 0.741 0.763 0.778 0.729 0.741 0.777 0.625 0.771 0.754 6.99
86) 1,1,1,2-tetrachloroethane
0.303 0.261 0.261 0.284 0.277 0.294 0.259 0.282 0.234 0.273 7.75
87) ethylbenzene
1.336 1.097 1.259 1.190 1.163 1.250 1.065 1.240 1.062 1.258 1.192 7.81
88) m,p-xylene
0.533 0.429 0.495 0.481 0.484 0.504 0.441 0.499 0.429 0.504 0.480 7.37
89) o-xylene
0.528 0.436 0.457 0.467 0.473 0.458 0.427 0.489 0.423 0.562 0.472 9.42
90) butyl acrylate
0.799 0.721 0.765 0.765 0.818 0.669 0.773 0.645 0.744 8.22
91) n-amyl acetate
0.227 0.216 0.224 0.214 0.189 0.189 0.226 0.158 0.205 11.88
92) styrene
0.894 0.750 0.787 0.816 0.790 0.844 0.710 0.837 0.722 0.695 0.785 8.27
93) bromoform
0.218 0.196 0.223 0.232 0.212 0.212 0.209 0.173 0.209 8.67
94) isopropylbenzene
1.196 1.165 1.066 1.083 1.058 1.110 0.954 1.115 0.927 1.066 1.074 7.77
95) cis-1,4-dichloro-2-butene
0.149 0.130 0.150 0.151 0.137 0.140 0.143 6.00

96) I 1,4-dichlorobenzene-d ----------ISTD----------
97) 4-bromofluorobenzene (s)
0.948 0.919 0.920 0.953 1.020 0.932 1.009 0.935 0.937 0.930 0.950 3.73
98) bromobenzene
0.713 0.572 0.642 0.671 0.739 0.706 0.686 0.666 0.573 0.686 0.665 8.39
99) 1,1,2,2-tetrachloroethane
0.800 0.747 0.743 0.752 0.835 0.686 0.787 0.742 0.653 0.719 0.746 7.15
100) trans-1,4-dichloro-2-butene
0.306 0.288 0.303 0.342 0.257 0.306 0.299 0.195 0.287 15.31
101) 1,2,3-trichloropropane
0.264 0.237 0.228 0.253 0.170 0.230 0.238 0.209 0.229 12.57
102) n-propylbenzene
2.841 2.494 2.567 2.631 2.857 2.505 2.669 2.637 2.187 2.699 2.609 7.36
103) 2-chlorotoluene
0.632 0.578 0.592 0.646 0.572 0.610 0.579 0.518 0.591 6.75
104) 4-chlorotoluene
0.656 0.468 0.578 0.616 0.663 0.633 0.615 0.624 0.554 0.601 10.04
105) 1,3,5-trimethylbenzene
1.985 1.738 1.781 1.835 1.970 1.716 1.882 1.807 1.592 1.692 1.800 6.86
106) tert-butylbenzene
1.738 1.427 1.580 1.628 1.765 1.472 1.646 1.628 1.304 1.461 1.565 9.32
107) 1,2,4-trimethylbenzene
2.049 1.667 1.785 1.866 2.022 1.765 1.924 1.890 1.625 1.961 1.855 7.70
108) sec-butylbenzene
2.283 1.861 2.116 2.241 2.365 2.234 2.222 2.234 1.886 2.207 2.165 7.65
109) 1,3-dichlorobenzene
1.265 0.968 1.130 1.184 1.254 1.162 1.193 1.187 1.010 0.927 1.128 10.50
110) p-isopropyltoluene
2.027 1.638 1.771 1.815 1.907 1.724 1.835 1.887 1.581 1.845 1.803 7.28
111) 1,2,3-trimethylbenzene
1.939 1.580 1.804 1.806 1.911 1.764 1.866 1.858 1.514 1.782 8.13

Initial Calibration Summary

Job Number: JD99851 **Sample:** V5A284-ICC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9725.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

```
112)  1,4-dichlorobenzene
       1.253 1.140 1.152 1.152 1.219 1.144 1.162 1.181 0.983        1.154    6.46
113)  1,2-dichlorobenzene
       1.146 0.939 1.067 1.103 1.147 1.061 1.109 1.102 0.913 0.933  1.052    8.55
114)  n-butylbenzene
       0.797       0.720 0.808 0.840 0.865 0.865 0.792 0.634        0.790    9.98
115)  1,2-dibromo-3-chloropropane
       0.198       0.185 0.207 0.236       0.249 0.213 0.110        0.200   22.74
             ----- Linear regression -----  Coefficient =  0.9967
               Response Ratio = -0.00612 + 0.24155 *A

116)  1,3,5-trichlorobenzene
       0.639       0.600 0.638 0.689 0.577 0.749 0.641 0.494        0.628   12.08
117)  1,2,4-trichlorobenzene
       0.546       0.472 0.548 0.618 0.408 0.674 0.523 0.378        0.521   19.17
118)  hexachlorobutadiene
       0.217       0.164 0.199 0.214 0.207 0.230 0.201 0.175        0.201   10.93
119)  naphthalene
       1.574       1.413 1.636 1.893 1.468 1.986 1.533 1.153        1.582   16.73
120)  1,2,3-trichlorobenzene
       0.452       0.438 0.457 0.535 0.369 0.556 0.451 0.368        0.453   14.87
121)  hexachloroethane
       0.283       0.262 0.297 0.340 0.283 0.342 0.280 0.212        0.288   14.53
122)  benzyl chloride
       1.274       1.176 1.284 1.342 1.177 1.319 1.255 0.980        1.226    9.46
123)  2-methylnaphthalene
       0.490       0.402 0.461 0.538       0.596 0.435              0.487   14.57

124)     pentafluorobenzene(a) ----------------ISTD---------------------
125)  Freon 114
                                                                     0.000   -1.00
126)  Freon 142B
       0.646       0.539 0.575 0.595 0.559 0.589 0.569 0.573        0.581    5.41
127)  vinyl bromide
       0.230       0.287 0.261 0.267 0.281 0.267 0.278 0.289        0.270    7.04
128)  allyl chloride
                                                                     0.000   -1.00

129)     1,4-dichlorobenzene-d ----------------ISTD---------------------
130)  4-ethyltoluene
                                                                     0.000   -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           M5a284.M          Mon Oct 14 16:55:48 2024
```

Initial Calibration Verification

Job Number: JD99851 **Sample:** V5A284-ICV284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9735.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\Initials\VA284\5A9735.D Vial: 32
Acq On : 10 Sep 2024 1:05 am Operator: nickw
Sample : icv284-50 Inst : GCMS4A5A
Misc : MS79588,V5A284,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\M5a284.M (RTE Integrator)
Title : SW846 Method V8260C/D and EPA 624.1, column ZB-624 60m x 0.25mm x 1.4 um
Last Update : Thu Sep 12 14:43:32 2024
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert Butyl Alcohol-d9	1.000	1.000	0.0	89	0.00	2.63
2	1,4-dioxane	0.056	0.051	8.9	89	0.00	4.46
3	ethanol	0.074	0.068	8.1	93	0.00	2.13
4 M	tertiary butyl alcohol	1.235	1.240	-0.4	90	0.00	2.68
5 I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	3.65
6	chlorodifluoromethane		----------NA----------				
7	dichlorodifluoromethane	0.651	0.573	12.0	87	0.00	1.39
8	chloromethane	0.626	0.610	2.6	109	0.00	1.52
9	vinyl chloride	0.558	0.584	-4.7	106	0.00	1.60
10	1,3-butadiene	0.519	0.574	-10.6	123	0.00	1.63
11	bromomethane	0.173	0.207	-19.7	112	0.00	1.83
12	chloroethane	0.297	0.298	-0.3	111	0.00	1.90
13	trichlorofluoromethane	0.697	0.674	3.3	100	0.00	2.06
14	ethyl ether	0.277	0.281	-1.4	99	0.00	2.22
15	acrolein	0.129	0.177	-37.2#	139	0.00	2.30
16	freon 113	0.357	0.361	-1.1	102	0.00	2.37
17	1,1-dichloroethene	0.378	0.356	5.8	100	0.00	2.38
18	acetone	0.118	0.105	11.0	96	0.00	2.38
19	acetonitrile	0.057	0.050	12.3	90	0.00	2.55
	----------	True	Calc.	% Drift		----------	
20	iodomethane	50.000	44.549	10.9	91	0.00	2.47
	----------	AvgRF	CCRF	% Dev		----------	
21	iso-butyl alcohol	0.039	0.042	-7.7	93	0.00	3.77
22	carbon disulfide	1.174	1.011	13.9	92	0.00	2.53
23	methylene chloride	0.414	0.393	5.1	104	0.00	2.66
24	methyl acetate	0.124	0.126	-1.6	99	0.00	2.56
25	methyl tert butyl ether	1.403	1.408	-0.4	104	0.00	2.80
26	trans-1,2-dichloroethene	0.429	0.405	5.6	101	0.00	2.81
27	hexane	0.740	0.702	5.1	100	0.00	2.97
28	di-isopropyl ether	2.011	1.867	7.2	100	0.00	3.06
29	ethyl tert-butyl ether	1.754	1.633	6.9	97	0.00	3.26
30	2-butanone	0.107	0.106	0.9	98	0.00	3.36
31 M	1,1-dichloroethane	0.900	0.859	4.6	103	0.00	3.06
32	chloroprene	0.892	0.851	4.6	105	0.00	3.11
33	acrylonitrile	0.278	0.344	-23.7	123	0.00	2.78
34	vinyl acetate	0.078	0.058	25.6	77	0.00	3.04
35	ethyl acetate	0.167	0.160	4.2	97	0.00	3.37
36	2,2-dichloropropane	0.637	0.576	9.6	100	0.00	3.40
37	cis-1,2-dichloroethene	0.476	0.454	4.6	104	0.00	3.39

Initial Calibration Verification

Job Number: JD99851 **Sample:** V5A284-ICV284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9735.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

38		propionitrile	0.129	0.124	3.9	99	0.00	3.40
39		methyl acrylate	0.101	0.100	1.0	96	0.00	3.41
40		bromochloromethane	0.222	0.214	3.6	103	0.00	3.53
41		tetrahydrofuran	0.118	0.113	4.2	103	0.00	3.53
42		chloroform	0.820	0.794	3.2	108	0.00	3.57
43	S	dibromofluoromethane (s)	0.513	0.492	4.1	104	0.00	3.66
44		methacrylonitrile	0.307	0.303	1.3	103	0.00	3.49
45		1,1,1-trichloroethane	0.661	0.641	3.0	105	0.00	3.68
46		cyclohexane	0.617	0.663	-7.5	116	0.00	3.73
47		1,1-dichloropropene	0.610	0.573	6.1	100	0.00	3.77
48		carbon tetrachloride	0.582	0.542	6.9	100	0.00	3.78
49		isopropyl acetate	0.121	0.125	-3.3	100	0.00	3.87
50		tert amyl alcohol	0.038	0.036	5.3	96	0.00	3.84
51	I	1,4-difluorobenzene	1.000	1.000	0.0	103	0.00	4.12
52	S	1,2-dichloroethane-d4 (s)	0.344	0.337	2.0	102	0.00	3.87
53		tert-amyl methyl ether	0.750	0.707	5.7	94	0.00	3.94
54		2,2,4-trimethylpentane	0.673	0.630	6.4	97	0.00	3.95
55		n-butyl alcohol	0.012	0.012	0.0	95	0.00	4.15
56	M	benzene	1.007	0.957	5.0	101	0.00	3.89
57		heptane	0.144	0.139	3.5	102	0.00	4.03
58		1,2-dichloroethane	0.399	0.369	7.5	102	0.00	3.91
59		trichloroethene	0.272	0.269	1.1	104	0.00	4.27
60		ethyl acrylate	0.544	0.562	-3.3	103	0.00	4.28
61		2-nitropropane	0.132	0.134	-1.5	104	0.00	4.70
62		2-chloroethyl vinyl ether	0.183	0.215	-17.5	111	0.00	4.72
63		methyl methacrylate	0.092	0.097	-5.4	106	0.00	4.43
64		1,2-dichloropropane	0.303	0.280	7.6	99	0.00	4.43
65		methylcyclohexane	0.352	0.354	-0.6	101	0.00	4.42
66		dibromomethane	0.160	0.153	4.4	102	0.00	4.48
67		bromodichloromethane	0.336	0.332	1.2	105	0.00	4.58
68		cis-1,3-dichloropropene	0.426	0.426	0.0	99	0.00	4.85
69		epichlorohydrin	0.055	0.053	3.6	96	0.00	4.77
70		4-methyl-2-pentanone	0.171	0.175	-2.3	100	0.00	4.92
71		3-methyl-1-butanol	0.009	0.009	0.0	96	0.00	4.93
72	I	chlorobenzene-d5	1.000	1.000	0.0	101	0.00	6.00
73	S	toluene-d8 (s)	1.194	1.191	0.3	102	0.00	5.02
74		toluene	0.662	0.665	-0.5	101	0.00	5.07
75		trans-1,3-dichloropropene	0.438	0.457	-4.3	100	0.00	5.20
76		ethyl methacrylate	0.386	0.382	1.0	95	0.00	5.21
77		1,1,2-trichloroethane	0.229	0.241	-5.2	107	0.00	5.33
78		2-hexanone	0.206	0.219	-6.3	101	0.00	5.45
79		tetrachloroethene		----------NA----------				
80		1,3-dichloropropane	0.442	0.464	-5.0	103	0.00	5.45
81		butyl acetate	0.289	0.309	-6.9	107	0.00	5.51
82		dibromochloromethane	0.301	0.317	-5.3	105	0.00	5.59
83		1,2-dibromoethane	0.285	0.306	-7.4	104	0.00	5.68
84		n-butyl ether	1.360	1.424	-4.7	104	0.00	6.04
85		chlorobenzene	0.754	0.775	-2.8	103	0.00	6.02
86		1,1,1,2-tetrachloroethane	0.273	0.290	-6.2	103	0.00	6.07
87		ethylbenzene	1.192	1.225	-2.8	104	0.00	6.07
88		m,p-xylene	0.480	0.500	-4.2	105	0.00	6.16
89		o-xylene	0.472	0.506	-7.2	109	0.00	6.43
90		butyl acrylate	0.744	0.786	-5.6	104	0.00	6.36
91		n-amyl acetate	0.205	0.230	-12.2	104	0.00	6.51
92		styrene	0.785	0.786	-0.1	97	0.00	6.45
93		bromoform	0.209	0.233	-11.5	105	0.00	6.58
94		isopropylbenzene	1.074	1.189	-10.7	111	0.00	6.68
95		cis-1,4-dichloro-2-butene	0.143	0.146	-2.1	98	0.00	6.71

Initial Calibration Verification

Job Number: JD99851 **Sample:** V5A284-ICV284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9735.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	7.58
97	S	4-bromofluorobenzene (s)	0.950	0.958	-0.8	99	0.00	6.81
98		bromobenzene	0.665	0.718	-8.0	106	0.00	6.91
99		1,1,2,2-tetrachloroethane	0.746	0.770	-3.2	101	0.00	6.88
100		trans-1,4-dichloro-2-bute	0.287	0.332	-15.7	108	0.00	6.91
101		1,2,3-trichloropropane	0.229	0.251	-9.6	109	0.00	6.93
102		n-propylbenzene	2.609	2.774	-6.3	104	0.00	6.96
103		2-chlorotoluene	0.591	0.625	-5.8	104	0.00	7.04
104		4-chlorotoluene	0.601	0.631	-5.0	101	0.00	7.11
105		1,3,5-trimethylbenzene	1.800	1.929	-7.2	104	0.00	7.08
106		tert-butylbenzene	1.565	1.736	-10.9	105	0.00	7.30
107		1,2,4-trimethylbenzene	1.855	2.004	-8.0	106	0.00	7.33
108		sec-butylbenzene	2.165	2.381	-10.0	105	0.00	7.44
109		1,3-dichlorobenzene	1.128	1.247	-10.5	104	0.00	7.53
110		p-isopropyltoluene	1.803	1.967	-9.1	107	0.00	7.53
111		1,2,3-trimethylbenzene		----------NA----------				
112		1,4-dichlorobenzene	1.154	1.210	-4.9	104	0.00	7.60
113		1,2-dichlorobenzene	1.052	1.155	-9.8	103	0.00	7.83
114		n-butylbenzene	0.790	0.860	-8.9	105	0.00	7.80
		----------	True	Calc.	% Drift		----------	
115		1,2-dibromo-3-chloropropa	50.000	47.051	5.9	105	0.00	8.31
		----------	AvgRF	CCRF	% Dev		----------	
116		1,3,5-trichlorobenzene	0.628	0.719	-14.5	111	0.00	8.42
117		1,2,4-trichlorobenzene	0.521	0.567	-8.8	102	0.00	8.80
118		hexachlorobutadiene	0.201	0.210	-4.5	104	0.00	8.87
119		naphthalene	1.582	1.691	-6.9	102	0.00	8.96
120		1,2,3-trichlorobenzene	0.453	0.484	-6.8	105	0.00	9.09
121		hexachloroethane	0.288	0.318	-10.4	106	0.00	8.00
122		benzyl chloride	1.226	1.300	-6.0	100	0.00	7.66
123		2-methylnaphthalene	0.487	0.493	-1.2	106	0.00	9.66
124		pentafluorobenzene(a)	1.000	1.000	0.0	104	0.00	3.65
125		Freon 114		----------NA----------				
126		Freon 142B		----------NA----------				
127		vinyl bromide		----------NA----------				
128		allyl chloride		----------NA----------				
129		1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	99	0.00	7.58
130		4-ethyltoluene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5A9725.D M5a284.M Mon Sep 16 17:11:02 2024

Initial Calibration Verification

Job Number: JD99851 **Sample:** V5A284-ICV284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9743.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\Initials\VA284\5A9743.D Vial: 40
Acq On : 13 Sep 2024 5:12 pm Operator: nickw
Sample : icv284-50 Inst : GCMS4A5A
Misc : MS79588,V5A284,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\M5a284.M (RTE Integrator)
Title : SW846 Method V8260C/D and EPA 624.1, column ZB-624 60m x 0.25mm x 1.4 um
Last Update : Thu Sep 12 14:43:32 2024
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert Butyl Alcohol-d9	1.000	1.000	0.0	50#	0.00	2.64
2		1,4-dioxane		----------NA----------				
3		ethanol		----------NA----------				
4	M	tertiary butyl alcohol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	104	0.00	3.65
6		chlorodifluoromethane	0.621	0.604	2.7	99	0.00	1.41
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11		bromomethane		----------NA----------				
12		chloroethane		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		ethyl ether		----------NA----------				
15		acrolein		----------NA----------				
16		freon 113		----------NA----------				
17		1,1-dichloroethene		----------NA----------				
18		acetone		----------NA----------				
19		acetonitrile	0.057	0.044	22.8	79	0.00	2.55
		----------	True	Calc.	% Drift	----------		
20		iodomethane		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
21		iso-butyl alcohol		----------NA----------				
22		carbon disulfide		----------NA----------				
23		methylene chloride		----------NA----------				
24		methyl acetate		----------NA----------				
25		methyl tert butyl ether		----------NA----------				
26		trans-1,2-dichloroethene		----------NA----------				
27		hexane		----------NA----------				
28		di-isopropyl ether		----------NA----------				
29		ethyl tert-butyl ether		----------NA----------				
30		2-butanone		----------NA----------				
31	M	1,1-dichloroethane		----------NA----------				
32		chloroprene		----------NA----------				
33		acrylonitrile	0.278	0.358	-28.8	127	0.00	2.78
34		vinyl acetate		----------NA----------				
35		ethyl acetate		----------NA----------				
36		2,2-dichloropropane		----------NA----------				
37		cis-1,2-dichloroethene		----------NA----------				

Initial Calibration Verification

Job Number: JD99851 **Sample:** V5A284-ICV284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9743.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

38		propionitrile		----------NA----------					
39		methyl acrylate		----------NA----------					
40		bromochloromethane		----------NA----------					
41		tetrahydrofuran		----------NA----------					
42		chloroform		----------NA----------					
43	S	dibromofluoromethane (s)	0.513	0.534	-4.1	112	0.00	3.66	
44		methacrylonitrile		----------NA----------					
45		1,1,1-trichloroethane		----------NA----------					
46		cyclohexane		----------NA----------					
47		1,1-dichloropropene		----------NA----------					
48		carbon tetrachloride		----------NA----------					
49		isopropyl acetate		----------NA----------					
50		tert amyl alcohol		----------NA----------					
51	I	1,4-difluorobenzene	1.000	1.000	0.0	104	0.00	4.12	
52	S	1,2-dichloroethane-d4 (s)	0.344	0.359	-4.4	110	0.00	3.87	
53		tert-amyl methyl ether		----------NA----------					
54		2,2,4-trimethylpentane		----------NA----------					
55		n-butyl alcohol		----------NA----------					
56	M	benzene		----------NA----------					
57		heptane		----------NA----------					
58		1,2-dichloroethane		----------NA----------					
59		trichloroethene		----------NA----------					
60		ethyl acrylate		----------NA----------					
61		2-nitropropane		----------NA----------					
62		2-chloroethyl vinyl ether		----------NA----------					
63		methyl methacrylate		----------NA----------					
64		1,2-dichloropropane		----------NA----------					
65		methylcyclohexane		----------NA----------					
66		dibromomethane		----------NA----------					
67		bromodichloromethane		----------NA----------					
68		cis-1,3-dichloropropene		----------NA----------					
69		epichlorohydrin		----------NA----------					
70		4-methyl-2-pentanone		----------NA----------					
71		3-methyl-1-butanol		----------NA----------					
72	I	chlorobenzene-d5	1.000	1.000	0.0	99	0.00	6.00	
73	S	toluene-d8 (s)	1.194	1.278	-7.0	107	0.00	5.03	
74		toluene		----------NA----------					
75		trans-1,3-dichloropropene		----------NA----------					
76		ethyl methacrylate		----------NA----------					
77		1,1,2-trichloroethane		----------NA----------					
78		2-hexanone		----------NA----------					
79		tetrachloroethene	0.324	0.351	-8.3	107	0.00	5.41	
80		1,3-dichloropropane		----------NA----------					
81		butyl acetate		----------NA----------					
82		dibromochloromethane		----------NA----------					
83		1,2-dibromoethane		----------NA----------					
84		n-butyl ether		----------NA----------					
85		chlorobenzene		----------NA----------					
86		1,1,1,2-tetrachloroethane		----------NA----------					
87		ethylbenzene		----------NA----------					
88		m,p-xylene		----------NA----------					
89		o-xylene		----------NA----------					
90		butyl acrylate		----------NA----------					
91		n-amyl acetate		----------NA----------					
92		styrene		----------NA----------					
93		bromoform		----------NA----------					
94		isopropylbenzene		----------NA----------					
95		cis-1,4-dichloro-2-butene		----------NA----------					

Initial Calibration Verification

Job Number: JD99851 **Sample:** V5A284-ICV284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A9743.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	99	0.00	7.58
97	S	4-bromofluorobenzene (s)	0.950	0.968	-1.9	101	0.00	6.81
98		bromobenzene	----------NA----------					
99		1,1,2,2-tetrachloroethane	----------NA----------					
100		trans-1,4-dichloro-2-bute	----------NA----------					
101		1,2,3-trichloropropane	----------NA----------					
102		n-propylbenzene	----------NA----------					
103		2-chlorotoluene	----------NA----------					
104		4-chlorotoluene	----------NA----------					
105		1,3,5-trimethylbenzene	----------NA----------					
106		tert-butylbenzene	----------NA----------					
107		1,2,4-trimethylbenzene	----------NA----------					
108		sec-butylbenzene	----------NA----------					
109		1,3-dichlorobenzene	----------NA----------					
110		p-isopropyltoluene	----------NA----------					
111		1,2,3-trimethylbenzene	1.782	2.247	-26.1	124	0.00	7.61
112		1,4-dichlorobenzene	----------NA----------					
113		1,2-dichlorobenzene	----------NA----------					
114		n-butylbenzene	----------NA----------					
		----------	True	Calc.	% Drift	----------		
115		1,2-dibromo-3-chloropropa	----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------		
116		1,3,5-trichlorobenzene	----------NA----------					
117		1,2,4-trichlorobenzene	----------NA----------					
118		hexachlorobutadiene	----------NA----------					
119		naphthalene	----------NA----------					
120		1,2,3-trichlorobenzene	----------NA----------					
121		hexachloroethane	----------NA----------					
122		benzyl chloride	----------NA----------					
123		2-methylnaphthalene	----------NA----------					
124		pentafluorobenzene(a)	1.000	1.000	0.0	104	0.00	3.65
125		Freon 114	----------NA----------					
126		Freon 142B	----------NA----------					
127		vinyl bromide	----------NA----------					
128		allyl chloride	----------NA----------					
129		1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	99	0.00	7.58
130		4-ethyltoluene	----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5A9725.D M5a284.M Mon Sep 16 17:13:43 2024

6.7.9

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V5A328-CC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A11469.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : X:\Dayton VOA GCMS\k...1124\v5a328\5A11469.d Vial: 6
Acq On : 11 Nov 2024 8:47 am Operator: nickw
Sample : cc284-20 Inst : GCMS4A5A
Misc : MS86867,V5A328,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\M5a284.M (RTE Integrator)
Title : SW846 Method V8260C/D and EPA 624.1, column ZB-624 60m x 0.25mm x 1.4 um
Last Update : Mon Oct 14 09:29:11 2024
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	tert Butyl Alcohol-d9	1.000	1.000	0.0	52	0.00	2.64
2	1,4-dioxane	0.056	0.051	8.9	46#	0.00	4.46
3	ethanol	0.074	0.064	13.5	48#	0.00	2.13
4 M	tertiary butyl alcohol	1.235	1.260	-2.0	53	0.00	2.68
5 I	pentafluorobenzene	1.000	1.000	0.0	75	0.00	3.65
6	chlorodifluoromethane	0.621	0.660	-6.3	77	0.00	1.41
7	dichlorodifluoromethane	0.651	0.611	6.1	66	0.00	1.40
8	chloromethane	0.626	0.588	6.1	72	0.00	1.53
9	vinyl chloride	0.558	0.511	8.4	65	0.00	1.61
10	1,3-butadiene	0.519	0.562	-8.3	79	0.00	1.63
11	bromomethane	0.173	0.160	7.5	69	0.00	1.84
12	chloroethane	0.297	0.263	11.4	67	0.00	1.91
13	trichlorofluoromethane	0.697	0.766	-9.9	80	0.00	2.06
14	ethyl ether	0.277	0.283	-2.2	71	0.00	2.22
15	acrolein	0.129	0.130	-0.8	76	0.00	2.31
16	freon 113	0.357	0.388	-8.7	74	0.00	2.38
17	1,1-dichloroethene	0.378	0.367	2.9	70	0.00	2.38
18	acetone	0.118	0.074	37.3#	47#	0.00	2.38
19	acetonitrile	0.057	0.060	-5.3	79	0.00	2.55
		True	Calc.	% Drift			
20	iodomethane	20.000	14.709	26.5#	55	0.00	2.48
		AvgRF	CCRF	% Dev			
21	iso-butyl alcohol	0.039	0.033	15.4	66	0.00	3.77
22	carbon disulfide	1.174	1.159	1.3	71	0.00	2.53
23	methylene chloride	0.414	0.429	-3.6	76	0.00	2.66
24	methyl acetate	0.124	0.112	9.7	63	0.00	2.56
25	methyl tert butyl ether	1.403	1.386	1.2	69	0.00	2.80
26	trans-1,2-dichloroethene	0.429	0.448	-4.4	74	0.00	2.82
27	hexane	0.740	0.720	2.7	69	0.00	2.97
28	di-isopropyl ether	2.011	2.125	-5.7	75	0.00	3.06
29	ethyl tert-butyl ether	1.754	1.680	4.2	67	0.00	3.26
30	2-butanone	0.107	0.095	11.2	62	0.00	3.36
31 M	1,1-dichloroethane	0.900	0.890	1.1	69	0.00	3.07
32	chloroprene	0.892	0.913	-2.4	71	0.00	3.11
33	acrylonitrile	0.278	0.341	-22.7#	91	0.00	2.78
34	vinyl acetate	0.078	0.108	-38.5#	94	0.00	3.04
35	ethyl acetate	0.167	0.184	-10.2	82	0.00	3.37
36	2,2-dichloropropane	0.637	0.653	-2.5	73	0.00	3.40
37	cis-1,2-dichloroethene	0.476	0.496	-4.2	75	0.00	3.39

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V5A328-CC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A11469.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

38		propionitrile	0.129	0.128	0.8	70	0.00	3.40
39		methyl acrylate	0.101	0.104	-3.0	69	0.00	3.41
40		bromochloromethane	0.222	0.231	-4.1	74	0.00	3.53
41		tetrahydrofuran	0.118	0.114	3.4	74	0.00	3.53
42		chloroform	0.820	0.842	-2.7	78	0.00	3.57
43	S	dibromofluoromethane (s)	0.513	0.552	-7.6	80	0.00	3.66
44		methacrylonitrile	0.307	0.287	6.5	68	0.00	3.49
45		1,1,1-trichloroethane	0.661	0.692	-4.7	76	0.00	3.69
46		cyclohexane	0.617	0.603	2.3	73	0.00	3.74
47		1,1-dichloropropene	0.610	0.619	-1.5	73	0.00	3.77
48		carbon tetrachloride	0.582	0.608	-4.5	75	0.00	3.78
49		isopropyl acetate	0.121	0.125	-3.3	72	0.00	3.87
50		tert amyl alcohol	0.038	0.033	13.2	67	0.00	3.84
51	I	1,4-difluorobenzene	1.000	1.000	0.0	76	0.00	4.12
52	S	1,2-dichloroethane-d4 (s)	0.344	0.365	-6.1	77	0.00	3.87
53		tert-amyl methyl ether	0.750	0.718	4.3	67	0.00	3.94
54		2,2,4-trimethylpentane	0.673	0.678	-0.7	72	0.00	3.94
55		n-butyl alcohol	0.012	0.008	33.3#	49#	0.00	4.15
56	M	benzene	1.007	0.968	3.9	70	0.00	3.90
57		heptane	0.144	0.149	-3.5	76	0.00	4.03
58		1,2-dichloroethane	0.399	0.392	1.8	72	0.00	3.91
59		trichloroethene	0.272	0.261	4.0	70	0.00	4.27
60		ethyl acrylate	0.544	0.503	7.5	65	0.00	4.28
61		2-nitropropane	0.132	0.130	1.5	77	0.00	4.71
62		2-chloroethyl vinyl ether	0.183	0.193	-5.5	71	0.00	4.73
63		methyl methacrylate	0.092	0.076	17.4	59	0.00	4.43
64		1,2-dichloropropane	0.303	0.278	8.3	67	0.00	4.43
65		methylcyclohexane	0.352	0.344	2.3	69	0.00	4.43
66		dibromomethane	0.160	0.154	3.8	71	0.00	4.49
67		bromodichloromethane	0.336	0.330	1.8	73	0.00	4.58
68		cis-1,3-dichloropropene	0.426	0.402	5.6	67	0.00	4.85
69		epichlorohydrin	0.055	0.050	9.1	70	0.00	4.77
70		4-methyl-2-pentanone	0.171	0.163	4.7	67	0.00	4.92
71		3-methyl-1-butanol	0.009	0.006	33.3#	50	0.00	4.93
72	I	chlorobenzene-d5	1.000	1.000	0.0	72	0.00	5.99
73	S	toluene-d8 (s)	1.194	1.223	-2.4	76	0.00	5.03
74		toluene	0.662	0.654	1.2	70	0.00	5.07
75		trans-1,3-dichloropropene	0.438	0.417	4.8	64	0.00	5.20
76		ethyl methacrylate	0.386	0.367	4.9	65	0.00	5.21
77		1,1,2-trichloroethane	0.229	0.231	-0.9	71	0.00	5.33
78		2-hexanone	0.206	0.192	6.8	59	0.00	5.45
79		tetrachloroethene	0.324	0.304	6.2	68	0.00	5.41
80		1,3-dichloropropane	0.442	0.450	-1.8	67	0.00	5.45
81		butyl acetate	0.289	0.279	3.5	65	0.00	5.52
82		dibromochloromethane	0.301	0.310	-3.0	72	0.00	5.59
83		1,2-dibromoethane	0.285	0.307	-7.7	74	0.00	5.69
84		n-butyl ether	1.360	1.291	5.1	65	0.00	6.04
85		chlorobenzene	0.754	0.744	1.3	69	0.00	6.02
86		1,1,1,2-tetrachloroethane	0.273	0.259	5.1	66	0.00	6.07
87		ethylbenzene	1.192	1.218	-2.2	71	0.00	6.07
88		m,p-xylene	0.480	0.485	-1.0	70	0.00	6.16
89		o-xylene	0.472	0.466	1.3	68	0.00	6.43
90		butyl acrylate	0.744	0.673	9.5	62	0.00	6.37
91		n-amyl acetate	0.205	0.205	0.0	65	0.00	6.52
92		styrene	0.785	0.813	-3.6	70	0.00	6.45
93		bromoform	0.209	0.205	1.9	70	0.00	6.59
94		isopropylbenzene	1.074	1.033	3.8	66	0.00	6.68
95		cis-1,4-dichloro-2-butene	0.143	0.125	12.6	64	0.00	6.72

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V5A328-CC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A11469.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	64	0.00	7.58
97	S	4-bromofluorobenzene (s)	0.950	1.049	-10.4	72	0.00	6.81
98		bromobenzene	0.665	0.703	-5.7	67	0.00	6.92
99		1,1,2,2-tetrachloroethane	0.746	0.887	-18.9	76	0.00	6.88
100		trans-1,4-dichloro-2-bute	0.287	0.295	-2.8	63	0.00	6.91
101		1,2,3-trichloropropane	0.229	0.254	-10.9	68	0.00	6.93
102		n-propylbenzene	2.609	2.935	-12.5	71	0.00	6.97
103		2-chlorotoluene	0.591	0.645	-9.1	71	0.00	7.04
104		4-chlorotoluene	0.601	0.654	-8.8	67	0.00	7.12
105		1,3,5-trimethylbenzene	1.800	1.941	-7.8	69	0.00	7.08
106		tert-butylbenzene	1.565	1.667	-6.5	65	0.00	7.30
107		1,2,4-trimethylbenzene	1.855	1.993	-7.4	67	0.00	7.33
108		sec-butylbenzene	2.165	2.419	-11.7	69	0.00	7.44
109		1,3-dichlorobenzene	1.128	1.267	-12.3	68	0.00	7.53
110		p-isopropyltoluene	1.803	2.061	-14.3	70	0.00	7.53
111		1,2,3-trimethylbenzene	1.782	1.999	-12.2	69	0.00	7.61
112		1,4-dichlorobenzene	1.154	1.248	-8.1	68	0.00	7.59
113		1,2-dichlorobenzene	1.052	1.187	-12.8	69	0.00	7.83
114		n-butylbenzene	0.790	0.838	-6.1	68	0.00	7.80
			True	Calc.	% Drift			
115		1,2-dibromo-3-chloropropa	20.000	17.361	13.2	58	0.00	8.31
			AvgRF	CCRF	% Dev			
116		1,3,5-trichlorobenzene	0.628	0.619	1.4	62	0.00	8.42
117		1,2,4-trichlorobenzene	0.521	0.519	0.4	63	0.00	8.80
118		hexachlorobutadiene	0.201	0.214	-6.5	68	0.00	8.87
119		naphthalene	1.582	1.605	-1.5	67	0.00	8.96
120		1,2,3-trichlorobenzene	0.453	0.461	-1.8	65	0.00	9.09
121		hexachloroethane	0.288	0.301	-4.5	69	0.00	8.00
122		benzyl chloride	1.226	1.284	-4.7	65	0.00	7.66
123		2-methylnaphthalene	0.487	0.428	12.1	63	0.00	9.66
124		pentafluorobenzene(a)	1.000	1.000	0.0	81	0.00	3.65
125		Freon 114		----------NA----------				
126		Freon 142B		----------NA----------				
127		vinyl bromide		----------NA----------				
128		allyl chloride		----------NA----------				
129		1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	64	0.00	7.58
130		4-ethyltoluene		----------NA----------				

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5A9723.D M5a284.M Mon Nov 11 17:43:13 2024

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V5A328-CC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A11471.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : X:\Dayton VOA GCMS\k...1124\v5a328\5A11471.d Vial: 8
Acq On : 11 Nov 2024 9:44 am Operator: nickw
Sample : cc284-2 Inst : GCMS4A5A
Misc : MS86867,V5A328,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\M5a284.M (RTE Integrator)
Title : SW846 Method V8260C/D and EPA 624.1, column ZB-624 60m x 0.25mm x 1.4 um
Last Update : Mon Oct 14 09:29:11 2024
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 100% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert Butyl Alcohol-d9	1.000	1.000	0.0	50	0.00	2.63
2		1,4-dioxane		----------NA----------				
3		ethanol		----------NA----------				
4	M	tertiary butyl alcohol		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	74	0.00	3.65
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11		bromomethane		----------NA----------				
12		chloroethane		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		ethyl ether		----------NA----------				
15		acrolein		----------NA----------				
16		freon 113		----------NA----------				
17		1,1-dichloroethene		----------NA----------				
18		acetone	0.118	0.067	43.2	44	0.00	2.39
19		acetonitrile		----------NA----------				
		----------	True	Calc.	% Drift		----------	
20		iodomethane	2.000	2.468	-23.4	89	0.00	2.48
		----------	AvgRF	CCRF	% Dev		----------	
21		iso-butyl alcohol		----------NA----------				
22		carbon disulfide		----------NA----------				
23		methylene chloride		----------NA----------				
24		methyl acetate		----------NA----------				
25		methyl tert butyl ether		----------NA----------				
26		trans-1,2-dichloroethene		----------NA----------				
27		hexane		----------NA----------				
28		di-isopropyl ether		----------NA----------				
29		ethyl tert-butyl ether		----------NA----------				
30		2-butanone		----------NA----------				
31	M	1,1-dichloroethane		----------NA----------				
32		chloroprene		----------NA----------				
33		acrylonitrile		----------NA----------				
34		vinyl acetate		----------NA----------				
35		ethyl acetate		----------NA----------				
36		2,2-dichloropropane		----------NA----------				
37		cis-1,2-dichloroethene		----------NA----------				

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V5A328-CC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A11471.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

38		propionitrile		----------NA----------				
39		methyl acrylate		----------NA----------				
40		bromochloromethane		----------NA----------				
41		tetrahydrofuran		----------NA----------				
42		chloroform		----------NA----------				
43	S	dibromofluoromethane (s)	0.513	0.570	-11.1	81	0.00	3.66
44		methacrylonitrile		----------NA----------				
45		1,1,1-trichloroethane		----------NA----------				
46		cyclohexane		----------NA----------				
47		1,1-dichloropropene		----------NA----------				
48		carbon tetrachloride		----------NA----------				
49		isopropyl acetate		----------NA----------				
50		tert amyl alcohol		----------NA----------				
51	I	1,4-difluorobenzene	1.000	1.000	0.0	78	0.00	4.12
52	S	1,2-dichloroethane-d4 (s)	0.344	0.373	-8.4	83	0.00	3.87
53		tert-amyl methyl ether		----------NA----------				
54		2,2,4-trimethylpentane		----------NA----------				
55		n-butyl alcohol	0.012	0.007	41.7	60	0.00	4.16
56	M	benzene		----------NA----------				
57		heptane		----------NA----------				
58		1,2-dichloroethane		----------NA----------				
59		trichloroethene		----------NA----------				
60		ethyl acrylate		----------NA----------				
61		2-nitropropane		----------NA----------				
62		2-chloroethyl vinyl ether		----------NA----------				
63		methyl methacrylate		----------NA----------				
64		1,2-dichloropropane		----------NA----------				
65		methylcyclohexane		----------NA----------				
66		dibromomethane		----------NA----------				
67		bromodichloromethane		----------NA----------				
68		cis-1,3-dichloropropene		----------NA----------				
69		epichlorohydrin		----------NA----------				
70		4-methyl-2-pentanone		----------NA----------				
71		3-methyl-1-butanol	0.009	0.005	44.4	53	0.00	4.94
72	I	chlorobenzene-d5	1.000	1.000	0.0	73	0.00	6.00
73	S	toluene-d8 (s)	1.194	1.263	-5.8	77	0.00	5.03
74		toluene		----------NA----------				
75		trans-1,3-dichloropropene		----------NA----------				
76		ethyl methacrylate		----------NA----------				
77		1,1,2-trichloroethane		----------NA----------				
78		2-hexanone		----------NA----------				
79		tetrachloroethene		----------NA----------				
80		1,3-dichloropropane		----------NA----------				
81		butyl acetate		----------NA----------				
82		dibromochloromethane		----------NA----------				
83		1,2-dibromoethane		----------NA----------				
84		n-butyl ether		----------NA----------				
85		chlorobenzene		----------NA----------				
86		1,1,1,2-tetrachloroethane		----------NA----------				
87		ethylbenzene		----------NA----------				
88		m,p-xylene		----------NA----------				
89		o-xylene		----------NA----------				
90		butyl acrylate		----------NA----------				
91		n-amyl acetate		----------NA----------				
92		styrene		----------NA----------				
93		bromoform		----------NA----------				
94		isopropylbenzene		----------NA----------				
95		cis-1,4-dichloro-2-butene		----------NA----------				

Continuing Calibration Summary

Job Number: JD99851 **Sample:** V5A328-CC284
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 5A11471.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	68	0.00	7.58
97	S	4-bromofluorobenzene (s)	0.950	1.024	-7.8	74	0.00	6.81
98		bromobenzene	----------NA----------					
99		1,1,2,2-tetrachloroethane	----------NA----------					
100		trans-1,4-dichloro-2-bute	----------NA----------					
101		1,2,3-trichloropropane	----------NA----------					
102		n-propylbenzene	----------NA----------					
103		2-chlorotoluene	----------NA----------					
104		4-chlorotoluene	----------NA----------					
105		1,3,5-trimethylbenzene	----------NA----------					
106		tert-butylbenzene	----------NA----------					
107		1,2,4-trimethylbenzene	----------NA----------					
108		sec-butylbenzene	----------NA----------					
109		1,3-dichlorobenzene	----------NA----------					
110		p-isopropyltoluene	----------NA----------					
111		1,2,3-trimethylbenzene	----------NA----------					
112		1,4-dichlorobenzene	----------NA----------					
113		1,2-dichlorobenzene	----------NA----------					
114		n-butylbenzene	----------NA----------					
		---------- True	Calc.	% Drift	----------			
115		1,2-dibromo-3-chloropropa	----------NA----------					
		---------- AvgRF	CCRF	% Dev	----------			
116		1,3,5-trichlorobenzene	----------NA----------					
117		1,2,4-trichlorobenzene	----------NA----------					
118		hexachlorobutadiene	----------NA----------					
119		naphthalene	----------NA----------					
120		1,2,3-trichlorobenzene	----------NA----------					
121		hexachloroethane	----------NA----------					
122		benzyl chloride	----------NA----------					
123		2-methylnaphthalene	----------NA----------					
124		pentafluorobenzene(a)	1.000	1.000	0.0	86	0.00	3.65
125		Freon 114	----------NA----------					
126		Freon 142B	----------NA----------					
127		vinyl bromide	----------NA----------					
128		allyl chloride	----------NA----------					
129		1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	68	0.00	7.58
130		4-ethyltoluene	----------NA----------					

(#) = Out of Range SPCC's out = 0 CCC's out = 0
5A9717.D M5a284.M Mon Nov 11 17:45:14 2024

Run Sequence Report

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Run ID: V2S228	**Method:** SW846 8260D	**Instrument ID:** GCMS2S

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2S228-BFB	2S009366.D	09/30/24 16:01	n/a	BFB Tune
V2S228-IC228	2S009368.D	09/30/24 16:40	n/a	Initial cal 0.2
V2S228-IC228	2S009370.D	09/30/24 17:06	n/a	Initial cal 0.5
V2S228-IC228	2S009372.D	09/30/24 17:32	n/a	Initial cal 1
V2S228-IC228	2S009374.D	09/30/24 17:57	n/a	Initial cal 2
V2S228-IC228	2S009376.D	09/30/24 18:23	n/a	Initial cal 4
V2S228-IC228	2S009378.D	09/30/24 18:49	n/a	Initial cal 8
V2S228-IC228	2S009380.D	09/30/24 19:15	n/a	Initial cal 20
V2S228-ICC228	2S009382.D	09/30/24 19:41	n/a	Initial cal 50
V2S228-IC228	2S009384.D	09/30/24 20:07	n/a	Initial cal 100
V2S228-IC228	2S009386.D	09/30/24 20:33	n/a	Initial cal 200
V2S228-ICV228	2S009392.D	09/30/24 21:50	n/a	Initial cal verification 50
V2S228-ICV228	2S009394.D	09/30/24 22:16	n/a	Initial cal verification 50
V2S228-BFB2	2S009398.D	10/01/24 15:24	n/a	BFB Tune
V2S228-ICV228	2S009400.D	10/01/24 16:08	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Run ID: V2S273	**Method:** SW846 8260D	**Instrument ID:** GCMS2S

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2S273-CC228	2S010608.D	11/08/24 21:47	n/a	Continuing cal 50
V2S273-CC228	2S010609.D	11/08/24 22:13	n/a	Continuing cal 1
V2S273-BS	2S010610.D	11/08/24 22:39	n/a	Blank Spike
V2S273-MB	2S010612.D	11/08/24 23:30	n/a	Method Blank
JD99851-5	2S010613.D	11/08/24 23:56	n/a	MW-1_110424
JD99851-5MS	2S010615.D	11/09/24 00:48	n/a	Matrix Spike
JD99851-5MSD	2S010616.D	11/09/24 01:14	n/a	Matrix Spike Duplicate
ZZZZZZ	2S010617.D	11/09/24 01:40	n/a	(unrelated sample)
ZZZZZZ	2S010618.D	11/09/24 02:06	n/a	(unrelated sample)
JD99851-2	2S010619.D	11/09/24 02:31	n/a	FB_110424
JD99851-3	2S010620.D	11/09/24 02:57	n/a	TB_110424
ZZZZZZ	2S010621.D	11/09/24 03:23	n/a	(unrelated sample)
ZZZZZZ	2S010622.D	11/09/24 03:49	n/a	(unrelated sample)
ZZZZZZ	2S010623.D	11/09/24 04:15	n/a	(unrelated sample)
ZZZZZZ	2S010625.D	11/09/24 05:07	n/a	(unrelated sample)
ZZZZZZ	2S010626.D	11/09/24 05:33	n/a	(unrelated sample)
ZZZZZZ	2S010627.D	11/09/24 05:58	n/a	(unrelated sample)
ZZZZZZ	2S010628.D	11/09/24 06:24	n/a	(unrelated sample)
JD99851-6	2S010631.D	11/09/24 07:42	n/a	MW-6_110424
ZZZZZZ	2S010632.D	11/09/24 08:08	n/a	(unrelated sample)

Run Sequence Report

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Run ID: V5A284	**Method:** SW846 8260D	**Instrument ID:** GCMS5A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V5A284-BFB	5A9709.D	09/09/24 17:08	n/a	BFB Tune
V5A284-IC284	5A9711.D	09/09/24 17:55	n/a	Initial cal 0.2
V5A284-IC284	5A9713.D	09/09/24 18:31	n/a	Initial cal 0.5
V5A284-IC284	5A9715.D	09/09/24 19:07	n/a	Initial cal 1
V5A284-IC284	5A9717.D	09/09/24 19:43	n/a	Initial cal 2
V5A284-IC284	5A9719.D	09/09/24 20:19	n/a	Initial cal 4
V5A284-IC284	5A9721.D	09/09/24 20:55	n/a	Initial cal 8
V5A284-IC284	5A9723.D	09/09/24 21:30	n/a	Initial cal 20
V5A284-ICC284	5A9725.D	09/09/24 22:06	n/a	Initial cal 50
V5A284-IC284	5A9727.D	09/09/24 22:41	n/a	Initial cal 100
V5A284-IC284	5A9729.D	09/09/24 23:17	n/a	Initial cal 200
V5A284-ICV284	5A9735.D	09/10/24 01:05	n/a	Initial cal verification 50
V5A284-BFB2	5A9741.D	09/13/24 16:36	n/a	BFB Tune
V5A284-ICV284	5A9743.D	09/13/24 17:12	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JD99851
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Run ID: V5A328	**Method:** SW846 8260D	**Instrument ID:** GCMS5A

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V5A328-CC284	5A11469.D	11/11/24 08:47	n/a	Continuing cal 20
V5A328-CC284	5A11471.D	11/11/24 09:44	n/a	Continuing cal 2
V5A328-BS	5A11473.D	11/11/24 10:20	n/a	Blank Spike
V5A328-MB	5A11475.D	11/11/24 10:55	n/a	Method Blank
JD99851-1	5A11477.D	11/11/24 11:42	n/a	MW-05_110424
JD99851-4	5A11479.D	11/11/24 12:18	n/a	DUP_110424
ZZZZZZ	5A11481.D	11/11/24 12:54	n/a	(unrelated sample)
ZZZZZZ	5A11483.D	11/11/24 13:30	n/a	(unrelated sample)
JE209-3	5A11485.D	11/11/24 14:06	n/a	(used for QC only; not part of job JD99851)
ZZZZZZ	5A11487.D	11/11/24 14:41	n/a	(unrelated sample)
JE209-3	5A11489.D	11/11/24 15:17	n/a	(used for QC only; not part of job JD99851)
ZZZZZZ	5A11491.D	11/11/24 15:53	n/a	(unrelated sample)
JE209-3MS	5A11493.D	11/11/24 16:28	n/a	Matrix Spike
JE209-3MSD	5A11495.D	11/11/24 17:05	n/a	Matrix Spike Duplicate
ZZZZZZ	5A11497.D	11/11/24 17:40	n/a	(unrelated sample)
ZZZZZZ	5A11499.D	11/11/24 18:16	n/a	(unrelated sample)
ZZZZZZ	5A11501.D	11/11/24 18:53	n/a	(unrelated sample)
ZZZZZZ	5A11503.D	11/11/24 19:28	n/a	(unrelated sample)
ZZZZZZ	5A11505.D	11/11/24 20:04	n/a	(unrelated sample)
ZZZZZZ	5A11507.D	11/11/24 20:39	n/a	(unrelated sample)

MS Volatiles

Raw Data

Full Raw Data Available upon request

RAMBOLL

ENVIRONMENT
& HEALTH

MEMO

Project name **Former Clove & Maple Haverstraw NY Site Data Validation Report**
Project no. **1940102724**
Client **Orange and Rockland Utilities, Inc. (ORU)**
Prepared by **Ramboll**

This report presents the results of data validation performed for samples collected at the Former Clove & Maple MGP Site in Haverstraw, New York. Sample collection activities were conducted by Ramboll in November 2024.

SGS North America, Inc. of Dayton, New Jersey (SGS Dayton) performed the laboratory analyses for the sampling event. The laboratory packages contain summary forms for quality control analysis and supportive raw data.

Table 1 below summarizes the sample analysis submitted for data validation.

February 28, 2024

Ramboll
101 Carnegie Center
Suite 200
Princeton, NJ 08540
USA

Table 1. ***Analytical Methods and References***

Analysis	Method	Reference
Volatile Organic Compounds (VOCs)	USEPA Methods 5030B/8000C/8260C	1
Semivolatile Organic Compounds (SVOCs)	USEPA Methods 3510C/8000C/8270D	1

Notes:

1. USEPA. 2018. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, 3rd Edition, Update VI. Washington D.C.

The samples submitted for data validation are summarized in the attached Table 2. Table 3, attached, presents the specific data validation approach applied to data generated for this investigation. Table 4, also attached, presents the laboratory quality assurance/quality control (QA/QC) analyses definitions.

Full validation was performed on the samples collected for this investigation. The analytical data generated for this investigation were evaluated by Ramboll using the QA/QC criteria established in the methods and professional judgement.

Application of qualifiers to the data affected by excursions from the method criteria was based on guidance provided in the following documents and professional judgment:

- USEPA. 2010. USEPA Region II Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP HW-22 Revision 5.
- USEPA. 2014. USEPA Region II Standard Operating Procedure For the Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24, Revision 4.

The following qualifiers are used in this type of data validation:

- "R" - Indicates that the reporting limit (RL) or sample result has been identified as unusable due to a major deficiency in the data generation process. The data were rejected and should not be used for any qualitative or quantitative purposes.
- "U" - Indicates that the analyte was not detected and the sample RL is presented. This qualifier is also used to signify blank excursions.
- "J" - Indicates that the concentration should be considered approximate. The target analyte was positively identified and the associated numerical value is the approximate concentration; either the data quality criteria were not met or the concentration of the target analyte was greater than the method detection limit (MDL) and below the RL.
- "UJ" - Indicates that the analyte was analyzed for and was not detected; however, the RL is presented and should be considered approximate. This qualifier is used when data quality criteria were not met.
- "JN" – Indicates that the target analyte has been "tentatively identified" as present and the associated numerical value is the estimated concentration in the sample. This qualifier may be applied due to data interpretation issues.

The data quality evaluation results in only one type of qualifier for each analyte; in a case when several qualifiers are applicable to the same analyte, the cumulative effect of the various QA/QC excursions is employed in assigning the final data qualifiers. For example, if a sample result is affected by low LCS recovery, for which the "UJ" qualifier is applied, but low MS/MSD recoveries result in the rejection of the sample result (application of the "R" qualifier), the final data qualifier is the "R" qualifier. QA/QC excursions that do not result in the qualification of an analyte are not discussed, with the exception of those excursions that provide useful information to the data user.

The data validation included an evaluation of the following parameters, where applicable:

- Documentation completeness
- Chain-of-custody record
- Sample collection
- Sample preservation
- Holding times
- Calibrations
- Blank analysis
- Matrix spike/ matrix spike duplicate (MS/MSD) analysis
- Laboratory Control Sample (LCS) analysis
- Field duplicate analysis
- Surrogate recovery
- Internal standards performance
- Gas chromatography/mass spectrometry (GC/MS) instrument performance check
- Target analyte quantitation, identification, and quantitation limits (QLs)

The following sections of this memorandum present the results of the comparison of the analytical data to the QA/QC criteria specified above.

VOC DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- Documentation completeness
- Chain-of-custody record
- Sample collection
- Sample preservation
- Holding times
- Calibrations
- Blank analysis
- MS/MSD analysis
- LCS analysis
- Field duplicate analysis
- Surrogate recovery
- Internal standards performance
- GC/MS instrument performance check
- Target analyte identification

Excursions from method or validation criteria were not identified. Additional observations are described below.

I. Target analyte quantitation and QLs

Sample results detected at concentrations greater than laboratory MDLs but less than laboratory RLs, the sample results are flagged as approximate (J) by the laboratory and the "J" qualifier is retained during data validation.

SVOC DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- Documentation completeness
- Chain-of-custody record
- Sample collection
- Sample preservation
- Holding times
- Calibrations
- MS/MSD analysis
- LCS analysis
- Field duplicate analysis
- Surrogate recovery
- Internal standards performance
- GC/MS instrument performance check
- Target analyte identification

Excursions from method or validation criteria and additional observations are described below.

I. Target analyte quantitation and QLs

Sample results detected at concentrations greater than laboratory MDLs but less than laboratory RLs, the sample results are flagged as approximate (J) by the laboratory and the "J" qualifier is retained during data validation.

DATA USABILITY

The data from the samples presented in Table 2 were evaluated based on QA/QC criteria established by the USEPA methods. Data validation qualifiers were applied to data based on the general approach presented in Table 3.

Major deficiencies that would have resulted in rejected data were not identified for data from this sampling event. Minor deficiencies in the data generation process would have resulted in approximation of sample data.

This section summarizes the adherence of the analytical data to precision, accuracy, representativeness, comparability, completeness, and sensitivity data quality objectives. Data quality was evaluated using percent usability, defined as the percentage of sample results that are usable for qualitative and quantitative purposes.

Precision: Data usability with respect to precision is 100 percent.

Sensitivity: Sensitivity is established by RLs, which represent measurable concentrations of analytes that can be quantified with a designated level of confidence and are less than the project action limits established for the project. Dilutions were not performed for sample analyses. Data usability with respect to sensitivity is 100 percent.

Accuracy: Data usability with respect to accuracy is 100 percent.

Representativeness: Data usability with respect to representativeness is 100 percent.

Comparability: Comparability is not compromised provided that the analytical method approach did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. Since the modified analytical method approach and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

Completeness: Overall, considering the complete data set, 100 percent of the data were usable for quantitative and quantitative purposes based on the data validation performed.

Table 2. Sample Cross Reference Table - Samples Collected and Submitted for Data Validation

Laboratory Name	Sample Delivery Group	Date Collected	Laboratory Identification	Client Identification	Matrix
SGS Dayton	JD99851	11/04/2024	MW-01_110424	JD99851-5	Groundwater
SGS Dayton	JD99851	11/04/2024	MW-05_110424	JD99851-1	Groundwater
SGS Dayton	JD99851	11/04/2024	MW-01_110424_MSD	JD99851-5D	Groundwater
SGS Dayton	JD99851	11/04/2024	MW-01_110424_MS	JD99851-5S	Groundwater
SGS Dayton	JD99851	11/04/2024	MW-06_110424	JD99851-6	Groundwater
SGS Dayton	JD99851	11/04/2024	DUP_110424 [MW-05_110424]	JD99851-4	Groundwater
SGS Dayton	JD99851	11/04/2024	FB_110424	JD99851-2	Aqueous
SGS Dayton	JD99851	11/04/2024	TB_110424	JD99851-5	Aqueous

Notes:

SGS Dayton indicates SGS North America Inc. located in Dayton, New Jersey.

VOCs indicates volatile organic compounds.

FB indicats field blank.

TB indicates trip blank.

MS/MSD indicates matrix spike/matrix spike duplicate.

DUP indicates field duplicate.

Table 3

Ramboll Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C) and SVOCs (8270D).

	The validation approach taken by Ramboll is a conservative one; qualifiers are applied to sample data to indicate both major and minor excursions so that data associated with any type of excursion are identified to the data user. Major excursions result in data being rejected (R), indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions result in sample data being qualified as approximate (J, J-, J+, UJ, JN) or non-detected (U) that is otherwise usable for quantitative or qualitative purposes.
General Validation Approach	Excursions are subdivided into excursions that are within the laboratory's control and those that are out of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response, method blank excursions, low or high spike recovery due to inaccurate spiking solutions or poor instrument response, holding times, interpretation errors, and quantitation errors are within the control of the laboratory. Excursions resulting from matrix spike recovery, serial dilution recovery, surrogate, and internal standard performance due to interference from the matrix of the samples are examples of those excursions that are not within the laboratory's control if the laboratory has followed proper method procedures, including performing appropriate cleanup techniques.
Applying professional judgment	USEPA data validation directs professional judgment to be used when applying qualifiers in some cases. When utilizing professional judgment, provide justification for actions taken in the associated validation notes.
Validation Parameter	Ramboll Data Validation Approach based on current Region II guidelines for SW-846 methods. For Region II guidelines that apply only to the CLP method, only the general approach to applying qualifiers was utilized.
Validation Qualifiers – Organics	U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the quantitation limit (QL). J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the QL). NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. UJ - The analyte was not detected at a level greater than or equal to the QL. However, the QL is approximate and may be inaccurate or imprecise. R - The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
Cooler Temperature	Results for samples submitted for organic and inorganic analyses that are impacted by coolers that did not contain ice, or if the ice melted upon receipt and the cooler temperatures are greater than 10°C, are qualified as approximate (UJ, J). If samples are delivered to the laboratory the same day as sample collection and samples did not have sufficient time to reach 10°C, samples are not qualified, unless proper preservation was not provided for samples between sample collection and sample receipt at the laboratory. Results for samples received at ambient temperature involved in extended shipment-day issues may be rejected, applying professional judgment.
Percent Solids	Results for samples submitted for organic and inorganic analyses that are impacted by percent solids of 50 percent or less are qualified as approximate (UJ, J).
Water sample collection for VOCs	If headspace or air bubbles are observed in VOC containers, the VOC data is qualified as approximate (UJ, J).
Soil sample collection for VOCs	Soil samples for VOCs submitted for low level analyses must be collected in accordance with EPA Method 5035A. If samples are not collected in encores or in weighed and preserved containers in the field, the VOC data are qualified as approximate (UJ, J).
Holding Time for Organics	Results for samples analyzed less than two times the holding time window established in the method or the QAPP for preparation and/or analysis are qualified as approximate (UJ, J). Non-detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are rejected (R). Detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are qualified as approximate (J).

Table 3

Ramboll Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C) and SVOCs (8270D).

General Calibration Actions	The entire sample target list for a VOC sample impacted by a holding time excursion is qualified. Due to relative standard deviation (RSD) calibration excursions, detected results for analytes in samples associated with the calibration are qualified as approximate (J). Non-detected results associated with RSD excursions may be qualified as approximate (UJ) based on professional judgment. If the RSD calibration excursion is greater than 90, detected results for analytes in samples associated with the calibration are qualified as approximate (J) and non-detected results may be rejected (R), applying professional judgment. Due to %D calibration verification excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers (J- or J+) For response factor excursions, detected results are qualified as approximate (J) and non-detected results are rejected (R). For initial calibration verifications (ICV) excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers (J- or J+).
VOCs Calibration Evaluation	VOC target analytes are evaluated using the criteria of 15 percent relative standard deviation (%RSD) or 20% RSD for USEPA 8260C or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 percent difference (%D) for target analytes. Initial calibrations and calibration verifications are also evaluated using the response factor (RF) criteria described in the method 8260B for system performance check compounds and a minimum RF of 0.05 or in Table 4 for Method 8260C. The following exceptions are allowed: RFs ≥ 0.010 for poor purging target analytes such as ketones, acetonitrile, acrolein, propionitrile, vinyl acetate, 1,4-dioxane, methyl acetate, alcohols, tetrahydrofuran, and cyclohexanone. Other target analytes not listed on Table 4 - RFs ≥ 0.050. For Ketones and poor purging target analytes listed in Table 4 with RFs ≥ 0.010 and less than 0.100 results, data will be qualified as approximate (UJ, J). ICV recoveries are evaluated using laboratory control limits if available or 70 to 130% or less than 30%D.
VOCs by Method 8015	Target analytes are evaluated using the criteria of 20 %RSD or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20%D for target analytes for both columns. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
SVOCs Calibration Evaluation	SVOC target analytes are evaluated using the criteria of 15 %RSD (<20 %RSD Method 8270D) or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 %D for the target analytes. Initial calibrations and calibration verifications are also evaluated using the criterion of a RF value of greater than or equal to a value of 0.05 for the target analytes using Method 8270C or Table 4 of 8270D. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
Associating samples with Field and Laboratory QC Samples	Trip blanks are associated with samples in the same sample cooler. Equipment blanks (Rinsate blanks) or Field Blanks are associated with samples collected in the same day (or sampling event) using the same sample collection equipment and decontamination solutions. When sampling equipment or decontamination solutions are changed, a new equipment blank should be collected. Each sample should be associated with one equipment blank, which is collected as close to the sample collection date/time as possible based on professional judgment. Field blanks are associated with the sample containers used to collect samples. When sampling container lots are changed, a new field blank should be collected. Method blanks are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples. Method blanks should reflect the sample matrix type (aqueous, low level solid, medium level solid).

Table 3

Ramboll Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C) and SVOCs (8270D).

Associating samples with Field and Laboratory QC Samples	LCSs are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples. MS/MSD and laboratory duplicate samples are collected in the field. The laboratory must prepare using project samples. MS/MSDs and laboratory duplicates are associated with samples prepared at the same time or close to the same time (if preparation is required) with the same matrix type. Field duplicates are collected in the field and are associated with samples of the same matrix type. In the case that insufficient QC samples are provided due to field or laboratory problems, use professional judgment to associate each sample with a QC sample that reflects the sample matrix and analysis conditions. If insufficient QC samples are available to properly associate samples, record the impact in the DV notes.
Evaluation and Action for MS/MSD, LCS, Surrogate and Laboratory Duplicate Data for VOCs and SVOCs	The laboratory control limit (CL) is used to assess MS/MSD, LCS, surrogate and laboratory duplicate data. Refer to Region II guidelines if laboratory control limits are not available. In the case that excursions are identified in more than one quality control sample of the same matrix within one sample delivery group, samples are batched according to sample preparation or analysis date and qualified accordingly (see batching description above). If percent recoveries are less than laboratory CLs but greater than 10%, non-detected and detected results are qualified as approximate (UJ, J). If percent recoveries are greater than laboratory CLs, detected results are qualified as approximate (J). If percent recoveries are less than 10%, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R). In the case of dual column analyses, usually only surrogate data are summarized for both columns. Method blanks, MS/MSD, laboratory duplicate, and LCS summary forms generally report results from one column, although both sets of results can be assessed from CLP Identification Form 10 and in the raw data. (Depending on the laboratory this may be the higher or lower of the two column results, or the column which meets calibration requirements). Results reported on the summary forms are used to qualify the data with consideration for confirmation data. In the case of dual column surrogate recovery failure, data are qualified when both surrogates are outside of the control limits. Non-detected sample results are not qualified if one of the two surrogates fail. Detected result associated with recovery of greater than upper laboratory CLs is qualified as approximate (J). Non-detected result is not qualified. Detected result associated with recovery of greater than or equal to 10% but less than the lower laboratory CL is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). Detected result associated with recoveries of less than 10% is qualified as approximate (J). Non-detected result is rejected (R). If RPDs for MSDs or laboratory duplicates are outside of laboratory CLs, detected results are qualified as approximate (J). Non-detected results may not be qualified, applying professional judgment. Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs. Qualification is performed only when both surrogate recoveries are outside of laboratory CLs, unless interference is identified in the sample chromatography.
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs and SVOCS	Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%. Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment. Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.

Table 3

Ramboll Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), and SVOCs (8270D).

Evaluation and Actions for Blank Results for VOC, SVOC Data	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 30 percent for aqueous samples and less than 50 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions. Blanks are not qualified due to contamination of another blank. Sample results qualified as non-detected (U) are treated as hits when qualifying for surrogate or calibration excursions. The following approach is utilized for applying qualifiers, using twice the quantitation limit (QL) for methylene chloride, 2-butanone and acetone: 1. For blank results less than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 2. For blank results greater than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and less than the blank contamination level are reported and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and greater than or equal to the blank contamination level are not qualified or may apply the Blank Rule Option. 3. For blank results equal to the QL, sample concentrations less than the QL are reported at the QL value and qualified as non-detected (U). Samples greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 4. For gross contamination in blanks (saturated peaks, interference peaks, poor baselines), all associated sample detected results are rejected (R) or qualified as non-detected (U) using professional judgment. Blank Rule Option: If methylene chloride, acetone or 2-butanone is detected in the sample at a concentration that is less than ten times the concentration in the associated blank, the sample result is qualified as "U". If other target analytes are detected in the sample at a concentration that is less than five times the concentration detected in the associated blank, the sample result is qualified as "U".
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs and SVOCS	Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs. Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%. Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment. Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively. Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 30 percent for aqueous samples and less than 50 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
Evaluation of Internal Standards for organic analyses	Internal standard recoveries are evaluated using control limits of from 50% of the lower standard area to 100% of the upper standard area of the associated calibration verification standard. The results associated with internal standard area recoveries 25% or greater but less than 50% are qualified as approximate (J, UJ). Non-detected results associated with internal standard area recoveries less than 25% are rejected (R), using professional judgment.

Source Ramboll

Table 4. Laboratory Quality Assurance /Quality Control (QA/QC) Analyses Definitions.

QA/QC Term	Definition
Quantitation limit (QL)	The level above which numerical results may be obtained with a specified degree of confidence; the minimum concentration of an analyte in a specific matrix that can be identified and quantified above the method detection limit and within specified limits of precision and bias during routine analytical operating conditions.
Method detection limit (MDL)	The minimum concentration of an analyte that undergoes preparation similar to the environmental samples and can be reported with a stated level of confidence that the analyte concentration is greater than zero.
Instrument detection limit (IDL)	The lowest concentration of a metal target analyte that, when directly inputted and processed on a specific analytical instrument, produces a signal/response that is statistically distinct from the signal/response arising from equipment "noise" alone.
Gas chromatography/mass spectrometry (GC/MS) instrument performance check	Performed to verify mass resolution, identification, and to some degree, instrument sensitivity. These criteria are not sample specific; conformance is determined using standard materials.
Calibration	Compliance requirements for satisfactory instrument calibration are established to verify that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of analysis and calibration verifications document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.
Relative Response Factor (RRF)	A measure of the relative mass spectral response of an analyte compared to its internal standard. Relative Response Factors are determined by analysis of standards and are used in the calculation of concentrations of analytes in samples.
Relative standard deviation (RSD)	The standard deviation divided by the mean; a unit-free measure of variability.
Correlation coefficient (CC)	A measure of the strength of the relationship between two variables.
Relative Percent Difference (RPD)	Used to compare two values; the relative percent difference is based on the mean of the two values, and is reported as an absolute value, i.e., always expressed as a positive number or zero.
Percent Difference (%D)	Used to compare two values; the percent difference indicates both the direction and the magnitude of the comparison, i.e., the percent difference may be either negative, positive, or zero.
Percent Deviation (%DEV)	The RF must be within 30% of the mean value measured in the initial calibration or the true value of the calibration verification standard.
Percent Recovery (%R)	The act of determining whether or not the methodology measures all of the target analytes contained in a sample.

Table 4. Laboratory Quality Assurance /Quality Control (QA/QC) Analyses Definitions.

QA/QC Term	Definition
Calibration blank (CB)	Consists of acids and reagent water used to prepare metal samples for analysis. This type of blank is analyzed to evaluate whether contamination is occurring during the preparation and analysis of the sample.
Method blank (MB)	A water or soil blank that undergoes the preparation procedures applied to a sample (i.e., extraction, digestion, clean-up). These samples are analyzed to examine whether sample preparation, clean-up, and analysis techniques result in sample contamination.
Field/equipment (FB/EB)	Collected and submitted for laboratory analysis, where appropriate. Field/equipment blanks are handled in the same manner as environmental samples. Field/equipment blanks are analyzed to assess contamination introduced during field sampling procedures.
Trip blank (TB)	Consist of samples of analyte-free water that have undergone shipment from the sampling site to the laboratory in coolers with the environmental samples submitted for volatile organic compound (VOC) analysis. Trip blanks will be analyzed for VOCs to determine if contamination has taken place during sample handling and/or shipment. Trip blanks will be utilized at a frequency of one each per cooler sent to the laboratory for VOC analysis.
Internal standards (IS) performance	Compounds not found in environmental samples which are spiked into samples and quality control samples at the time of sample preparation for organic analyses. Internal standards must meet retention time and recovery criteria specified in the analytical method. Internal standards are used as the basis for quantitation of the target analytes.
Surrogate recovery	Compounds similar in nature to the target analytes but not expected to be detected in the environmental media which are spiked into environmental samples, blanks, and quality control samples prior to sample preparation for organic analyses. Surrogates are used to evaluate analytical efficiency by measuring recovery.
Laboratory control sample (LCS) Matrix spike blank analyses (MSB)	Standard solutions that consist of known concentrations of the target analytes spiked into laboratory analyte-free water or sand. They are prepared or purchased from a certified manufacturer from a source independent from the calibration standards to provide an independent verification of the calibration procedure. They are prepared and analyzed following the same procedures employed for environmental sample analysis to assess method accuracy independently of sample matrix effects.
Laboratory duplicate	Two or more representative portions taken from one homogeneous sample by the analyst and analyzed in the same laboratory.
Matrix	The material of which the sample is composed or the substrate containing the analyte of interest, such as drinking water, waste water, air, soil/sediment, biological material.
Matrix Spike (MS)	An aliquot of a matrix (water or soil) fortified (spiked) with known quantities of specific target analytes and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery.

Table 4. Laboratory Quality Assurance /Quality Control (QA/QC) Analyses Definitions.

QA/QC Term	Definition
Matrix spike duplicate (MSD)	A second aliquot of the same matrix as the matrix spike that is spiked in order to determine the precision of the method.
Retention time (RT)	The time a target analyte is retained on a GC column before elution. The identification of a target analyte is dependent on a target compound's retention time falling within the specified retention time window established for that compound.
Relative retention time (RRT)	The ratio of the retention time of a compound to that of a standard.

Source: Ramboll

The results set forth herein are provided by SGS North America Inc.

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Automated Report

Technical Report for

Ramboll Americas Engineering Solutions

Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

SGS Job Number: JE31377

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Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable unless noted in the narrative, comments or footnotes.

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Sample Summary

Ramboll Americas Engineering Solutions

Job No: JE31377

Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JE31377-1	04/02/26	13:30	SB	04/02/26	AQ	Water	WC-040226

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the MDL

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Ramboll Americas Engineering Solutions	**Job No:**	JE31377
Site:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw,	**Report Date**	4/20/2026 5:15:55 PM

On 04/02/2026, 1 sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. (SGS) at a temperature of 1.7 °C. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JE31377 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

MS Volatiles By Method SW846 8260D

Matrix: LEACHATE **Batch ID:** V2T735

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JE31377-1LS, JE31408-1MS, JE31408-1MSD were used as the QC samples indicated.

MS Semi-volatiles By Method SW846 8270E

Matrix: LEACHATE **Batch ID:** OP72474

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) JE31874-1LS, JE31874-1MS, JE31874-1MSD, JE31874-1LS were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- The RPD(s) for the MS and MSD recoveries of Pyridine are outside control limits for sample OP72474-MSD. Analytical precision exceeds in-house control limits
- OP72474-MSD for 2-Fluorophenol: Outside of method control limits, but within reasonable method recovery limits.
- OP72474-MS for Phenol-d5: Outside of method control limits, but within reasonable method recovery limits.
- OP72474-MS for 2-Fluorophenol: Outside of method control limits, but within reasonable method recovery limits.
- OP72474-LS28 for Phenol-d5: Outside of method control limits, but within reasonable method recovery limits.
- OP72474-LS28 for 2-Fluorophenol: Outside of method control limits, but within reasonable method recovery limits.
- OP72474-MSD for Phenol-d5: Outside of method control limits, but within reasonable method recovery limits.

GC/LC Semi-volatiles By Method SW846 8082A

Matrix: AQ **Batch ID:** OP72230

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- JE31377-1 for Decachlorobiphenyl: Outside of in house control limits.
- JE31377-1 for Tetrachloro-m-xylene: Outside of in house control limits.

Metals Analysis By Method SW846 6010D

Matrix: LEACHATE **Batch ID:** MP61181

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JE31377-1MS, JE31377-1MSD, JE31377-1SDL were used as the QC samples for the metals analysis.
- The serial dilution RPD(s) for Arsenic are outside control limits for sample MP61181-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals Analysis By Method SW846 7470A

Matrix: LEACHATE **Batch ID:** MP61223

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JE31289-1AMS, JE31289-1AMSD were used as the QC samples for the metals analysis.

SGS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting SGS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by SGS indicated via signature on the report cover.

Summary of Hits

Job Number: JE31377
Account: Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Collected: 04/02/26

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JE31377-1	**WC-040226**					
Benzene		0.0049	0.0025	0.0021	mg/l	SW846 8260D

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	WC-040226		
Lab Sample ID:	JE31377-1	**Date Sampled:**	04/02/26
Matrix:	AQ - Water	**Date Received:**	04/02/26
Method:	SW846 8260D SW846 1311	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	2T30792.D	5	04/07/26 02:57	BK	04/03/26 15:00	GP69060	V2T735
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
71-43-2	Benzene	0.0049	D018	0.50	0.0025	0.0021	mg/l	
78-93-3	2-Butanone (MEK)	ND	D035	200	0.10	0.034	mg/l	
56-23-5	Carbon tetrachloride	ND	D019	0.50	0.0050	0.0028	mg/l	
108-90-7	Chlorobenzene	ND	D021	100	0.0050	0.0028	mg/l	
67-66-3	Chloroform	ND	D022	6.0	0.0050	0.0025	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.0050	0.0025	mg/l	
107-06-2	1,2-Dichloroethane	ND	D028	0.50	0.0050	0.0030	mg/l	
75-35-4	1,1-Dichloroethene	ND	D029	0.70	0.0050	0.0030	mg/l	
127-18-4	Tetrachloroethene	ND	D039	0.70	0.0050	0.0045	mg/l	
79-01-6	Trichloroethene	ND	D040	0.50	0.0050	0.0026	mg/l	
75-01-4	Vinyl chloride	ND	D043	0.20	0.0050	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		76-120%
17060-07-0	1,2-Dichloroethane-D4	110%		64-135%
2037-26-5	Toluene-D8	101%		76-117%
460-00-4	4-Bromofluorobenzene	93%		72-122%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
MCL = Maximum Contamination Level (40 CFR 261 7/1/11) B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	WC-040226		
Lab Sample ID:	JE31377-1	**Date Sampled:**	04/02/26
Matrix:	AQ - Water	**Date Received:**	04/02/26
Method:	SW846 8270E SW846 3510C	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	CR17297.D	1	04/14/26 22:58	RS	04/13/26 14:00	OP72474	ECR813
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

ABN TCLP Leachate **TCLP Leachate method SW846 1311**

CAS No.	Compound	Result	HW#	MCL	RL	MDL	Units	Q
95-48-7	2-Methylphenol	ND	D023	200	0.020	0.0089	mg/l	
	3&4-Methylphenol	ND	D024	200	0.020	0.0088	mg/l	
87-86-5	Pentachlorophenol	ND	D037	100	0.10	0.014	mg/l	
95-95-4	2,4,5-Trichlorophenol	ND	D041	400	0.050	0.013	mg/l	
88-06-2	2,4,6-Trichlorophenol	ND	D042	2.0	0.050	0.0092	mg/l	
106-46-7	1,4-Dichlorobenzene	ND	D027	7.5	0.020	0.0017	mg/l	
121-14-2	2,4-Dinitrotoluene	ND	D030	0.13	0.020	0.0055	mg/l	
118-74-1	Hexachlorobenzene	ND	D032	0.13	0.020	0.0033	mg/l	
87-68-3	Hexachlorobutadiene	ND	D033	0.50	0.010	0.0049	mg/l	
67-72-1	Hexachloroethane	ND	D034	3.0	0.050	0.0039	mg/l	
98-95-3	Nitrobenzene	ND	D036	2.0	0.020	0.0064	mg/l	
110-86-1	Pyridine	ND	D038	5.0	0.020	0.0039	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
367-12-4	2-Fluorophenol	72%		10-73%
4165-62-2	Phenol-d5	63%		10-64%
118-79-6	2,4,6-Tribromophenol	92%		31-130%
4165-60-0	Nitrobenzene-d5	80%		28-126%
321-60-8	2-Fluorobiphenyl	68%		26-114%
1718-51-0	Terphenyl-d14	93%		16-122%

ND = Not detected MDL = Method Detection Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	WC-040226		
Lab Sample ID:	JE31377-1	**Date Sampled:**	04/02/26
Matrix:	AQ - Water	**Date Received:**	04/02/26
Method:	SW846 8082A SW846 3511	**Percent Solids:**	n/a
Project:	Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	RM47498.D	20	04/07/26 21:21	JN	04/05/26 06:30	OP72230	GRM1153
Run #2							

	Initial Volume	Final Volume
Run #1	56.2 ml	2.0 ml
Run #2		

PCB List

CAS No.	Compound	Result	RL	MDL	Units	Q
12674-11-2	Aroclor 1016	ND	3.6	0.98	ug/l	
11104-28-2	Aroclor 1221	ND	3.6	1.9	ug/l	
11141-16-5	Aroclor 1232	ND	3.6	1.4	ug/l	
53469-21-9	Aroclor 1242	ND	3.6	0.77	ug/l	
12672-29-6	Aroclor 1248	ND	3.6	0.70	ug/l	
11097-69-1	Aroclor 1254	ND	3.6	1.3	ug/l	
11096-82-5	Aroclor 1260	ND	3.6	2.2	ug/l	
11100-14-4	Aroclor 1268	ND	3.6	1.2	ug/l	
37324-23-5	Aroclor 1262	ND	3.6	0.78	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	3510% [a]		50-150%
877-09-8	Tetrachloro-m-xylene	1373% [a]		50-150%
2051-24-3	Decachlorobiphenyl	6408% [a]		50-150%
2051-24-3	Decachlorobiphenyl	7482% [a]		50-150%

(a) Outside of in house control limits.

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: WC-040226
Lab Sample ID: JE31377-1
Matrix: AQ - Water
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Date Sampled: 04/02/26
Date Received: 04/02/26
Percent Solids: n/a

Metals Analysis, TCLP Leachate SW846 1311

Analyte	Result	HW#	MCL	RL	Units	DF	Prep	Analyzed	By	Method	Prep Method
Arsenic	< 0.10	D004	5.0	0.10	mg/l	1	04/05/26	04/07/26	LM	SW846 6010D [1]	SW846 3010A [3]
Barium	< 0.20	D005	100	0.20	mg/l	1	04/05/26	04/07/26	LM	SW846 6010D [1]	SW846 3010A [3]
Cadmium	< 0.0040	D006	1.0	0.0040	mg/l	1	04/05/26	04/07/26	LM	SW846 6010D [1]	SW846 3010A [3]
Chromium	< 0.010	D007	5.0	0.010	mg/l	1	04/05/26	04/07/26	LM	SW846 6010D [1]	SW846 3010A [3]
Lead	< 0.10	D008	5.0	0.10	mg/l	1	04/05/26	04/07/26	LM	SW846 6010D [1]	SW846 3010A [3]
Mercury	< 0.00020	D009	0.20	0.00020	mg/l	1	04/07/26	04/07/26	MK	SW846 7470A [2]	SW846 7470A [4]
Selenium	< 0.10	D010	1.0	0.10	mg/l	1	04/05/26	04/07/26	LM	SW846 6010D [1]	SW846 3010A [3]
Silver	< 0.010	D011	5.0	0.010	mg/l	1	04/05/26	04/07/26	LM	SW846 6010D [1]	SW846 3010A [3]

(1) Instrument QC Batch: MA60588
(2) Instrument QC Batch: MA60591
(3) Prep QC Batch: MP61181
(4) Prep QC Batch: MP61223

RL = Reporting Limit
MCL = Maximum Contamination Level (40 CFR 261 7/1/11)

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

CHAIN OF CUSTODY

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200
www.sgs.com/ehsusa

Page 1 of 1

FED-EX Tracking #: | Bottle Order Control #: TRFM TM 04126 31
SGS Quote #: | SGS Job #: JE31377

Client / Reporting Information

Company Name: Ramboll
Street Address: 777 Scudders Mill Road
City: Princeton State: NJ Zip: 08540
Project Contact: E-mail:
Phone #: 640-7[illegible] 5575
Sampler(s) Name(s): MS | SB Phone #:

Project Information

Project Name: Former Clove & Maple MGP Site
Street: 120 Maple Ave
City: Haverstraw State: NY
Project #:
Client Purchase Order #:
Project Manager: Tammy Feitosky
Attention: Accounts Payable

Billing Information (if different from Report to)

Company Name:
Street Address:
City: Syracuse State: NY Zip:

Analysis Requested

A8270TCLP, P8087NYPCB1, TCLPM, V8260TCLP

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB-Equipment Blank
RB - Rinse Blank
TB - Trip Blank

SGS Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Grab (G) Comp (C)	Source Chlorinated (Y/N)	Matrix	Number of Bottles # of bottles	HCl	NaOH	HNO_3	H_2SO_4	NONE	DI Water	MEOH	ENCORE	pH Check (Lab Use Only)	LAB USE ONLY
1	WC-040226		04/02/26	1330	SB	C	N	WC	8					8				X X X X	

Turn Around Time (Business Days)

Approved By (SGS PM) / Date: STANDARD

- [ ] 10 Business Days
- [ ] 5 Business Days
- [ ] 3 Business Days*
- [ ] 2 Business Days*
- [ ] 1 Business Day*
- [x] Other TAT

All data available via SGS Engage * Approval needed for 1-3 BD TAT

Deliverable

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] NJ Reduced (Level 3)
- [ ] Full Tier I (Level 4)
- [ ] Commercial "C"
- [ ] NJ DKQP
- [ ] NJGW Criteria 2025 *new*
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] MA MCP Criteria ____
- [ ] CT RCP Criteria ____
- [ ] State Forms
- [ ] EDD Format ____

Commercial "A" = Results only; Commercial "B" = Results + QC Summary
Commercial "C" = Results + QC Summary + Partial Raw data

Comments / Special Instructions

Initial Assessment 3B SS
Label Verification Here

http://www.sgs.com/en/terms-and-conditions

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished By:	Date / Time:	Received By:	Relinquished By:	Date / Time:	Received By:
1	4/1/26 1630	1 4/2/26 1632	2		2
3		3	4		4
5		5			

Custody Seal # ☐ Intact ☐ Not intact ☐ Absent Thermo ID: Cooler Temp. °C: 2.7 See Sample Receipt Summary ☐

Ref No: G140222989

5.1 5

JE31377: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JE31377 **Client:** RAMBOLL **Project:** FORMER COVE & MAPLE MGP SITE, 120

Date / Time Received: 4/2/2026 4:32:00 PM **Delivery Method:** DROP-OFF **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.7);

Cooler Temps (Corrected) °C: Cooler 1: (1.7);

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	IR-50		
3. Cooler media:	Ice (Bag)		
4. No. Coolers:	1		

Quality Control Preservatio	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 231619 pH 12+: 203117A Other: (Specify)

Comments

SM089-03
Rev. Date 12/7/17

JE31377: Chain of Custody
Page 2 of 2

Internal Sample Tracking Chronicle

Ramboll Americas Engineering Solutions

Job No: JE31377

Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JE31377-1	Collected: 02-APR-26 13:30 By: SB			Received: 02-APR-26 By: JR		
WC-040226						
JE31377-1	SW846 8260D	07-APR-26 02:57	BK	03-APR-26	DA	V8260TCLP
JE31377-1	SW846 6010D	07-APR-26 09:39	LM	05-APR-26	ZG	EAG,EAS,EBA,ECD,ECR,EPB,ESE
JE31377-1	SW846 7470A	07-APR-26 15:54	MK	07-APR-26	MK	EHG
JE31377-1	SW846 8082A	07-APR-26 21:21	JN	05-APR-26	SGC	P8082NYPCB11
JE31377-1	SW846 8270E	14-APR-26 22:58	RS	13-APR-26	BD	AB8270TCLP

SGS Internal Chain of Custody

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Received: 04/02/26

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JE31377-1.1	Nis Patel	Secured Storage	04/02/26 18:16	Return to Storage
JE31377-1.2	Nis Patel	Secured Storage	04/02/26 18:16	Return to Storage
JE31377-1.3	Nis Patel	Secured Storage	04/02/26 18:29	Return to Storage
JE31377-1.3	Secured Storage	Dave Hunkele	04/04/26 12:14	Retrieve from Storage
JE31377-1.3	Dave Hunkele	Secured Staging Area	04/04/26 12:14	Return to Storage
JE31377-1.3	Secured Staging Area	Sylvia Grace Cucchiaro	04/05/26 04:15	Retrieve from Storage
JE31377-1.3	Sylvia Grace Cucchiaro	Secured Storage	04/05/26 09:08	Return to Storage
JE31377-1.3.1	Sylvia Grace Cucchiaro	Organics Prep	04/05/26 04:38	Extract from JE31377-1.3
JE31377-1.4	Nis Patel	Secured Storage	04/02/26 18:29	Return to Storage
JE31377-1.5	Nis Patel	Secured Storage	04/02/26 18:16	Return to Storage
JE31377-1.5	Secured Storage	Dave Hunkele	04/03/26 13:43	Retrieve from Storage
JE31377-1.5	Dave Hunkele	Secured Staging Area	04/03/26 13:44	Return to Storage
JE31377-1.5	Secured Staging Area	Michael Sandoval	04/03/26 15:09	Retrieve from Storage
JE31377-1.5	Michael Sandoval		04/04/26 21:40	Depleted
JE31377-1.5.1	Michael Sandoval	TCLP	04/03/26 15:09	Leachate from JE31377-1.5
JE31377-1.5.1	TCLP	Michael Sandoval	04/03/26 21:39	Leachate from JE31377-1.5
JE31377-1.5.1	Michael Sandoval	Secured Storage	04/03/26 21:40	Return to Storage
JE31377-1.5.2	TCLP	Michael Sandoval	04/03/26 21:39	Leachate from JE31377-1.5
JE31377-1.5.2	Michael Sandoval	Secured Storage	04/03/26 21:40	Return to Storage
JE31377-1.5.2	Secured Storage	Kevin Brefo	04/06/26 09:21	Retrieve from Storage
JE31377-1.5.2	Kevin Brefo		04/20/26 09:30	Depleted
JE31377-1.5.3	Kevin Brefo	Organics Prep	04/06/26 09:22	Extract from JE31377-1.5.2
JE31377-1.5.4	Kevin Brefo	Organics Prep	04/13/26 10:27	Extract from JE31377-1.5.2
JE31377-1.6	Sean Sweeney	Secured Storage	04/02/26 17:31	Return to Storage
JE31377-1.6	Secured Storage	Dave Hunkele	04/04/26 05:46	Retrieve from Storage
JE31377-1.6	Dave Hunkele	Secured Staging Area	04/04/26 05:47	Return to Storage
JE31377-1.6	Secured Staging Area	Danny Argudo	04/04/26 06:10	Retrieve from Storage
JE31377-1.6	Secured Storage	Michael Sandoval	04/04/26 21:40	Retrieve from Storage
Analyst unavailable for custody transfer.				
JE31377-1.6	Michael Sandoval		04/04/26 21:40	Depleted
JE31377-1.6.1	Danny Argudo	TCLP	04/04/26 06:10	Leachate from JE31377-1.6
JE31377-1.6.1	TCLP	Danny Argudo	04/04/26 06:11	Leachate from JE31377-1.6
JE31377-1.6.1	Danny Argudo	Secured Storage	04/04/26 06:11	Return to Storage

SGS Internal Chain of Custody

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY
Received: 04/02/26

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JE31377-1.6.2	TCLP	Danny Argudo	04/04/26 06:11	Leachate from JE31377-1.6
JE31377-1.6.2	Danny Argudo	Secured Storage	04/04/26 06:11	Return to Storage
JE31377-1.7	Sean Sweeney	Secured Storage	04/02/26 17:31	Return to Storage
JE31377-1.8	Sean Sweeney	Secured Storage	04/02/26 17:31	Return to Storage
JE31377-1.8	Secured Storage	Dave Hunkele	04/04/26 05:46	Retrieve from Storage
JE31377-1.8	Dave Hunkele	Secured Staging Area	04/04/26 05:47	Return to Storage
JE31377-1.8	Secured Staging Area	Danny Argudo	04/04/26 06:10	Retrieve from Storage
JE31377-1.8	Secured Storage	Michael Sandoval	04/04/26 21:40	Retrieve from Storage
Analyst unavailable for custody transfer.				
JE31377-1.8	Michael Sandoval		04/04/26 21:40	Depleted
JE31377-1.8.1	Danny Argudo	TCLP	04/04/26 06:10	Leachate from JE31377-1.8

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2T735-MB	2T30784.D	1	04/07/26	BK	n/a	n/a	V2T735

The QC reported here applies to the following samples: **Method:** SW846 8260D

JE31377-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.43	ug/l	
78-93-3	2-Butanone (MEK)	ND	10	6.9	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	0.55	ug/l	
108-90-7	Chlorobenzene	ND	1.0	0.56	ug/l	
67-66-3	Chloroform	0.69	1.0	0.50	ug/l	J
106-46-7	1,4-Dichlorobenzene	ND	1.0	0.51	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	0.60	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	0.59	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	0.90	ug/l	
79-01-6	Trichloroethene	ND	1.0	0.53	ug/l	
75-01-4	Vinyl chloride	ND	1.0	0.79	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	76-120%
17060-07-0	1,2-Dichloroethane-D4	102%	64-135%
2037-26-5	Toluene-D8	101%	76-117%
460-00-4	4-Bromofluorobenzene	95%	72-122%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/l	

Leachate Blank Summary

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP69060-LB9	2T30786.D	5	04/07/26	BK	04/03/26	GP69060	V2T735

The QC reported here applies to the following samples: **Method:** SW846 8260D

JE31377-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	2.5	2.1	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	34	ug/l	
56-23-5	Carbon tetrachloride	ND	5.0	2.8	ug/l	
108-90-7	Chlorobenzene	ND	5.0	2.8	ug/l	
67-66-3	Chloroform	ND	5.0	2.5	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	5.0	2.5	ug/l	
107-06-2	1,2-Dichloroethane	ND	5.0	3.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	5.0	3.0	ug/l	
127-18-4	Tetrachloroethene	ND	5.0	4.5	ug/l	
79-01-6	Trichloroethene	ND	5.0	2.6	ug/l	
75-01-4	Vinyl chloride	ND	5.0	3.9	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	76-120%
17060-07-0	1,2-Dichloroethane-D4	99%	64-135%
2037-26-5	Toluene-D8	103%	76-117%
460-00-4	4-Bromofluorobenzene	96%	72-122%

Blank Spike Summary

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V2T735-BS	2T30782.D	1	04/07/26	BK	n/a	n/a	V2T735

The QC reported here applies to the following samples: **Method:** SW846 8260D

JE31377-1

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
71-43-2	Benzene	50	47.2	94	80-115
78-93-3	2-Butanone (MEK)	200	231	116	61-150
56-23-5	Carbon tetrachloride	50	49.1	98	75-127
108-90-7	Chlorobenzene	50	44.8	90	80-115
67-66-3	Chloroform	50	54.9	110	75-116
106-46-7	1,4-Dichlorobenzene	50	44.5	89	80-114
107-06-2	1,2-Dichloroethane	50	47.6	95	73-117
75-35-4	1,1-Dichloroethene	50	48.7	97	70-124
127-18-4	Tetrachloroethene	50	44.2	88	73-119
79-01-6	Trichloroethene	50	46.9	94	80-118
75-01-4	Vinyl chloride	50	51.6	103	52-146

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	104%	76-120%
17060-07-0	1,2-Dichloroethane-D4	107%	64-135%
2037-26-5	Toluene-D8	100%	76-117%
460-00-4	4-Bromofluorobenzene	97%	72-122%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JE31408-1MS	2T30798.D	5	04/07/26	BK	n/a	n/a	V2T735
JE31408-1MSD	2T30800.D	5	04/07/26	BK	n/a	n/a	V2T735
JE31408-1	2T30790.D	5	04/07/26	BK	04/05/26	GP69069	V2T735

The QC reported here applies to the following samples: **Method:** SW846 8260D

JE31377-1

CAS No.	Compound	JE31408-1 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		250	248	99	250	245	98	1	49-137/12
78-93-3	2-Butanone (MEK)	ND		1000	1040	104	1000	1030	103	1	52-137/17
56-23-5	Carbon tetrachloride	ND		250	259	104	250	252	101	3	70-132/13
108-90-7	Chlorobenzene	ND		250	233	93	250	231	92	1	68-123/12
67-66-3	Chloroform	ND		250	274	110	250	270	108	1	68-120/13
106-46-7	1,4-Dichlorobenzene	ND		250	230	92	250	231	92	0	72-117/12
107-06-2	1,2-Dichloroethane	ND		250	241	96	250	237	95	2	66-120/13
75-35-4	1,1-Dichloroethene	ND		250	240	96	250	231	92	4	59-133/15
127-18-4	Tetrachloroethene	ND		250	228	91	250	226	90	1	58-132/13
79-01-6	Trichloroethene	ND		250	242	97	250	238	95	2	56-136/12
75-01-4	Vinyl chloride	ND		250	263	105	250	252	101	4	41-156/16

CAS No.	Surrogate Recoveries	MS	MSD	JE31408-1	Limits
1868-53-7	Dibromofluoromethane	102%	102%	113%	76-120%
17060-07-0	1,2-Dichloroethane-D4	104%	104%	108%	64-135%
2037-26-5	Toluene-D8	101%	103%	102%	76-117%
460-00-4	4-Bromofluorobenzene	98%	98%	96%	72-122%

* = Outside of Control Limits.

Leachate Spike Summary

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GP69060-LS9	2T30796.D	5	04/07/26	BK	04/03/26	GP69060	V2T735
JE31377-1	2T30792.D	5	04/07/26	BK	04/03/26	GP69060	V2T735

The QC reported here applies to the following samples: **Method:** SW846 8260D

JE31377-1

CAS No.	Compound	JE31377-1 ug/l	Q	Spike ug/l	LS ug/l	LS %	Limits
71-43-2	Benzene	4.9		250	250	98	49-137
78-93-3	2-Butanone (MEK)	ND		1000	1230	123	52-137
56-23-5	Carbon tetrachloride	ND		250	253	101	70-132
108-90-7	Chlorobenzene	ND		250	231	92	68-123
67-66-3	Chloroform	ND		250	275	110	68-120
106-46-7	1,4-Dichlorobenzene	ND		250	237	95	72-117
107-06-2	1,2-Dichloroethane	ND		250	242	97	66-120
75-35-4	1,1-Dichloroethene	ND		250	244	98	59-133
127-18-4	Tetrachloroethene	ND		250	226	90	58-132
79-01-6	Trichloroethene	ND		250	236	94	56-136
75-01-4	Vinyl chloride	ND		250	269	108	41-156

CAS No.	Surrogate Recoveries	LS	JE31377-1	Limits
1868-53-7	Dibromofluoromethane	102%	110%	76-120%
17060-07-0	1,2-Dichloroethane-D4	107%	110%	64-135%
2037-26-5	Toluene-D8	99%	101%	76-117%
460-00-4	4-Bromofluorobenzene	102%	93%	72-122%

* = Outside of Control Limits.

Instrument Performance Check (BFB)

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Sample:	V2T707-BFB	**Injection Date:**	03/11/26
Lab File ID:	2T29486.D	**Injection Time:**	17:06
Instrument ID:	GCMS2T		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	15.0 - 40.0% of mass 95	96795	21.8		Pass
75	30.0 - 60.0% of mass 95	240939	54.3		Pass
95	Base peak, 100% relative abundance	443392	100.0		Pass
96	5.0 - 9.0% of mass 95	29784	6.72		Pass
173	Less than 2.0% of mass 174	3694	0.83	(1.06) [a]	Pass
174	50.0 - 120.0% of mass 95	348885	78.7		Pass
175	5.0 - 9.0% of mass 174	25437	5.74	(7.29) [a]	Pass
176	95.0 - 101.0% of mass 174	333781	75.3	(95.7) [a]	Pass
177	5.0 - 9.0% of mass 176	22195	5.01	(6.65) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V2T707-IC707	2T29488.D	03/11/26	18:00	00:54	Initial cal 0.2
V2T707-IC707	2T29490.D	03/11/26	18:28	01:22	Initial cal 0.5
V2T707-IC707	2T29492.D	03/11/26	18:56	01:50	Initial cal 1
V2T707-IC707	2T29494.D	03/11/26	19:23	02:17	Initial cal 2
V2T707-IC707	2T29496.D	03/11/26	19:51	02:45	Initial cal 4
V2T707-IC707	2T29498.D	03/11/26	20:19	03:13	Initial cal 8
V2T707-IC707	2T29500.D	03/11/26	20:46	03:40	Initial cal 20
V2T707-ICC707	2T29502.D	03/11/26	21:14	04:08	Initial cal 50
V2T707-IC707	2T29504.D	03/11/26	21:42	04:36	Initial cal 100
V2T707-IC707	2T29506.D	03/11/26	22:09	05:03	Initial cal 200
V2T707-ICV707	2T29512.D	03/11/26	23:32	06:26	Initial cal verification 50
V2T707-ICV707	2T29514.D	03/12/26	00:00	06:54	Initial cal verification 50

Internal Standard Area Summary

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Check Std:	V2T735-CC707	**Injection Date:**	04/06/26
Lab File ID:	2T30778.D	**Injection Time:**	23:45
Instrument ID:	GCMS2T	**Method:**	SW846 8260D

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	760753	1.94	897699	3.63	1535818	4.22	1266063	6.22	618885	7.50
Upper Limit [a]	1521506	2.44	1795398	4.13	3071636	4.72	2532126	6.72	1237770	8.00
Lower Limit [b]	380377	1.44	448850	3.13	767909	3.72	633032	5.72	309443	7.00
Lab Sample ID	**IS 1 AREA**	**RT**	**IS 2 AREA**	**RT**	**IS 3 AREA**	**RT**	**IS 4 AREA**	**RT**	**IS 5 AREA**	**RT**
V2T735-BS	792588	1.94	915101	3.63	1595500	4.22	1316693	6.22	642081	7.50
V2T735-MB	644463	1.93	814203	3.62	1424555	4.22	1129742	6.22	520449	7.50
GP69060-LB9	548525	1.94	780657	3.62	1347403	4.22	1053278	6.22	481611	7.50
GP69069-LB12	544822	1.94	759889	3.63	1348250	4.23	1054555	6.22	507386	7.50
JE31408-1	524556	1.94	756781	3.63	1364788	4.23	1080567	6.22	502440	7.50
JE31377-1	554161	1.94	768537	3.62	1339164	4.22	1100033	6.22	549379	7.50
ZZZZZZ	600840	1.94	798474	3.63	1398985	4.23	1102824	6.22	516228	7.50
GP69060-LS9	667816	1.94	926508	3.63	1589988	4.22	1322282	6.22	614251	7.50
GP69069-LS12	698122	1.94	1001661	3.62	1714549	4.22	1374214	6.22	661057	7.50
JE31408-1MS	698122	1.94	1001661	3.62	1714549	4.22	1374214	6.22	661057	7.50
JE31408-1MSD	721077	1.94	1024315	3.62	1737743	4.22	1382791	6.22	672724	7.50
ZZZZZZ	564120	1.94	866851	3.63	1502065	4.23	1152016	6.22	545353	7.50
ZZZZZZ	581282	1.94	839397	3.63	1457059	4.22	1141092	6.22	533694	7.50
ZZZZZZ	475461	1.94	801554	3.63	1411886	4.22	1113568	6.22	510160	7.50
ZZZZZZ	479651	1.94	796806	3.63	1405668	4.23	1100251	6.22	514197	7.50
ZZZZZZ	456520	1.94	785967	3.62	1395919	4.22	1101198	6.22	508430	7.50
ZZZZZZ	471357	1.94	775079	3.62	1377055	4.22	1096111	6.22	529035	7.50
ZZZZZZ	465820	1.94	768267	3.62	1347242	4.22	1067646	6.22	499844	7.50
ZZZZZZ	432364	1.93	768507	3.62	1374290	4.22	1095464	6.22	509242	7.50
ZZZZZZ	451971	1.94	760661	3.62	1345197	4.22	1062886	6.22	490461	7.50
ZZZZZZ	442336	1.94	745305	3.63	1331449	4.22	1054644	6.22	471954	7.50
ZZZZZZ	404066	1.94	741034	3.63	1315821	4.22	1031475	6.22	482475	7.50
ZZZZZZ	432680	1.94	742658	3.62	1300390	4.22	1040279	6.22	477991	7.50

IS 1 = Tert Butyl Alcohol-D9
IS 2 = Pentafluorobenzene
IS 3 = 1,4-Difluorobenzene
IS 4 = Chlorobenzene-D5
IS 5 = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Surrogate Recovery Summary

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Method: SW846 8260D **Matrix:** LEACHATE

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3	S4
JE31377-1	2T30792.D	110	110	101	93
GP69060-LB9	2T30786.D	104	99	103	96
GP69060-LS9	2T30796.D	102	107	99	102
JE31408-1MS	2T30798.D	102	104	101	98
JE31408-1MSD	2T30800.D	102	104	103	98
V2T735-BS	2T30782.D	104	107	100	97
V2T735-MB	2T30784.D	107	102	101	95

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	76-120%
S2 = 1,2-Dichloroethane-D4	64-135%
S3 = Toluene-D8	76-117%
S4 = 4-Bromofluorobenzene	72-122%

Initial Calibration Summary

Job Number: JE31377 **Sample:** V2T707-ICC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29502.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Response Factor Report GCMST

Method : C:\msdchem\1\methods\m2t707.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Mar 12 12:03:24 2026
Response via : Initial Calibration

Calibration Files
4 =2T29496.D 0.5 =2T29490.D 8 =2T29498.D 50 =2T29502.D
100 =2T29504.D 1 =2T29492.D 200 =2T29506.D 20 =2T29500.D
2 =2T29494.D 0.2 =2T29488.D = =

Compound

	4	0.5	8	50	100	1	200	20	2	0.2	Avg	%RSD
1) I tert butyl alcohol-d9	----------ISTD----------											
2) ethanol	0.117	0.115	0.122	0.120	0.109	0.139	0.093	0.117	0.130		0.118	10.81
3) tertiary butyl alcohol	1.013		1.010	0.974	0.977	1.171	0.878	0.915	1.138		1.010	9.99
4) 1,4-dioxane	0.100		0.100	0.097	0.095	0.081	0.094	0.097	0.095		0.095	6.34
5) I pentafluorobenzene	----------ISTD----------											
6) chlorodifluoromethane	0.612	0.614	0.589	0.589	0.563	0.581	0.513	0.584	0.624	0.637	0.591	5.98
7) dichlorodifluoromethane	0.594	0.543	0.616	0.618	0.584	0.568	0.530	0.602	0.563	0.576	0.579	5.07
8) chloromethane	0.472	0.429	0.457	0.455	0.420	0.426	0.396	0.451	0.435		0.438	5.29
9) vinyl chloride	0.523	0.436	0.514	0.524	0.480	0.450	0.465	0.511	0.497	0.586	0.499	8.73
10) 1,3-butadiene	0.447		0.417	0.399	0.367	0.470	0.344	0.407	0.478		0.416	11.33
11) bromomethane	0.328		0.330	0.304	0.284	0.346	0.262	0.315	0.342		0.314	9.27
12) chloroethane	0.391	0.389	0.402	0.397	0.331	0.401	0.238	0.401	0.410		0.373	14.93
13) trichlorofluoromethane	0.895	0.759	0.848	0.878	0.781	0.764	0.644	0.857	0.850	0.837	0.811	9.27
14) ethyl ether	0.254	0.215	0.247	0.289	0.271	0.253	0.260	0.253	0.277	0.251	0.257	7.68
15) acrolein	0.106		0.104	0.119	0.107	0.131	0.096	0.103	0.118		0.111	10.19
16) freon 113	0.318	0.276	0.293	0.311	0.298	0.303	0.285	0.293	0.313	0.278	0.297	4.93
17) 1,1-dichloroethene	0.757	0.653	0.713	0.768	0.713	0.732	0.653	0.706	0.750	0.759	0.720	5.77
18) acetone	0.065	0.060	0.062	0.067	0.059	0.073	0.052	0.060	0.071	0.068	0.064	10.04
19) acetonitrile	0.058		0.055	0.056	0.049	0.060	0.049	0.055	0.065		0.056	9.56
20) iodomethane	0.182		0.192	0.329	0.362			0.227	0.187		0.247	32.04
----- Quadratic regression -----										Coefficient = 0.9959		
Response Ratio = -0.00447 + 0.24340 *A + 0.06310 *A^2												
21) carbon disulfide	1.170	1.158	1.128	1.209	1.163	1.218	1.097	1.123	1.160	1.319	1.175	5.34

Initial Calibration Summary

Job Number: JE31377 **Sample:** V2T707-ICC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29502.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

22) methylene chloride
0.424 0.447 0.423 0.421 0.402 0.456 0.374 0.408 0.468 0.425 6.85
23) methyl acetate
0.095 0.092 0.104 0.098 0.101 0.088 0.094 0.112 0.098 7.81
24) methyl tert butyl ether
1.039 0.919 1.008 1.083 1.035 1.036 1.007 1.018 1.027 0.985 1.016 4.19
25) trans-1,2-dichloroethene
0.431 0.374 0.409 0.423 0.403 0.450 0.381 0.404 0.425 0.411 5.84
26) hexane
0.907 0.968 0.855 0.883 0.851 0.977 0.804 0.851 0.919 0.891 6.45
27) di-isopropyl ether
0.997 0.994 0.974 1.059 1.017 1.021 1.006 0.996 1.030 0.990 1.008 2.40
28) ethyl tert-butyl ether
1.019 0.923 1.002 1.156 1.141 1.005 1.163 1.043 1.028 1.053 7.81
29) 2-butanone
0.065 0.065 0.077 0.072 0.059 0.069 0.070 0.070 0.068 7.75
30) 1,1-dichloroethane
0.696 0.656 0.670 0.691 0.662 0.664 0.658 0.677 0.664 0.632 0.667 2.74
31) chloroprene
0.583 0.589 0.621 0.660 0.646 0.601 0.635 0.618 0.589 0.616 4.45
32) acrylonitrile
0.133 0.122 0.146 0.138 0.128 0.128 0.143 0.134 6.51
33) vinyl acetate
0.067 0.077 0.092 0.089 0.090 0.079 0.082 11.71
34) ethyl acetate
0.060 0.061 0.067 0.064 0.061 0.059 0.054 0.061 6.61
35) 2,2-dichloropropane
0.453 0.491 0.448 0.518 0.522 0.447 0.532 0.480 0.455 0.483 7.14
36) cis-1,2-dichloroethene
0.379 0.354 0.367 0.384 0.363 0.417 0.359 0.370 0.400 0.377 5.43
37) propionitrile
0.083 0.080 0.092 0.086 0.078 0.083 0.082 0.088 0.084 5.27
38) methyl acrylate
0.073 0.074 0.085 0.080 0.079 0.075 0.082 0.078 5.83
39) bromochloromethane
0.181 0.174 0.169 0.171 0.157 0.175 0.152 0.171 0.182 0.170 5.86
40) tetrahydrofuran
0.067 0.066 0.078 0.072 0.084 0.069 0.070 0.073 0.072 8.31
41) chloroform
0.190 0.192 0.188 0.178 0.229 0.173 0.180 0.210 0.193 9.56
42) dibromofluoromethane (s)
0.608 0.604 0.607 0.607 0.600 0.608 0.593 0.616 0.597 0.613 0.605 1.17
43) methacrylonitrile
0.172 0.178 0.201 0.191 0.180 0.186 0.184 0.210 0.188 6.71
44) 1,1,1-trichloroethane
0.604 0.532 0.582 0.631 0.617 0.596 0.602 0.603 0.600 0.562 0.593 4.74
45) cyclohexane
0.484 0.499 0.519 0.496 0.423 0.522 0.488 0.448 0.485 7.02
46) 1,1-dichloropropene
0.490 0.402 0.493 0.524 0.510 0.452 0.502 0.501 0.522 0.465 0.486 7.70
47) carbon tetrachloride
0.517 0.436 0.504 0.551 0.541 0.490 0.536 0.523 0.516 0.513 6.71
48) isobutyl alcohol
0.021 0.021 0.027 0.025 0.019 0.022 0.022 13.47
49) tert-amyl alcohol
0.045 0.042 0.048 0.042 0.044 0.033 0.043 0.049 0.043 11.29

50) I 1,4-difluorobenzene ----------ISTD----------
51) 1,2-dichloroethane-d4 (s)
0.426 0.425 0.435 0.465 0.450 0.416 0.460 0.447 0.422 0.422 0.437 4.00

52) iso-octane
0.567 0.494 0.558 0.590 0.578 0.522 0.587 0.554 0.599 0.561 6.08
53) benzene
0.844 0.770 0.820 0.848 0.815 0.820 0.807 0.814 0.852 0.868 0.826 3.40
54) tert-amyl methyl ether
0.524 0.484 0.506 0.580 0.577 0.535 0.605 0.514 0.540 0.541 7.31
55) heptane
0.116 0.107 0.118 0.117 0.110 0.119 0.111 0.116 0.114 3.65
56) isopropyl acetate
0.042 0.046 0.063 0.063 0.066 0.051 0.051 0.054 17.12
57) 1,2-dichloroethane
0.339 0.356 0.333 0.350 0.341 0.346 0.341 0.331 0.351 0.343 2.46
58) n-butyl alcohol
0.009 0.010 0.014 0.013 0.013 0.011 0.009 0.011 18.61
59) ethyl acrylate
0.287 0.314 0.378 0.373 0.289 0.388 0.332 0.305 0.333 12.35
60) trichloroethene
0.226 0.224 0.217 0.230 0.223 0.214 0.225 0.219 0.234 0.224 0.223 2.66
61) 2-nitropropane
0.054 0.055 0.088 0.089 0.095 0.066 0.075 24.30
----- Linear regression ----- Coefficient = 0.9968
Response Ratio = -0.00494 + 0.09350 *A

62) 2-chloroethyl vinyl ether
0.144 0.153 0.174 0.167 0.133 0.166 0.156 0.145 0.155 8.89
63) methyl methacrylate
0.062 0.063 0.076 0.075 0.049 0.077 0.067 0.062 0.066 14.37
64) 1,2-dichloropropane
0.218 0.215 0.214 0.232 0.226 0.209 0.226 0.221 0.235 0.222 3.81
65) methylcyclohexane
0.159 0.150 0.167 0.167 0.136 0.171 0.156 0.144 0.156 7.74
66) dibromomethane
0.141 0.145 0.142 0.151 0.145 0.151 0.144 0.142 0.156 0.146 3.56
67) bromodichloromethane
0.278 0.270 0.288 0.319 0.316 0.291 0.320 0.293 0.286 0.318 0.298 6.22
68) epichlorohydrin
0.028 0.029 0.040 0.039 0.039 0.033 0.033 0.034 13.67
69) cis-1,3-dichloropropene
0.298 0.280 0.311 0.361 0.357 0.289 0.367 0.320 0.287 0.319 10.74
70) 4-methyl-2-pentanone
0.105 0.111 0.131 0.130 0.095 0.128 0.115 0.104 0.115 11.87
71) 3-methyl-1-butanol
0.007 0.008 0.013 0.013 0.013 0.010 0.007 0.010 29.41
----- Quadratic regression ----- Coefficient = 0.9971
Response Ratio = -0.00695 + 0.01198 *A + 0.00002 *A^2

72) I chlorobenzene-d5 ----------ISTD----------
73) toluene-d8 (s)
1.644 1.627 1.644 1.582 1.546 1.643 1.527 1.638 1.652 1.617 1.612 2.78
74) toluene
0.663 0.629 0.642 0.651 0.615 0.732 0.606 0.626 0.683 0.677 0.652 5.80
75) ethyl methacrylate
0.302 0.307 0.361 0.340 0.341 0.313 0.282 0.321 8.58
76) trans-1,3-dichloropropene
0.343 0.317 0.376 0.433 0.419 0.315 0.414 0.389 0.378 0.376 11.54
77) 1,1,2-trichloroethane
0.212 0.204 0.210 0.211 0.193 0.206 0.190 0.194 0.211 0.186 0.202 4.95
78) tetrachloroethene
0.281 0.247 0.283 0.273 0.261 0.295 0.261 0.267 0.291 0.254 0.271 5.88

Initial Calibration Summary

Job Number: JE31377 **Sample:** V2T707-ICC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29502.D
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79) 2-hexanone
0.132 0.136 0.166 0.152 0.108 0.146 0.148 0.135 0.140 12.18
80) 1,3-dichloropropane
0.429 0.403 0.428 0.438 0.407 0.434 0.394 0.410 0.421 0.389 0.415 4.13
81) butyl acetate
0.153 0.158 0.212 0.203 0.201 0.183 0.185 13.36
82) dibromochloromethane
0.261 0.226 0.256 0.291 0.272 0.268 0.271 0.267 0.260 0.278 0.265 6.35
83) 1,2-dibromoethane
0.254 0.253 0.256 0.265 0.246 0.277 0.241 0.254 0.269 0.266 0.258 4.34
84) n-butyl ether
1.000 0.873 1.059 1.163 1.119 0.911 1.043 1.081 1.017 1.030 9.01
85) chlorobenzene
0.739 0.693 0.725 0.728 0.692 0.718 0.669 0.697 0.765 0.781 0.721 4.82
86) 1,1,1,2-tetrachloroethane
0.242 0.231 0.241 0.265 0.250 0.228 0.249 0.243 0.253 0.220 0.242 5.39
87) ethylbenzene
1.273 1.143 1.202 1.257 1.197 1.226 1.114 1.200 1.298 1.179 1.209 4.70
88) m,p-xylene
0.464 0.411 0.461 0.484 0.465 0.443 0.439 0.461 0.457 0.446 0.453 4.37
89) o-xylene
0.440 0.389 0.436 0.459 0.443 0.407 0.435 0.431 0.450 0.411 0.430 4.94
90) styrene
0.693 0.613 0.705 0.778 0.761 0.619 0.729 0.721 0.711 0.703 8.00
91) bromoform
0.174 0.157 0.167 0.199 0.200 0.158 0.200 0.167 0.168 0.204 0.179 10.54
92) butyl acrylate
0.376 0.413 0.583 0.571 0.555 0.477 0.496 17.63
93) n-amyl acetate
0.132 0.148 0.211 0.208 0.205 0.174 0.126 0.172 21.51
----- Linear regression ----- Coefficient = 0.9983
Response Ratio = -0.00517 + 0.20746 *A

94) isopropylbenzene
1.108 0.990 1.132 1.185 1.155 1.045 1.057 1.137 1.092 1.100 5.55
95) cis-1,4-dichloro-2-butene
0.089 0.095 0.143 0.148 0.152 0.108 0.123 23.13
----- Linear regression ----- Coefficient = 0.9974
Response Ratio = -0.00759 + 0.15176 *A

96) I 1,4-dichlorobenzene-d ----------ISTD----------
97) 4-bromofluorobenzene (s)
1.205 1.198 1.232 1.236 1.284 1.219 1.306 1.216 1.230 1.188 1.231 3.01
98) bromobenzene
0.575 0.526 0.561 0.583 0.567 0.588 0.572 0.544 0.632 0.572 5.17
99) 1,1,2,2-tetrachloroethane
0.756 0.690 0.762 0.775 0.730 0.762 0.714 0.725 0.844 0.781 0.754 5.69
100) trans-1,4-dichloro-2-butene
0.190 0.205 0.267 0.263 0.266 0.211 0.234 15.15
101) 1,2,3-trichloropropane
0.263 0.312 0.256 0.271 0.265 0.269 0.261 0.249 0.284 0.274 0.270 6.45
102) n-propylbenzene
2.846 2.737 2.843 2.919 2.814 2.861 2.518 2.791 2.970 2.679 2.798 4.60
103) 2-chlorotoluene
0.552 0.566 0.539 0.550 0.545 0.500 0.540 0.524 0.559 0.472 0.535 5.42
104) 4-chlorotoluene
1.772 1.663 1.754 1.849 1.777 1.762 1.693 1.741 1.832 1.693 1.754 3.39
105) 1,3,5-trimethylbenzene
1.938 1.637 1.964 2.060 2.011 1.809 1.893 1.961 1.964 1.776 1.901 6.67

Initial Calibration Summary

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106) tert-butylbenzene
1.564 1.397 1.603 1.663 1.636 1.609 1.548 1.553 1.619 1.375 1.557 6.24
107) 1,2,4-trimethylbenzene
1.997 1.606 2.014 2.138 2.104 1.912 1.936 1.991 2.039 1.971 7.84
108) sec-butylbenzene
2.228 1.846 2.325 2.410 2.330 2.141 2.148 2.247 2.369 2.227 7.66
109) 1,3-dichlorobenzene
1.062 1.025 1.058 1.104 1.070 1.089 1.044 1.042 1.178 1.231 1.090 6.01
110) p-isopropyltoluene
1.846 1.522 1.900 2.061 2.002 1.821 1.877 1.923 1.894 1.872 8.07
111) 1,4-dichlorobenzene
1.135 1.197 1.132 1.135 1.096 1.167 1.041 1.066 1.256 1.136 5.78
112) 1,2-dichlorobenzene
1.012 1.045 1.035 1.058 1.008 0.997 0.982 0.979 1.151 1.075 1.034 5.02
113) 1,2,3-trimethylbenzene
2.067 2.061 2.052 2.139 2.062 2.013 1.907 1.959 2.192 2.050 4.17
114) n-butylbenzene
0.413 0.376 0.430 0.465 0.455 0.408 0.447 0.432 0.427 0.428 6.29
115) 1,2-dibromo-3-chloropropane
0.175 0.148 0.173 0.209 0.194 0.169 0.198 0.179 0.175 0.199 0.182 9.95
116) 1,3,5-trichlorobenzene
0.678 0.663 0.685 0.706 0.674 0.679 0.677 0.672 0.721 0.684 2.67
117) 1,2,4-trichlorobenzene
0.545 0.487 0.572 0.588 0.553 0.563 0.564 0.543 0.610 0.558 6.10
118) hexachlorobutadiene
0.238 0.242 0.226 0.223 0.216 0.232 0.223 0.211 0.239 0.228 4.78
119) naphthalene
1.814 1.582 1.877 2.096 1.957 1.710 1.836 1.936 1.893 1.856 7.97
120) 1,2,3-trichlorobenzene
0.526 0.487 0.544 0.549 0.520 0.515 0.528 0.507 0.578 0.562 0.532 5.07
121) hexachloroethane
0.284 0.295 0.370 0.369 0.288 0.377 0.315 0.318 0.327 11.97
122) benzyl chloride
0.163 0.179 0.271 0.277 0.285 0.209 0.176 0.223 23.87
----- Quadratic regression ----- Coefficient = 0.9976
Response Ratio = -0.00615 + 0.25619 *A + 0.00827 *A^2

123) 2-methylnaphthalene
0.781 0.779 1.027 1.005 1.041 0.849 0.914 13.62

124) i pentafluorobenzene(a) ----------ISTD----------
125) Freon 143A
0.000 -1.00
126) Freon 114
0.000 -1.00
127) Freon 142B
0.000 -1.00
128) Freon 141B
0.000 -1.00
129) vinyl bromide
0.000 -1.00
130) pentane
0.000 -1.00
131) allyl chloride
0.000 -1.00

132) i 1,4-dichlorobenzene-d ----------ISTD----------
133) 4-ethyltoluene
0.000 -1.00
134) 1,4-diethylbenzene

```
                                                                    0.000   -1.00
135)  Indane
                                                                    0.000   -1.00
136)  1,2,4,5-tetramethylbenzene
                                                                    0.000   -1.00
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           m2t707.m          Thu Mar 12 12:14:28 2026
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Initial Calibration Verification

Job Number: JE31377 **Sample:** V2T707-ICV707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29512.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\Initials\VT707\2T29512.D Vial: 15
Acq On : 11 Mar 2026 11:32 pm Operator: PrashanS
Sample : ICV707-50 Inst : GCMST
Misc : MS2447,V2T0707,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\m2t707.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Mar 12 12:03:24 2026
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	106	0.00	1.95
2		ethanol	0.118	0.112	5.1	100	0.00	1.45
3	M	tertiary butyl alcohol	1.010	1.001	0.9	109	0.00	2.00
4		1,4-dioxane	0.095	0.103	-8.4	113	0.00	4.86
5	I	pentafluorobenzene	1.000	1.000	0.0	110	0.00	3.63
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane	0.579	0.581	-0.3	103	0.00	0.87
8		chloromethane	0.438	0.376	14.2	91	0.00	0.96
9		vinyl chloride	0.499	0.472	5.4	99	0.00	0.99
10		1,3-butadiene	0.416	0.480	-15.4	132	0.00	1.00
11		bromomethane	0.314	0.293	6.7	106	0.00	1.13
12		chloroethane	0.373	0.360	3.5	99	0.00	1.18
13		trichlorofluoromethane	0.811	0.813	-0.2	102	0.00	1.25
14		ethyl ether	0.257	0.273	-6.2	104	0.00	1.38
15		acrolein	0.111	0.099	10.8	91	0.00	1.64
16		freon 113	0.297	0.306	-3.0	108	0.00	1.50
17		1,1-dichloroethene	0.720	0.736	-2.2	105	0.00	1.48
18		acetone	0.064	0.063	1.6	104	0.00	1.80
19		acetonitrile	0.056	0.056	0.0	109	0.00	2.08
		----------	True	Calc.	% Drift		----------	
20		iodomethane	50.000	51.369	-2.7	104	0.00	1.56
		----------	AvgRF	CCRF	% Dev		----------	
21		carbon disulfide	1.175	1.165	0.9	106	0.00	1.50
22		methylene chloride	0.425	0.416	2.1	108	0.00	1.78
23		methyl acetate	0.098	0.104	-6.1	110	0.00	1.87
24		methyl tert butyl ether	1.016	1.093	-7.6	111	0.00	1.94
25		trans-1,2-dichloroethene	0.411	0.424	-3.2	110	0.00	1.87
26		hexane	0.891	0.771	13.5	96	0.00	1.92
27		di-isopropyl ether	1.008	1.049	-4.1	109	0.00	2.19
28		ethyl tert-butyl ether	1.053	1.090	-3.5	103	0.00	2.45
29		2-butanone	0.068	0.078	-14.7	112	0.00	3.22
30	M	1,1-dichloroethane	0.667	0.700	-4.9	111	0.00	2.26
31		chloroprene	0.616	0.602	2.3	100	0.00	2.24
32		acrylonitrile		----------NA----------				
33		vinyl acetate	0.082	0.085	-3.7	101	0.00	2.45
34		ethyl acetate	0.061	0.067	-9.8	111	0.00	3.06
35		2,2-dichloropropane	0.483	0.534	-10.6	113	0.00	2.76
36		cis-1,2-dichloroethene	0.377	0.387	-2.7	110	0.00	2.67
37		propionitrile	0.084	0.093	-10.7	111	0.00	3.51

Initial Calibration Verification

Job Number: JE31377 **Sample:** V2T707-ICV707
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Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

38		methyl acrylate	0.078	0.087	-11.5	113	0.00	3.06
39		bromochloromethane	0.170	0.171	-0.6	110	0.00	2.84
40		tetrahydrofuran	0.072	0.079	-9.7	111	0.00	3.07
41		chloroform	0.193	0.193	0.0	112	0.00	2.92
42	S	dibromofluoromethane (s)	0.605	0.603	0.3	109	0.00	3.09
43		methacrylonitrile	0.188	0.206	-9.6	113	0.00	3.54
44		1,1,1-trichloroethane	0.593	0.653	-10.1	113	0.00	3.11
45		cyclohexane	0.485	0.578	-19.2	122	0.00	2.85
46		1,1-dichloropropene	0.486	0.548	-12.8	115	0.00	3.24
47		carbon tetrachloride	0.513	0.577	-12.5	115	0.00	3.05
48		isobutyl alcohol	0.022	0.028	-27.3	116	0.00	3.84
49		tert-amyl alcohol	0.043	0.050	-16.3	114	0.00	3.94
50	I	1,4-difluorobenzene	1.000	1.000	0.0	109	0.00	4.23
51	S	1,2-dichloroethane-d4 (s)	0.437	0.463	-5.9	108	0.00	3.64
52		iso-octane	0.561	0.600	-7.0	111	0.00	3.38
53	M	benzene	0.826	0.878	-6.3	113	0.00	3.50
54		tert-amyl methyl ether	0.541	0.541	0.0	102	0.00	3.67
55		heptane	0.114	0.127	-11.4	117	0.00	3.51
56		isopropyl acetate	0.054	0.065	-20.4	112	0.00	4.10
57		1,2-dichloroethane	0.343	0.359	-4.7	112	0.00	3.71
58		n-butyl alcohol	0.011	0.014	-27.3	111	0.00	4.57
59		ethyl acrylate	0.333	0.398	-19.5	115	0.00	4.71
60		trichloroethene	0.223	0.240	-7.6	114	0.00	4.17

			True	Calc.	% Drift			
61		2-nitropropane	50.000	53.952	-7.9	119	0.00	5.43

			AvgRF	CCRF	% Dev			
62		2-chloroethyl vinyl ether	0.155	0.179	-15.5	112	0.00	5.13
63		methyl methacrylate	0.066	0.081	-22.7	116	0.00	4.86
64		1,2-dichloropropane	0.222	0.235	-5.9	110	0.00	4.63
65		methylcyclohexane	0.156	0.191	-22.4	125	0.00	4.16
66		dibromomethane	0.146	0.154	-5.5	111	0.00	4.54
67		bromodichloromethane	0.298	0.329	-10.4	112	0.00	4.70
68		epichlorohydrin	0.034	0.039	-14.7	108	0.00	5.31
69		cis-1,3-dichloropropene	0.319	0.367	-15.0	111	0.00	5.15
70		4-methyl-2-pentanone	0.115	0.134	-16.5	111	0.00	5.54

			True	Calc.	% Drift			
71		3-methyl-1-butanol	1000.000	1107.214	-10.7	113	0.00	5.45

			AvgRF	CCRF	% Dev			
72	I	chlorobenzene-d5	1.000	1.000	0.0	108	0.00	6.22
73	S	toluene-d8 (s)	1.612	1.595	1.1	109	0.00	5.27
74		toluene	0.652	0.675	-3.5	112	0.00	5.30
75		ethyl methacrylate	0.321	0.389	-21.2	117	0.00	5.67
76		trans-1,3-dichloropropene	0.376	0.447	-18.9	112	0.00	5.55
77		1,1,2-trichloroethane	0.202	0.212	-5.0	109	0.00	5.64
78		tetrachloroethene	0.271	0.350	-29.2	139	0.00	5.53
79		2-hexanone	0.140	0.169	-20.7	111	0.00	6.05
80		1,3-dichloropropane	0.415	0.443	-6.7	110	0.00	5.80
81		butyl acetate	0.185	0.222	-20.0	113	0.00	6.01
82		dibromochloromethane	0.265	0.298	-12.5	111	0.00	5.74
83		1,2-dibromoethane	0.258	0.273	-5.8	111	0.00	5.87
84		n-butyl ether	1.030	1.248	-21.2	116	0.00	6.21
85		chlorobenzene	0.721	0.745	-3.3	111	0.00	6.23
86		1,1,1,2-tetrachloroethane	0.242	0.274	-13.2	112	0.00	6.28
87		ethylbenzene	1.209	1.327	-9.8	114	0.00	6.26

Initial Calibration Verification

Job Number: JE31377 **Sample:** V2T707-ICV707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29512.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

			True	Calc.	% Drift			
88		m,p-xylene	0.453	0.507	-11.9	113	0.00	6.35
89		o-xylene	0.430	0.481	-11.9	113	0.00	6.60
90		styrene	0.703	0.808	-14.9	112	0.00	6.63
91		bromoform	0.179	0.207	-15.6	113	0.00	6.63
92		butyl acrylate	0.496	0.619	-24.8	115	0.00	6.72
			True	Calc.	% Drift			
93		n-amyl acetate	50.000	54.587	-9.2	114	0.00	6.86
			AvgRF	CCRF	% Dev			
94		isopropylbenzene	1.100	1.260	-14.5	115	0.00	6.78
			True	Calc.	% Drift			
95		cis-1,4-dichloro-2-butene	50.000	51.888	-3.8	113	0.00	6.96
			AvgRF	CCRF	% Dev			
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	107	0.00	7.50
97	S	4-bromofluorobenzene (s)	1.231	1.254	-1.9	109	0.00	6.93
98		bromobenzene	0.572	0.602	-5.2	111	0.00	6.98
99		1,1,2,2-tetrachloroethane	0.754	0.792	-5.0	110	0.00	7.04
100		trans-1,4-dichloro-2-bute	0.234	0.296	-26.5	119	0.00	7.13
101		1,2,3-trichloropropane	0.270	0.286	-5.9	113	0.00	7.10
102		n-propylbenzene	2.798	3.069	-9.7	113	0.00	7.00
103		2-chlorotoluene	0.535	0.583	-9.0	114	0.00	7.08
104		4-chlorotoluene	1.754	1.941	-10.7	113	0.00	7.16
105		1,3,5-trimethylbenzene	1.901	2.206	-16.0	115	0.00	7.11
106		tert-butylbenzene	1.557	1.973	-26.7	127	0.00	7.27
107		1,2,4-trimethylbenzene	1.971	2.239	-13.6	112	0.00	7.31
108		sec-butylbenzene	2.227	2.527	-13.5	112	0.00	7.36
109		1,3-dichlorobenzene	1.090	1.157	-6.1	112	0.00	7.46
110		p-isopropyltoluene	1.872	2.188	-16.9	114	0.00	7.43
111		1,4-dichlorobenzene	1.136	1.192	-4.9	113	0.00	7.50
112		1,2-dichlorobenzene	1.034	1.092	-5.6	111	0.00	7.71
113		1,2,3-trimethylbenzene		----------NA----------				
114		n-butylbenzene	0.428	0.487	-13.8	112	0.00	7.64
115		1,2-dibromo-3-chloropropa	0.182	0.217	-19.2	112	0.00	8.08
116		1,3,5-trichlorobenzene	0.684	0.764	-11.7	116	0.00	8.10
117		1,2,4-trichlorobenzene	0.558	0.626	-12.2	114	0.00	8.39
118		hexachlorobutadiene	0.228	0.246	-7.9	118	0.00	8.38
119		naphthalene	1.856	2.175	-17.2	111	0.00	8.53
120		1,2,3-trichlorobenzene	0.532	0.567	-6.6	111	0.00	8.62
121		hexachloroethane	0.327	0.401	-22.6	116	0.00	7.70
			True	Calc.	% Drift			
122		benzyl chloride	50.000	52.350	-4.7	107	0.00	7.63
			AvgRF	CCRF	% Dev			
123		2-methylnaphthalene	0.914	1.167	-27.7	122	0.00	9.01
124	i	pentafluorobenzene(a)	1.000	1.000	0.0	110	0.00	3.63
125		Freon 143A		----------NA----------				
126		Freon 114		----------NA----------				
127		Freon 142B		----------NA----------				
128		Freon 141B		----------NA----------				
129		vinyl bromide		----------NA----------				
130		pentane		----------NA----------				
131		allyl chloride		----------NA----------				
132	i	1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	107	0.00	7.50

Initial Calibration Verification

Job Number: JE31377 **Sample:** V2T707-ICV707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29512.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

133	4-ethyltoluene	----------NA----------	
134	1,4-diethylbenzene	----------NA----------	
135	Indane	----------NA----------	
136	1,2,4,5-tetramethylbenzen	----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2T29502.D m2t707.m Thu Mar 12 12:14:05 2026

Initial Calibration Verification

Job Number: JE31377 **Sample:** V2T707-ICV707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29514.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\Initials\VT707\2T29514.D Vial: 16
Acq On : 12 Mar 2026 12:00 am Operator: PrashanS
Sample : ICV707-50 Inst : GCMST
Misc : MS2447,V2T0707,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\m2t707.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Mar 12 12:03:24 2026
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	93	0.00	1.95
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane		----------NA----------				
5	I	pentafluorobenzene	1.000	1.000	0.0	106	0.00	3.63
6		chlorodifluoromethane	0.591	0.615	-4.1	111	0.00	0.89
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11		bromomethane		----------NA----------				
12		chloroethane		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		ethyl ether		----------NA----------				
15		acrolein		----------NA----------				
16		freon 113		----------NA----------				
17		1,1-dichloroethene		----------NA----------				
18		acetone		----------NA----------				
19		acetonitrile	0.056	0.066	-17.9	125	0.00	2.08
		----------	True	Calc.	% Drift	----------		
20		iodomethane		----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------		
21		carbon disulfide		----------NA----------				
22		methylene chloride		----------NA----------				
23		methyl acetate		----------NA----------				
24		methyl tert butyl ether		----------NA----------				
25		trans-1,2-dichloroethene		----------NA----------				
26		hexane		----------NA----------				
27		di-isopropyl ether		----------NA----------				
28		ethyl tert-butyl ether		----------NA----------				
29		2-butanone		----------NA----------				
30	M	1,1-dichloroethane		----------NA----------				
31		chloroprene		----------NA----------				
32		acrylonitrile	0.134	0.165	-23.1	120	0.00	2.29
33		vinyl acetate		----------NA----------				
34		ethyl acetate		----------NA----------				
35		2,2-dichloropropane		----------NA----------				
36		cis-1,2-dichloroethene		----------NA----------				
37		propionitrile		----------NA----------				

Initial Calibration Verification

Job Number: JE31377 **Sample:** V2T707-ICV707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29514.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

38		methyl acrylate			----------NA----------				
39		bromochloromethane			----------NA----------				
40		tetrahydrofuran			----------NA----------				
41		chloroform			----------NA----------				
42	S	dibromofluoromethane (s)	0.605	0.595	1.7	104	0.00	3.09	
43		methacrylonitrile			----------NA----------				
44		1,1,1-trichloroethane			----------NA----------				
45		cyclohexane			----------NA----------				
46		1,1-dichloropropene			----------NA----------				
47		carbon tetrachloride			----------NA----------				
48		isobutyl alcohol			----------NA----------				
49		tert-amyl alcohol			----------NA----------				
50	I	1,4-difluorobenzene	1.000	1.000	0.0	107	0.00	4.22	
51	S	1,2-dichloroethane-d4 (s)	0.437	0.434	0.7	100	0.00	3.64	
52		iso-octane			----------NA----------				
53	M	benzene			----------NA----------				
54		tert-amyl methyl ether			----------NA----------				
55		heptane			----------NA----------				
56		isopropyl acetate			----------NA----------				
57		1,2-dichloroethane			----------NA----------				
58		n-butyl alcohol			----------NA----------				
59		ethyl acrylate			----------NA----------				
60		trichloroethene			----------NA----------				
		----------	True	Calc.	% Drift	----------			
61		2-nitropropane			----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------			
62		2-chloroethyl vinyl ether	0.155	0.169	-9.0	104	0.00	5.13	
63		methyl methacrylate			----------NA----------				
64		1,2-dichloropropane			----------NA----------				
65		methylcyclohexane			----------NA----------				
66		dibromomethane			----------NA----------				
67		bromodichloromethane			----------NA----------				
68		epichlorohydrin			----------NA----------				
69		cis-1,3-dichloropropene			----------NA----------				
70		4-methyl-2-pentanone			----------NA----------				
		----------	True	Calc.	% Drift	----------			
71		3-methyl-1-butanol			----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------			
72	I	chlorobenzene-d5	1.000	1.000	0.0	99	0.00	6.22	
73	S	toluene-d8 (s)	1.612	1.664	-3.2	105	0.00	5.27	
74		toluene			----------NA----------				
75		ethyl methacrylate			----------NA----------				
76		trans-1,3-dichloropropene			----------NA----------				
77		1,1,2-trichloroethane			----------NA----------				
78		tetrachloroethene	0.271	0.295	-8.9	107	0.00	5.53	
79		2-hexanone			----------NA----------				
80		1,3-dichloropropane			----------NA----------				
81		butyl acetate			----------NA----------				
82		dibromochloromethane			----------NA----------				
83		1,2-dibromoethane			----------NA----------				
84		n-butyl ether			----------NA----------				
85		chlorobenzene			----------NA----------				
86		1,1,1,2-tetrachloroethane			----------NA----------				
87		ethylbenzene			----------NA----------				

Initial Calibration Verification

Job Number: JE31377 **Sample:** V2T707-ICV707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29514.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

88		m,p-xylene			----------NA----------				
89		o-xylene			----------NA----------				
90		styrene			----------NA----------				
91		bromoform			----------NA----------				
92		butyl acrylate			----------NA----------				
		----------	True	Calc.	% Drift	----------			
93		n-amyl acetate			----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------			
94		isopropylbenzene			----------NA----------				
		----------	True	Calc.	% Drift	----------			
95		cis-1,4-dichloro-2-butene			----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------			
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	97	0.00	7.50	
97	S	4-bromofluorobenzene (s)	1.231	1.249	-1.5	98	0.00	6.93	
98		bromobenzene			----------NA----------				
99		1,1,2,2-tetrachloroethane			----------NA----------				
100		trans-1,4-dichloro-2-bute			----------NA----------				
101		1,2,3-trichloropropane			----------NA----------				
102		n-propylbenzene			----------NA----------				
103		2-chlorotoluene			----------NA----------				
104		4-chlorotoluene			----------NA----------				
105		1,3,5-trimethylbenzene			----------NA----------				
106		tert-butylbenzene			----------NA----------				
107		1,2,4-trimethylbenzene			----------NA----------				
108		sec-butylbenzene			----------NA----------				
109		1,3-dichlorobenzene			----------NA----------				
110		p-isopropyltoluene			----------NA----------				
111		1,4-dichlorobenzene			----------NA----------				
112		1,2-dichlorobenzene			----------NA----------				
113		1,2,3-trimethylbenzene	2.050	2.225	-8.5	101	0.00	7.52	
114		n-butylbenzene			----------NA----------				
115		1,2-dibromo-3-chloropropa			----------NA----------				
116		1,3,5-trichlorobenzene			----------NA----------				
117		1,2,4-trichlorobenzene			----------NA----------				
118		hexachlorobutadiene			----------NA----------				
119		naphthalene			----------NA----------				
120		1,2,3-trichlorobenzene			----------NA----------				
121		hexachloroethane			----------NA----------				
		----------	True	Calc.	% Drift	----------			
122		benzyl chloride			----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------			
123		2-methylnaphthalene			----------NA----------				
124	i	pentafluorobenzene(a)	1.000	1.000	0.0	106	0.00	3.63	
125		Freon 143A			----------NA----------				
126		Freon 114			----------NA----------				
127		Freon 142B			----------NA----------				
128		Freon 141B			----------NA----------				
129		vinyl bromide			----------NA----------				
130		pentane			----------NA----------				
131		allyl chloride			----------NA----------				
132	i	1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	97	0.00	7.50	

Initial Calibration Verification

Job Number: JE31377 **Sample:** V2T707-ICV707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T29514.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

133	4-ethyltoluene	----------NA----------	
134	1,4-diethylbenzene	----------NA----------	
135	Indane	----------NA----------	
136	1,2,4,5-tetramethylbenzen	----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2T29502.D m2t707.m Thu Mar 12 12:11:07 2026

Continuing Calibration Summary

Job Number: JE31377 **Sample:** V2T735-CC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T30778.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ge...2026\V2t735\2T30778.D Vial: 2
Acq On : 06 Apr 2026 11:45 pm Operator: BridgetK
Sample : cc707-50 Inst : GCMST
Misc : MS3656,V2T0735,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\m2t707.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Mar 12 12:03:24 2026
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	129	0.00	1.94
2		ethanol	0.118	0.128	-8.5	138	0.00	1.45
3	M	tertiary butyl alcohol	1.010	0.932	7.7	124	0.00	1.99
4		1,4-dioxane	0.095	0.076	20.0#	101	0.00	4.86
5	I	pentafluorobenzene	1.000	1.000	0.0	128	0.00	3.63
6		chlorodifluoromethane	0.591	0.605	-2.4	132	0.00	0.89
7		dichlorodifluoromethane	0.579	0.544	6.0	113	0.00	0.87
8		chloromethane	0.438	0.522	-19.2	147	0.00	0.96
9		vinyl chloride	0.499	0.511	-2.4	125	0.00	0.99
10		1,3-butadiene	0.416	0.527	-26.7#	169	0.00	1.00
11		bromomethane	0.314	0.221	29.6#	93	0.00	1.13
12		chloroethane	0.373	0.402	-7.8	130	0.00	1.18
13		trichlorofluoromethane	0.811	0.889	-9.6	130	0.00	1.25
14		ethyl ether	0.257	0.254	1.2	113	0.00	1.38
15		acrolein		----------NA----------				
16		freon 113	0.297	0.261	12.1	108	0.00	1.50
17		1,1-dichloroethene	0.720	0.712	1.1	119	0.00	1.48
18		acetone	0.064	0.070	-9.4	135	0.00	1.80
19		acetonitrile	0.056	0.078	-39.3#	179	0.00	2.08
		----------	True	Calc.	% Drift	----------		
20		iodomethane	50.000	26.427	47.1#	55	0.00	1.56
		----------	AvgRF	CCRF	% Dev	----------		
21		carbon disulfide	1.175	1.058	10.0	112	0.00	1.50
22		methylene chloride	0.425	0.395	7.1	120	0.00	1.78
23		methyl acetate	0.098	0.093	5.1	115	0.00	1.87
24		methyl tert butyl ether	1.016	1.004	1.2	119	0.00	1.93
25		trans-1,2-dichloroethene	0.411	0.380	7.5	115	0.00	1.87
26		hexane	0.891	0.816	8.4	119	0.00	1.92
27		di-isopropyl ether	1.008	1.225	-21.5#	148	0.00	2.19
28		ethyl tert-butyl ether	1.053	1.111	-5.5	123	0.00	2.45
29		2-butanone	0.068	0.073	-7.4	123	0.00	3.21
30	M	1,1-dichloroethane	0.667	0.674	-1.0	125	0.00	2.26
31		chloroprene	0.616	0.663	-7.6	129	0.00	2.24
32		acrylonitrile		----------NA----------				
33		vinyl acetate	0.082	0.086	-4.9	121	0.00	2.45
34		ethyl acetate	0.061	0.062	-1.6	119	0.00	3.06
35		2,2-dichloropropane	0.483	0.506	-4.8	125	0.00	2.76
36		cis-1,2-dichloroethene	0.377	0.350	7.2	117	0.00	2.67
37		propionitrile	0.084	0.097	-15.5	136	0.00	3.51

Continuing Calibration Summary

Job Number: JE31377 **Sample:** V2T735-CC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T30778.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

38		methyl acrylate	0.078	0.073	6.4	109	0.00	3.05
39		bromochloromethane	0.170	0.169	0.6	126	0.00	2.84
40		tetrahydrofuran	0.072	0.071	1.4	117	0.00	3.06
41		chloroform	0.193	0.209	-8.3	142	0.00	2.92
42	S	dibromofluoromethane (s)	0.605	0.609	-0.7	129	0.00	3.09
43		methacrylonitrile	0.188	0.199	-5.9	127	0.00	3.54
44		1,1,1-trichloroethane	0.593	0.573	3.4	117	0.00	3.11
45		cyclohexane	0.485	0.487	-0.4	120	0.00	2.85
46		1,1-dichloropropene	0.486	0.489	-0.6	120	0.00	3.24
47		carbon tetrachloride	0.513	0.512	0.2	119	0.00	3.05
48		isobutyl alcohol	0.022	0.033	-50.0#	157	0.00	3.84
49		tert-amyl alcohol	0.043	0.043	0.0	115	0.00	3.94
50	I	1,4-difluorobenzene	1.000	1.000	0.0	132	0.00	4.22
51	S	1,2-dichloroethane-d4 (s)	0.437	0.457	-4.6	130	0.00	3.64
52		iso-octane	0.561	0.566	-0.9	126	0.00	3.38
53	M	benzene	0.826	0.791	4.2	123	0.00	3.49
54		tert-amyl methyl ether	0.541	0.537	0.7	122	0.00	3.67
55		heptane	0.114	0.107	6.1	120	0.01	3.52
56		isopropyl acetate	0.054	0.057	-5.6	119	0.00	4.10
57		1,2-dichloroethane	0.343	0.328	4.4	124	0.00	3.71
58		n-butyl alcohol	0.011	0.013	-18.2	123	0.00	4.57
59		ethyl acrylate	0.333	0.362	-8.7	126	0.00	4.71
60		trichloroethene	0.223	0.209	6.3	120	0.00	4.17

			True	Calc.	% Drift			
61		2-nitropropane	50.000	58.733	-17.5	158	0.00	5.43

			AvgRF	CCRF	% Dev			
62		2-chloroethyl vinyl ether	0.155	0.157	-1.3	119	0.00	5.13
63		methyl methacrylate	0.066	0.063	4.5	110	0.00	4.86
64		1,2-dichloropropane	0.222	0.218	1.8	124	0.00	4.63
65		methylcyclohexane	0.156	0.143	8.3	113	0.00	4.16
66		dibromomethane	0.146	0.135	7.5	118	0.00	4.54
67		bromodichloromethane	0.298	0.291	2.3	120	0.00	4.70
68		epichlorohydrin	0.034	0.040	-17.6	132	0.00	5.31
69		cis-1,3-dichloropropene	0.319	0.328	-2.8	120	0.00	5.15
70		4-methyl-2-pentanone	0.115	0.127	-10.4	127	0.00	5.53

			True	Calc.	% Drift			
71		3-methyl-1-butanol	1000.000	913.790	8.6	112	0.00	5.45

			AvgRF	CCRF	% Dev			
72	I	chlorobenzene-d5	1.000	1.000	0.0	131	0.00	6.22
73	S	toluene-d8 (s)	1.612	1.604	0.5	133	0.00	5.27
74		toluene	0.652	0.587	10.0	118	0.00	5.30
75		ethyl methacrylate	0.321	0.328	-2.2	119	0.00	5.67
76		trans-1,3-dichloropropene	0.376	0.401	-6.6	121	0.00	5.55
77		1,1,2-trichloroethane	0.202	0.197	2.5	122	0.00	5.64
78		tetrachloroethene	0.271	0.238	12.2	114	0.00	5.52
79		2-hexanone	0.140	0.159	-13.6	126	0.00	6.05
80		1,3-dichloropropane	0.415	0.407	1.9	122	0.00	5.80
81		butyl acetate	0.185	0.200	-8.1	123	0.00	6.02
82		dibromochloromethane	0.265	0.258	2.6	116	0.00	5.74
83		1,2-dibromoethane	0.258	0.243	5.8	120	0.00	5.87
84		n-butyl ether	1.030	1.119	-8.6	126	0.00	6.22
85		chlorobenzene	0.721	0.659	8.6	119	0.00	6.23
86		1,1,1,2-tetrachloroethane	0.242	0.241	0.4	119	0.00	6.28
87		ethylbenzene	1.209	1.128	6.7	118	0.00	6.26

Continuing Calibration Summary

Job Number: JE31377 **Sample:** V2T735-CC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T30778.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

88		m,p-xylene	0.453	0.427	5.7	116	0.00	6.35
89		o-xylene	0.430	0.409	4.9	117	0.00	6.60
90		styrene	0.703	0.694	1.3	117	0.00	6.63
91		bromoform	0.179	0.176	1.7	116	0.00	6.64
92		butyl acrylate	0.496	0.579	-16.7	130	0.00	6.72
		----------	True	Calc.	% Drift	----------		
93		n-amyl acetate	50.000	49.231	1.5	124	0.00	6.87
		----------	AvgRF	CCRF	% Dev	----------		
94		isopropylbenzene	1.100	1.060	3.6	117	0.00	6.78
		----------	True	Calc.	% Drift	----------		
95		cis-1,4-dichloro-2-butene	50.000	35.510	29.0#	92	0.00	6.97
		----------	AvgRF	CCRF	% Dev	----------		
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	129	0.00	7.50
97	S	4-bromofluorobenzene (s)	1.231	1.180	4.1	123	0.00	6.93
98		bromobenzene	0.572	0.536	6.3	118	0.00	6.98
99		1,1,2,2-tetrachloroethane	0.754	0.738	2.1	123	0.00	7.04
100		trans-1,4-dichloro-2-bute	0.234	0.209	10.7	101	0.00	7.13
101		1,2,3-trichloropropane	0.270	0.254	5.9	121	0.00	7.10
102		n-propylbenzene	2.798	2.707	3.3	120	0.00	7.00
103		2-chlorotoluene	0.535	0.516	3.6	121	0.00	7.08
104		4-chlorotoluene	1.754	1.623	7.5	113	0.00	7.17
105		1,3,5-trimethylbenzene	1.901	1.827	3.9	114	0.00	7.11
106		tert-butylbenzene	1.557	1.460	6.2	113	0.00	7.27
107		1,2,4-trimethylbenzene	1.971	1.891	4.1	114	0.00	7.31
108		sec-butylbenzene	2.227	2.172	2.5	116	0.00	7.36
109		1,3-dichlorobenzene	1.090	1.011	7.2	118	0.00	7.46
110		p-isopropyltoluene	1.872	1.790	4.4	112	0.00	7.44
111		1,4-dichlorobenzene	1.136	1.030	9.3	117	0.00	7.51
112		1,2-dichlorobenzene	1.034	0.952	7.9	116	0.00	7.71
113		1,2,3-trimethylbenzene	2.050	1.882	8.2	114	0.00	7.52
114		n-butylbenzene	0.428	0.418	2.3	116	0.00	7.64
115		1,2-dibromo-3-chloropropa	0.182	0.188	-3.3	117	0.00	8.08
116		1,3,5-trichlorobenzene	0.684	0.644	5.8	118	0.00	8.10
117		1,2,4-trichlorobenzene	0.558	0.518	7.2	114	0.00	8.39
118		hexachlorobutadiene	0.228	0.196	14.0	113	0.00	8.39
119		naphthalene	1.856	1.874	-1.0	115	0.00	8.54
120		1,2,3-trichlorobenzene	0.532	0.498	6.4	117	0.00	8.62
121		hexachloroethane	0.327	0.340	-4.0	119	0.00	7.70
		----------	True	Calc.	% Drift	----------		
122		benzyl chloride	50.000	49.869	0.3	123	0.00	7.63
		----------	AvgRF	CCRF	% Dev	----------		
123		2-methylnaphthalene	0.914	0.755	17.4	95	0.00	9.02
124	i	pentafluorobenzene(a)	1.000	1.000	0.0	128	0.00	3.63
125		Freon 143A		----------NA----------				
126		Freon 114		----------NA----------				
127		Freon 142B		----------NA----------				
128		Freon 141B		----------NA----------				
129		vinyl bromide		----------NA----------				
130		pentane		----------NA----------				
131		allyl chloride		----------NA----------				
132	i	1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	129	0.00	7.50

Continuing Calibration Summary

Job Number: JE31377 **Sample:** V2T735-CC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T30778.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

133	4-ethyltoluene	----------NA----------	
134	1,4-diethylbenzene	----------NA----------	
135	Indane	----------NA----------	
136	1,2,4,5-tetramethylbenzen	----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2T29502.D m2t707.m Wed Apr 08 11:22:08 2026

Continuing Calibration Summary

Job Number: JE31377 **Sample:** V2T735-CC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T30780.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\ge...2026\V2t735\2T30780.D Vial: 4
Acq On : 07 Apr 2026 12:13 am Operator: BridgetK
Sample : cc707-1 Inst : GCMST
Misc : MS3656,V2T0735,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\methods\m2t707.m (RTE Integrator)
Title : SW-846 Method 8260C/D, column DB-624 60 m x 0.25 mm x 1.4 um
Last Update : Thu Mar 12 12:03:24 2026
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 200% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1	I	tert butyl alcohol-d9	1.000	1.000	0.0	148	0.00	1.94
2		ethanol		----------NA----------				
3	M	tertiary butyl alcohol		----------NA----------				
4		1,4-dioxane	0.095	0.081	14.7	149	0.00	4.85
5	I	pentafluorobenzene	1.000	1.000	0.0	127	0.00	3.63
6		chlorodifluoromethane		----------NA----------				
7		dichlorodifluoromethane		----------NA----------				
8		chloromethane		----------NA----------				
9		vinyl chloride		----------NA----------				
10		1,3-butadiene		----------NA----------				
11		bromomethane	0.314	0.410	-30.6	150	0.00	1.13
12		chloroethane		----------NA----------				
13		trichlorofluoromethane		----------NA----------				
14		ethyl ether		----------NA----------				
15		acrolein		----------NA----------				
16		freon 113		----------NA----------				
17		1,1-dichloroethene		----------NA----------				
18		acetone		----------NA----------				
19		acetonitrile		----------NA----------				
		----------	True	Calc.	% Drift	----------		
20		iodomethane	1.000	1.561	-56.1	0	0.00	1.56
		----------	AvgRF	CCRF	% Dev	----------		
21		carbon disulfide		----------NA----------				
22		methylene chloride		----------NA----------				
23		methyl acetate		----------NA----------				
24		methyl tert butyl ether		----------NA----------				
25		trans-1,2-dichloroethene		----------NA----------				
26		hexane		----------NA----------				
27		di-isopropyl ether		----------NA----------				
28		ethyl tert-butyl ether		----------NA----------				
29		2-butanone		----------NA----------				
30	M	1,1-dichloroethane		----------NA----------				
31		chloroprene		----------NA----------				
32		acrylonitrile		----------NA----------				
33		vinyl acetate		----------NA----------				
34		ethyl acetate		----------NA----------				
35		2,2-dichloropropane		----------NA----------				
36		cis-1,2-dichloroethene		----------NA----------				
37		propionitrile		----------NA----------				

Continuing Calibration Summary

Job Number: JE31377 **Sample:** V2T735-CC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T30780.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

38		methyl acrylate		----------NA----------					
39		bromochloromethane		----------NA----------					
40		tetrahydrofuran		----------NA----------					
41		chloroform		----------NA----------					
42	S	dibromofluoromethane (s)	0.605	0.653	-7.9	136	0.00	3.09	
43		methacrylonitrile		----------NA----------					
44		1,1,1-trichloroethane		----------NA----------					
45		cyclohexane		----------NA----------					
46		1,1-dichloropropene		----------NA----------					
47		carbon tetrachloride		----------NA----------					
48		isobutyl alcohol		----------NA----------					
49		tert-amyl alcohol		----------NA----------					
50	I	1,4-difluorobenzene	1.000	1.000	0.0	128	0.00	4.22	
51	S	1,2-dichloroethane-d4 (s)	0.437	0.453	-3.7	139	0.00	3.63	
52		iso-octane		----------NA----------					
53	M	benzene		----------NA----------					
54		tert-amyl methyl ether		----------NA----------					
55		heptane		----------NA----------					
56		isopropyl acetate		----------NA----------					
57		1,2-dichloroethane		----------NA----------					
58		n-butyl alcohol		----------NA----------					
59		ethyl acrylate		----------NA----------					
60		trichloroethene		----------NA----------					
		----------	True	Calc.	% Drift	----------			
61		2-nitropropane		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
62		2-chloroethyl vinyl ether		----------NA----------					
63		methyl methacrylate		----------NA----------					
64		1,2-dichloropropane		----------NA----------					
65		methylcyclohexane		----------NA----------					
66		dibromomethane		----------NA----------					
67		bromodichloromethane		----------NA----------					
68		epichlorohydrin		----------NA----------					
69		cis-1,3-dichloropropene		----------NA----------					
70		4-methyl-2-pentanone		----------NA----------					
		----------	True	Calc.	% Drift	----------			
71		3-methyl-1-butanol		----------NA----------					
		----------	AvgRF	CCRF	% Dev	----------			
72	I	chlorobenzene-d5	1.000	1.000	0.0	132	0.00	6.22	
73	S	toluene-d8 (s)	1.612	1.625	-0.8	130	0.00	5.27	
74		toluene		----------NA----------					
75		ethyl methacrylate		----------NA----------					
76		trans-1,3-dichloropropene		----------NA----------					
77		1,1,2-trichloroethane		----------NA----------					
78		tetrachloroethene		----------NA----------					
79		2-hexanone		----------NA----------					
80		1,3-dichloropropane		----------NA----------					
81		butyl acetate		----------NA----------					
82		dibromochloromethane		----------NA----------					
83		1,2-dibromoethane		----------NA----------					
84		n-butyl ether		----------NA----------					
85		chlorobenzene		----------NA----------					
86		1,1,1,2-tetrachloroethane		----------NA----------					
87		ethylbenzene		----------NA----------					

Continuing Calibration Summary

Job Number: JE31377 **Sample:** V2T735-CC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T30780.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

88		m,p-xylene			----------NA----------				
89		o-xylene			----------NA----------				
90		styrene			----------NA----------				
91		bromoform			----------NA----------				
92		butyl acrylate			----------NA----------				
		----------	True	Calc.	% Drift	----------			
93		n-amyl acetate			----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------			
94		isopropylbenzene			----------NA----------				
		----------	True	Calc.	% Drift	----------			
95		cis-1,4-dichloro-2-butene	1.000	2.920	-192.0	0	0.00	6.96	
		----------	AvgRF	CCRF	% Dev	----------			
96	I	1,4-dichlorobenzene-d4	1.000	1.000	0.0	129	0.00	7.50	
97	S	4-bromofluorobenzene (s)	1.231	1.192	3.2	126	0.00	6.93	
98		bromobenzene			----------NA----------				
99		1,1,2,2-tetrachloroethane			----------NA----------				
100		trans-1,4-dichloro-2-bute			----------NA----------				
101		1,2,3-trichloropropane			----------NA----------				
102		n-propylbenzene			----------NA----------				
103		2-chlorotoluene			----------NA----------				
104		4-chlorotoluene			----------NA----------				
105		1,3,5-trimethylbenzene			----------NA----------				
106		tert-butylbenzene			----------NA----------				
107		1,2,4-trimethylbenzene			----------NA----------				
108		sec-butylbenzene			----------NA----------				
109		1,3-dichlorobenzene			----------NA----------				
110		p-isopropyltoluene			----------NA----------				
111		1,4-dichlorobenzene			----------NA----------				
112		1,2-dichlorobenzene			----------NA----------				
113		1,2,3-trimethylbenzene			----------NA----------				
114		n-butylbenzene			----------NA----------				
115		1,2-dibromo-3-chloropropa			----------NA----------				
116		1,3,5-trichlorobenzene			----------NA----------				
117		1,2,4-trichlorobenzene			----------NA----------				
118		hexachlorobutadiene			----------NA----------				
119		naphthalene			----------NA----------				
120		1,2,3-trichlorobenzene			----------NA----------				
121		hexachloroethane			----------NA----------				
		----------	True	Calc.	% Drift	----------			
122		benzyl chloride			----------NA----------				
		----------	AvgRF	CCRF	% Dev	----------			
123		2-methylnaphthalene			----------NA----------				
124	i	pentafluorobenzene(a)	1.000	1.000	0.0	127	0.00	3.63	
125		Freon 143A			----------NA----------				
126		Freon 114			----------NA----------				
127		Freon 142B			----------NA----------				
128		Freon 141B			----------NA----------				
129		vinyl bromide			----------NA----------				
130		pentane			----------NA----------				
131		allyl chloride			----------NA----------				
132	i	1,4-dichlorobenzene-d4(a)	1.000	1.000	0.0	129	0.00	7.50	

Continuing Calibration Summary

Job Number: JE31377 **Sample:** V2T735-CC707
Account: OBGNJ Ramboll Americas Engineering Solutions **Lab FileID:** 2T30780.D
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

133	4-ethyltoluene	----------NA----------	
134	1,4-diethylbenzene	----------NA----------	
135	Indane	----------NA----------	
136	1,2,4,5-tetramethylbenzen	----------NA----------	

(#) = Out of Range SPCC's out = 0 CCC's out = 0
2T29492.D m2t707.m Wed Apr 08 12:04:44 2026

6.9.5

6

Run Sequence Report

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Run ID: V2T707	**Method:** SW846 8260D	**Instrument ID:** GCMS2T

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2T707-BFB	2T29486.D	03/11/26 17:06	n/a	BFB Tune
V2T707-IC707	2T29488.D	03/11/26 18:00	n/a	Initial cal 0.2
V2T707-IC707	2T29490.D	03/11/26 18:28	n/a	Initial cal 0.5
V2T707-IC707	2T29492.D	03/11/26 18:56	n/a	Initial cal 1
V2T707-IC707	2T29494.D	03/11/26 19:23	n/a	Initial cal 2
V2T707-IC707	2T29496.D	03/11/26 19:51	n/a	Initial cal 4
V2T707-IC707	2T29498.D	03/11/26 20:19	n/a	Initial cal 8
V2T707-IC707	2T29500.D	03/11/26 20:46	n/a	Initial cal 20
V2T707-ICC707	2T29502.D	03/11/26 21:14	n/a	Initial cal 50
V2T707-IC707	2T29504.D	03/11/26 21:42	n/a	Initial cal 100
V2T707-IC707	2T29506.D	03/11/26 22:09	n/a	Initial cal 200
V2T707-ICV707	2T29512.D	03/11/26 23:32	n/a	Initial cal verification 50
V2T707-ICV707	2T29514.D	03/12/26 00:00	n/a	Initial cal verification 50

Run Sequence Report

Job Number: JE31377
Account: OBGNJ Ramboll Americas Engineering Solutions
Project: Former Cove & Maple MGP Site, 120 Maple Avenue, Haverstraw, NY

Run ID: V2T735	**Method:** SW846 8260D	**Instrument ID:** GCMS2T

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V2T735-CC707	2T30778.D	04/06/26 23:45	n/a	Continuing cal 50
V2T735-CC707	2T30780.D	04/07/26 00:13	n/a	Continuing cal 1
V2T735-BS	2T30782.D	04/07/26 00:40	n/a	Blank Spike
V2T735-MB	2T30784.D	04/07/26 01:08	n/a	Method Blank
GP69060-LB9	2T30786.D	04/07/26 01:35	GP69060	Leachate Blank
GP69069-LB12	2T30788.D	04/07/26 02:02	GP69069	Leachate Blank
JE31408-1	2T30790.D	04/07/26 02:30	GP69069	(used for QC only; not part of job JE31377)
JE31377-1	2T30792.D	04/07/26 02:57	GP69060	WC-040226
ZZZZZZ	2T30794.D	04/07/26 03:24	GP69069	(unrelated sample)
GP69060-LS9	2T30796.D	04/07/26 03:51	GP69060	Leachate Spike
JE31408-1MS	2T30798.D	04/07/26 04:19	n/a	Matrix Spike
GP69069-LS12	2T30798A.D	04/07/26 04:19	GP69069	Leachate Spike
JE31408-1MSD	2T30800.D	04/07/26 04:46	n/a	Matrix Spike Duplicate
ZZZZZZ	2T30804.D	04/07/26 05:41	GP69033	(unrelated sample)
ZZZZZZ	2T30806.D	04/07/26 06:08	GP69033	(unrelated sample)
ZZZZZZ	2T30808.D	04/07/26 06:35	GP69033	(unrelated sample)
ZZZZZZ	2T30810.D	04/07/26 07:02	GP69033	(unrelated sample)
ZZZZZZ	2T30812.D	04/07/26 07:30	GP69058	(unrelated sample)
ZZZZZZ	2T30814.D	04/07/26 07:57	GP69058	(unrelated sample)
ZZZZZZ	2T30816.D	04/07/26 08:24	GP69058	(unrelated sample)
ZZZZZZ	2T30818.D	04/07/26 08:51	GP69058	(unrelated sample)
ZZZZZZ	2T30820.D	04/07/26 09:19	GP69058	(unrelated sample)
ZZZZZZ	2T30822.D	04/07/26 09:46	GP69058	(unrelated sample)
ZZZZZZ	2T30824.D	04/07/26 10:13	GP69069	(unrelated sample)
ZZZZZZ	2T30826.D	04/07/26 10:41	GP69069	(unrelated sample)

MS Volatiles

Raw Data

Full Raw Data Available upon request

RAMBOLL

ENVIRONMENT
& HEALTH

MEMO

Project name **Former Clove & Maple Haverstraw NY Site Data Validation Report**
Project no. **1940102724**
Client **Orange and Rockland Utilities, Inc. (ORU)**
Prepared by **Ramboll**

This report presents the results of data validation performed for samples collected at the Former Clove & Maple MGP Site in Haverstraw, New York. Sample collection activities were conducted by Ramboll in April 2026.

SGS North America, Inc. of Dayton, New Jersey (SGS Dayton) performed the laboratory analyses for the sampling event. The laboratory packages contain summary forms for quality control analysis and supportive raw data.

Table 1 below summarizes the sample analysis submitted for data validation.

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Table 1. *Analytical Methods and References*

Analysis	Method	Reference
Volatile Organic Compounds (VOCs)	USEPA Methods 5030B/8000C/8260C	1
Semivolatile Organic Compounds (SVOCs)	USEPA Methods 3510C/8000C/8270D	1

Notes:

1. USEPA. 2018. Test Methods for Evaluating Solid Waste: Physical/Chemical Methods, SW-846, 3rd Edition, Update VI. Washington D.C.

The samples submitted for data validation are summarized in the attached Table 2. Table 3, attached, presents the specific data validation approach applied to data generated for this investigation. Table 4, also attached, presents the laboratory quality assurance/quality control (QA/QC) analyses definitions.

Full validation was performed on the samples collected for this investigation. The analytical data generated for this investigation were evaluated by Ramboll using the QA/QC criteria established in the methods and professional judgement.

Application of qualifiers to the data affected by excursions from the method criteria was based on guidance provided in the following documents and professional judgment:

- USEPA. 2010. USEPA Region II Validating Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8270D, SOP HW-22 Revision 5.
- USEPA. 2014. USEPA Region II Standard Operating Procedure For the Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C, SOP HW-24, Revision 4.

The following qualifiers are used in this type of data validation:

- "R" - Indicates that the reporting limit (RL) or sample result has been identified as unusable due to a major deficiency in the data generation process. The data were rejected and should not be used for any qualitative or quantitative purposes.
- "U" - Indicates that the analyte was not detected and the sample RL is presented. This qualifier is also used to signify blank excursions.
- "J" - Indicates that the concentration should be considered approximate. The target analyte was positively identified and the associated numerical value is the approximate concentration; either the data quality criteria were not met or the concentration of the target analyte was greater than the method detection limit (MDL) and below the RL.
- "UJ" - Indicates that the analyte was analyzed for and was not detected; however, the RL is presented and should be considered approximate. This qualifier is used when data quality criteria were not met.
- "JN" – Indicates that the target analyte has been "tentatively identified" as present and the associated numerical value is the estimated concentration in the sample. This qualifier may be applied due to data interpretation issues.

The data quality evaluation results in only one type of qualifier for each analyte; in a case when several qualifiers are applicable to the same analyte, the cumulative effect of the various QA/QC excursions is employed in assigning the final data qualifiers. For example, if a sample result is affected by low LCS recovery, for which the "UJ" qualifier is applied, but low MS/MSD recoveries result in the rejection of the sample result (application of the "R" qualifier), the final data qualifier is the "R" qualifier. QA/QC excursions that do not result in the qualification of an analyte are not discussed, with the exception of those excursions that provide useful information to the data user.

The data validation included an evaluation of the following parameters, where applicable:

- Documentation completeness
- Chain-of-custody record
- Sample collection
- Sample preservation
- Holding times
- Calibrations
- Blank analysis
- Matrix spike/ matrix spike duplicate (MS/MSD) analysis
- Laboratory Control Sample (LCS) analysis
- Field duplicate analysis
- Surrogate recovery
- Internal standards performance
- Gas chromatography/mass spectrometry (GC/MS) instrument performance check
- Target analyte quantitation, identification, and quantitation limits (QLs)

The following sections of this memorandum present the results of the comparison of the analytical data to the QA/QC criteria specified above.

VOC DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- Documentation completeness
- Chain-of-custody record
- Sample collection
- Sample preservation
- Holding times
- Calibrations
- Blank analysis
- MS/MSD analysis
- LCS analysis
- Field duplicate analysis
- Surrogate recovery
- Internal standards performance
- GC/MS instrument performance check
- Target analyte identification

Excursions from method or validation criteria were not identified. Additional observations are described below.

I. Target analyte quantitation and QLs

Sample results detected at concentrations greater than laboratory MDLs but less than laboratory RLs, the sample results are flagged as approximate (J) by the laboratory and the "J" qualifier is retained during data validation.

SVOC DATA EVALUATION SUMMARY

The following QA/QC parameters were found to meet method and validation criteria or did not result in additional qualification of sample results:

- Documentation completeness
- Chain-of-custody record
- Sample collection
- Sample preservation
- Holding times
- Calibrations
- MS/MSD analysis
- LCS analysis
- Field duplicate analysis
- Surrogate recovery
- Internal standards performance
- GC/MS instrument performance check
- Target analyte identification

Excursions from method or validation criteria and additional observations are described below.

I. Target analyte quantitation and QLs

Sample results detected at concentrations greater than laboratory MDLs but less than laboratory RLs, the sample results are flagged as approximate (J) by the laboratory and the "J" qualifier is retained during data validation.

DATA USABILITY

The data from the samples presented in Table 2 were evaluated based on QA/QC criteria established by the USEPA methods. Data validation qualifiers were applied to data based on the general approach presented in Table 3.

Major deficiencies that would have resulted in rejected data were not identified for data from this sampling event. Minor deficiencies in the data generation process would have resulted in approximation of sample data.

This section summarizes the adherence of the analytical data to precision, accuracy, representativeness, comparability, completeness, and sensitivity data quality objectives. Data quality was evaluated using percent usability, defined as the percentage of sample results that are usable for qualitative and quantitative purposes.

Precision: Data usability with respect to precision is 100 percent.

Sensitivity: Sensitivity is established by RLs, which represent measurable concentrations of analytes that can be quantified with a designated level of confidence and are less than the project action limits established for the project. Dilutions were not performed for sample analyses. Data usability with respect to sensitivity is 100 percent.

Accuracy: Data usability with respect to accuracy is 100 percent.

Representativeness: Data usability with respect to representativeness is 100 percent.

Comparability: Comparability is not compromised provided that the analytical method approach did not change over time. A major component of comparability is the use of standard reference materials for calibration and QC. Since the modified analytical method approach and reporting procedures were consistently used by the laboratory, the comparability criteria for the analytical data were met.

Completeness: Overall, considering the complete data set, 100 percent of the data were usable for quantitative and quantitative purposes based on the data validation performed.

Table 2. Sample Cross Reference Table - Samples Collected and Submitted for Data Validation

Laboratory Name	Sample Delivery Group	Date Collected	Laboratory Identification	Client Identification	Matrix
SGS Dayton	JE31375	04/02/2026	MW-01_040226	JE31375-1	Groundwater
SGS Dayton	JE31375	04/02/2026	MW-01_040226_MSD	JE31375-1D	Groundwater
SGS Dayton	JE31375	04/02/2026	MW-01_040226_MSD	JE31375-1S	Groundwater
SGS Dayton	JE31375	04/02/2026	MW-01_040226_MS	JE31375-2	Groundwater
SGS Dayton	JE31375	04/02/2026	MW-06_040226	JE31375-3	Groundwater
SGS Dayton	JE31375	04/02/2026	DUP_040226 [MW-05_040226)	JE31375-4	Groundwater
SGS Dayton	JE31375	04/02/2026	FB_040226	JE31375-5	Aqueous
SGS Dayton	JE31375	04/02/2026	TB_040226	JE31375-6	Aqueous

Notes:

SGS Dayton indicates SGS North America Inc. located in Dayton, New Jersey.

VOCs indicates volatile organic compounds.

FB indicats field blank.

TB indicates trip blank.

MS/MSD indicates matrix spike/matrix spike duplicate.

DUP indicates field duplicate.

Table 3

Ramboll Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C) and SVOCs (8270D).

	The validation approach taken by Ramboll is a conservative one; qualifiers are applied to sample data to indicate both major and minor excursions so that data associated with any type of excursion are identified to the data user. Major excursions result in data being rejected (R), indicating that the data are considered unusable for either quantitative or qualitative purposes. Minor excursions result in sample data being qualified as approximate (J, J-, J+, UJ, JN) or non-detected (U) that is otherwise usable for quantitative or qualitative purposes.
General Validation Approach	Excursions are subdivided into excursions that are within the laboratory's control and those that are out of the laboratory's control. Excursions involving laboratory control sample recovery, calibration response, method blank excursions, low or high spike recovery due to inaccurate spiking solutions or poor instrument response, holding times, interpretation errors, and quantitation errors are within the control of the laboratory. Excursions resulting from matrix spike recovery, serial dilution recovery, surrogate, and internal standard performance due to interference from the matrix of the samples are examples of those excursions that are not within the laboratory's control if the laboratory has followed proper method procedures, including performing appropriate cleanup techniques.
Applying professional judgment	USEPA data validation directs professional judgment to be used when applying qualifiers in some cases. When utilizing professional judgment, provide justification for actions taken in the associated validation notes.
Validation Parameter	Ramboll Data Validation Approach based on current Region II guidelines for SW-846 methods. For Region II guidelines that apply only to the CLP method, only the general approach to applying qualifiers was utilized.
Validation Qualifiers – Organics	U - The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the quantitation limit (QL). J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the QL). NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. UJ - The analyte was not detected at a level greater than or equal to the QL. However, the QL is approximate and may be inaccurate or imprecise. R - The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
Cooler Temperature	Results for samples submitted for organic and inorganic analyses that are impacted by coolers that did not contain ice, or if the ice melted upon receipt and the cooler temperatures are greater than 10°C, are qualified as approximate (UJ, J). If samples are delivered to the laboratory the same day as sample collection and samples did not have sufficient time to reach 10°C, samples are not qualified, unless proper preservation was not provided for samples between sample collection and sample receipt at the laboratory. Results for samples received at ambient temperature involved in extended shipment-day issues may be rejected, applying professional judgment.
Percent Solids	Results for samples submitted for organic and inorganic analyses that are impacted by percent solids of 50 percent or less are qualified as approximate (UJ, J).
Water sample collection for VOCs	If headspace or air bubbles are observed in VOC containers, the VOC data is qualified as approximate (UJ, J).
Soil sample collection for VOCs	Soil samples for VOCs submitted for low level analyses must be collected in accordance with EPA Method 5035A. If samples are not collected in encores or in weighed and preserved containers in the field, the VOC data are qualified as approximate (UJ, J).
Holding Time for Organics	Results for samples analyzed less than two times the holding time window established in the method or the QAPP for preparation and/or analysis are qualified as approximate (UJ, J). Non-detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are rejected (R). Detected results for samples analyzed greater than two times the holding time window for preparation and/or analysis are qualified as approximate (J).

Table 3

Ramboll Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C) and SVOCs (8270D).

General Calibration Actions	The entire sample target list for a VOC sample impacted by a holding time excursion is qualified. Due to relative standard deviation (RSD) calibration excursions, detected results for analytes in samples associated with the calibration are qualified as approximate (J). Non-detected results associated with RSD excursions may be qualified as approximate (UJ) based on professional judgment. If the RSD calibration excursion is greater than 90, detected results for analytes in samples associated with the calibration are qualified as approximate (J) and non-detected results may be rejected (R), applying professional judgment. Due to %D calibration verification excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers (J- or J+) For response factor excursions, detected results are qualified as approximate (J) and non-detected results are rejected (R). For initial calibration verifications (ICV) excursions, detected and non-detected results for analytes in samples associated with the calibration are qualified as approximate (J, UJ). The response direction and detection of target analytes in associated sample may be considered in applying qualifiers (J- or J+).
VOCs Calibration Evaluation	VOC target analytes are evaluated using the criteria of 15 percent relative standard deviation (%RSD) or 20% RSD for USEPA 8260C or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 percent difference (%D) for target analytes. Initial calibrations and calibration verifications are also evaluated using the response factor (RF) criteria described in the method 8260B for system performance check compounds and a minimum RF of 0.05 or in Table 4 for Method 8260C. The following exceptions are allowed: RFs ≥ 0.010 for poor purging target analytes such as ketones, acetonitrile, acrolein, propionitrile, vinyl acetate, 1,4-dioxane, methyl acetate, alcohols, tetrahydrofuran, and cyclohexanone. Other target analytes not listed on Table 4 - RFs ≥ 0.050. For Ketones and poor purging target analytes listed in Table 4 with RFs ≥ 0.010 and less than 0.100 results, data will be qualified as approximate (UJ, J). ICV recoveries are evaluated using laboratory control limits if available or 70 to 130% or less than 30%D.
VOCs by Method 8015	Target analytes are evaluated using the criteria of 20 %RSD or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20%D for target analytes for both columns. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
SVOCs Calibration Evaluation	SVOC target analytes are evaluated using the criteria of 15 %RSD (<20 %RSD Method 8270D) or correlation coefficient of 0.990 for initial calibration curves. Calibration verifications are evaluated using a criterion of 20 %D for the target analytes. Initial calibrations and calibration verifications are also evaluated using the criterion of a RF value of greater than or equal to a value of 0.05 for the target analytes using Method 8270C or Table 4 of 8270D. ICV recoveries are evaluated using laboratory control limits if available or 70 to 130%.
Associating samples with Field and Laboratory QC Samples	Trip blanks are associated with samples in the same sample cooler. Equipment blanks (Rinsate blanks) or Field Blanks are associated with samples collected in the same day (or sampling event) using the same sample collection equipment and decontamination solutions. When sampling equipment or decontamination solutions are changed, a new equipment blank should be collected. Each sample should be associated with one equipment blank, which is collected as close to the sample collection date/time as possible based on professional judgment. Field blanks are associated with the sample containers used to collect samples. When sampling container lots are changed, a new field blank should be collected. Method blanks are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples. Method blanks should reflect the sample matrix type (aqueous, low level solid, medium level solid).

Table 3

Ramboll Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C) and SVOCs (8270D).

Associating samples with Field and Laboratory QC Samples	LCSs are associated with samples prepared at the same time (if preparation is required) or analyzed in the same analytical batch as the samples. MS/MSD and laboratory duplicate samples are collected in the field. The laboratory must prepare using project samples. MS/MSDs and laboratory duplicates are associated with samples prepared at the same time or close to the same time (if preparation is required) with the same matrix type. Field duplicates are collected in the field and are associated with samples of the same matrix type. In the case that insufficient QC samples are provided due to field or laboratory problems, use professional judgment to associate each sample with a QC sample that reflects the sample matrix and analysis conditions. If insufficient QC samples are available to properly associate samples, record the impact in the DV notes.
Evaluation and Action for MS/MSD, LCS, Surrogate and Laboratory Duplicate Data for VOCs and SVOCs	The laboratory control limit (CL) is used to assess MS/MSD, LCS, surrogate and laboratory duplicate data. Refer to Region II guidelines if laboratory control limits are not available. In the case that excursions are identified in more than one quality control sample of the same matrix within one sample delivery group, samples are batched according to sample preparation or analysis date and qualified accordingly (see batching description above). If percent recoveries are less than laboratory CLs but greater than 10%, non-detected and detected results are qualified as approximate (UJ, J). If percent recoveries are greater than laboratory CLs, detected results are qualified as approximate (J). If percent recoveries are less than 10%, detected results are qualified as approximate (J) and non-detected results are qualified as rejected (R). In the case of dual column analyses, usually only surrogate data are summarized for both columns. Method blanks, MS/MSD, laboratory duplicate, and LCS summary forms generally report results from one column, although both sets of results can be assessed from CLP Identification Form 10 and in the raw data. (Depending on the laboratory this may be the higher or lower of the two column results, or the column which meets calibration requirements). Results reported on the summary forms are used to qualify the data with consideration for confirmation data. In the case of dual column surrogate recovery failure, data are qualified when both surrogates are outside of the control limits. Non-detected sample results are not qualified if one of the two surrogates fail. Detected result associated with recovery of greater than upper laboratory CLs is qualified as approximate (J). Non-detected result is not qualified. Detected result associated with recovery of greater than or equal to 10% but less than the lower laboratory CL is qualified as approximate (J). Non-detected result is qualified as approximate (UJ). Detected result associated with recoveries of less than 10% is qualified as approximate (J). Non-detected result is rejected (R). If RPDs for MSDs or laboratory duplicates are outside of laboratory CLs, detected results are qualified as approximate (J). Non-detected results may not be qualified, applying professional judgment. Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs. Qualification is performed only when both surrogate recoveries are outside of laboratory CLs, unless interference is identified in the sample chromatography.
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs and SVOCS	Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%. Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment. Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively.

Table 3

Ramboll Data validation approach based on USEPA Region II Data validation guidelines for the following SW-846 analytical methods: VOCs (8260C), and SVOCs (8270D).

Evaluation and Actions for Blank Results for VOC, SVOC Data	Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 30 percent for aqueous samples and less than 50 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions. Blanks are not qualified due to contamination of another blank. Sample results qualified as non-detected (U) are treated as hits when qualifying for surrogate or calibration excursions. The following approach is utilized for applying qualifiers, using twice the quantitation limit (QL) for methylene chloride, 2-butanone and acetone: 1. For blank results less than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 2. For blank results greater than the QL, samples with concentrations less than the QL are reported at the QL and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and less than the blank contamination level are reported and qualified as non-detected (U). Samples with concentrations greater than or equal to the QL and greater than or equal to the blank contamination level are not qualified or may apply the Blank Rule Option. 3. For blank results equal to the QL, sample concentrations less than the QL are reported at the QL value and qualified as non-detected (U). Samples greater than or equal to the QL are not qualified or may apply the Blank Rule Option. 4. For gross contamination in blanks (saturated peaks, interference peaks, poor baselines), all associated sample detected results are rejected (R) or qualified as non-detected (U) using professional judgment. Blank Rule Option: If methylene chloride, acetone or 2-butanone is detected in the sample at a concentration that is less than ten times the concentration in the associated blank, the sample result is qualified as "U". If other target analytes are detected in the sample at a concentration that is less than five times the concentration detected in the associated blank, the sample result is qualified as "U".
Evaluation of MS/MSD, Surrogate, and Field Duplicate Data for VOCs and SVOCS	Qualification is performed only when both MS and MSD recoveries are outside of laboratory CLs. Organic data are rejected (R) in the case that both MS/MSD recoveries are less than 10%. Qualification is not performed if MS/MSD or surrogate recoveries are outside of laboratory CLs with an analysis that applied a dilution factor of 10 times or more, applying professional judgment. Qualification of data associated with MS/MSD or field duplicate excursions is limited to the un-spiked sample or the field duplicate pair, respectively. Field duplicate data are evaluated against relative percent difference (RPD) criteria of less than 30 percent for aqueous samples and less than 50 percent for soils when results are greater than or equal to five times the QL. When a field duplicate result is less than five times the QL, a control limit of plus or minus two times the QL (difference criterion) is applied. If RPDs or differences are outside of criterion, detected and non-detected results are qualified as approximate (UJ, J) to indicate minor excursions.
Evaluation of Internal Standards for organic analyses	Internal standard recoveries are evaluated using control limits of from 50% of the lower standard area to 100% of the upper standard area of the associated calibration verification standard. The results associated with internal standard area recoveries 25% or greater but less than 50% are qualified as approximate (J, UJ). Non-detected results associated with internal standard area recoveries less than 25% are rejected (R), using professional judgment.

Source Ramboll

Table 4. Laboratory Quality Assurance /Quality Control (QA/QC) Analyses Definitions.

QA/QC Term	Definition
Quantitation limit (QL)	The level above which numerical results may be obtained with a specified degree of confidence; the minimum concentration of an analyte in a specific matrix that can be identified and quantified above the method detection limit and within specified limits of precision and bias during routine analytical operating conditions.
Method detection limit (MDL)	The minimum concentration of an analyte that undergoes preparation similar to the environmental samples and can be reported with a stated level of confidence that the analyte concentration is greater than zero.
Instrument detection limit (IDL)	The lowest concentration of a metal target analyte that, when directly inputted and processed on a specific analytical instrument, produces a signal/response that is statistically distinct from the signal/response arising from equipment "noise" alone.
Gas chromatography/mass spectrometry (GC/MS) instrument performance check	Performed to verify mass resolution, identification, and to some degree, instrument sensitivity. These criteria are not sample specific; conformance is determined using standard materials.
Calibration	Compliance requirements for satisfactory instrument calibration are established to verify that the instrument is capable of producing acceptable quantitative data. Initial calibration demonstrates that the instrument is capable of acceptable performance at the beginning of analysis and calibration verifications document satisfactory maintenance and adjustment of the instrument on a day-to-day basis.
Relative Response Factor (RRF)	A measure of the relative mass spectral response of an analyte compared to its internal standard. Relative Response Factors are determined by analysis of standards and are used in the calculation of concentrations of analytes in samples.
Relative standard deviation (RSD)	The standard deviation divided by the mean; a unit-free measure of variability.
Correlation coefficient (CC)	A measure of the strength of the relationship between two variables.
Relative Percent Difference (RPD)	Used to compare two values; the relative percent difference is based on the mean of the two values, and is reported as an absolute value, i.e., always expressed as a positive number or zero.
Percent Difference (%D)	Used to compare two values; the percent difference indicates both the direction and the magnitude of the comparison, i.e., the percent difference may be either negative, positive, or zero.
Percent Deviation (%DEV)	The RF must be within 30% of the mean value measured in the initial calibration or the true value of the calibration verification standard.
Percent Recovery (%R)	The act of determining whether or not the methodology measures all of the target analytes contained in a sample.

Table 4. Laboratory Quality Assurance /Quality Control (QA/QC) Analyses Definitions.

QA/QC Term	Definition
Calibration blank (CB)	Consists of acids and reagent water used to prepare metal samples for analysis. This type of blank is analyzed to evaluate whether contamination is occurring during the preparation and analysis of the sample.
Method blank (MB)	A water or soil blank that undergoes the preparation procedures applied to a sample (i.e., extraction, digestion, clean-up). These samples are analyzed to examine whether sample preparation, clean-up, and analysis techniques result in sample contamination.
Field/equipment (FB/EB)	Collected and submitted for laboratory analysis, where appropriate. Field/equipment blanks are handled in the same manner as environmental samples. Field/equipment blanks are analyzed to assess contamination introduced during field sampling procedures.
Trip blank (TB)	Consist of samples of analyte-free water that have undergone shipment from the sampling site to the laboratory in coolers with the environmental samples submitted for volatile organic compound (VOC) analysis. Trip blanks will be analyzed for VOCs to determine if contamination has taken place during sample handling and/or shipment. Trip blanks will be utilized at a frequency of one each per cooler sent to the laboratory for VOC analysis.
Internal standards (IS) performance	Compounds not found in environmental samples which are spiked into samples and quality control samples at the time of sample preparation for organic analyses. Internal standards must meet retention time and recovery criteria specified in the analytical method. Internal standards are used as the basis for quantitation of the target analytes.
Surrogate recovery	Compounds similar in nature to the target analytes but not expected to be detected in the environmental media which are spiked into environmental samples, blanks, and quality control samples prior to sample preparation for organic analyses. Surrogates are used to evaluate analytical efficiency by measuring recovery.
Laboratory control sample (LCS) Matrix spike blank analyses (MSB)	Standard solutions that consist of known concentrations of the target analytes spiked into laboratory analyte-free water or sand. They are prepared or purchased from a certified manufacturer from a source independent from the calibration standards to provide an independent verification of the calibration procedure. They are prepared and analyzed following the same procedures employed for environmental sample analysis to assess method accuracy independently of sample matrix effects.
Laboratory duplicate	Two or more representative portions taken from one homogeneous sample by the analyst and analyzed in the same laboratory.
Matrix	The material of which the sample is composed or the substrate containing the analyte of interest, such as drinking water, waste water, air, soil/sediment, biological material.
Matrix Spike (MS)	An aliquot of a matrix (water or soil) fortified (spiked) with known quantities of specific target analytes and subjected to the entire analytical procedure in order to indicate the appropriateness of the method for the matrix by measuring recovery.

Table 4. Laboratory Quality Assurance /Quality Control (QA/QC) Analyses Definitions.

QA/QC Term	Definition
Matrix spike duplicate (MSD)	A second aliquot of the same matrix as the matrix spike that is spiked in order to determine the precision of the method.
Retention time (RT)	The time a target analyte is retained on a GC column before elution. The identification of a target analyte is dependent on a target compound's retention time falling within the specified retention time window established for that compound.
Relative retention time (RRT)	The ratio of the retention time of a compound to that of a standard.

Source: Ramboll