



February 29, 2024

Ms. Jordan Thompson, Project Manager  
North Carolina Department of Environmental Quality  
Division of Waste Management  
Brownfields Redevelopment Section  
1646 Mail Service Center  
Raleigh, North Carolina 27699-1646

Subject: Report of Soil-Gas Testing and Methane Screening  
Former Leland Auto Salvage  
142 and 150 Navassa Road  
Leland, North Carolina  
Brownfields Project Number 26001-22-010  
WSP Project: 6228-23-0133

Dear Ms. Thompson:

WSP USA Environment & Infrastructure Inc. (WSP) is pleased to submit this *Report of Soil-Gas Testing and Methane Screening* for the above-referenced subject property (referred to herein as "subject property") located in Leland, North Carolina (Figure 1). Included in this report is an outline of our understanding of the project information, a description of the field activities and results, and our conclusions and recommendations. These activities were completed in general accordance with our Site-Specific Quality Assurance Project Plan (SS QAPP), dated July 28, 2023.

#### Project Information

WSP performed assessment activities at the subject property in late 2023 and complete a Brownfields Assessment Report (dated January 26, 2024). The report noted the deviations from the SS QAPP occurred during the Site assessment activities that necessitated additional work. The deviations are as follows:

- During sampling, the flow controller for soil-gas sample SV-2 indicated fluctuating, anomalous vacuum readings and was considered to have malfunctioned in the field. Sample SV-2 was closed after a period of seven minutes due to the malfunctioning flow controller. Upon receipt of the sample at the laboratory, the residual vacuum for sample SV-2 was recorded as -14.5 inches of mercury. Collection of an additional sample from sample point SV-2 was planned with analysis for the same parameters outlined in the Brownfields Assessment report.
- Methane concentrations were measured in each soil-gas sample point on only one date (September 21, 2023). The North Carolina Brownfields Program Methane Assessment Protocol (July 2020, revised December 2020) requires one pressure measurement and one landfill gas screening to be conducted per day for each sample location with a minimum of 24-hours separating each event at various times of day.

Therefore, it was necessary to conduct pressure measurements and landfill gas screenings as outlined above on two sequential days totaling 2 pressure measurements and landfill gas screenings per location. Additional sampling data may be necessary following the initial screening based on site specific conditions, methane, and pressure detected.

## Soil-Gas Sampling and Analysis

The sampling was performed in general accordance with the NCDEQ, Division of Waste Management (DWM) Vapor Intrusion Guidance, dated March 2018 (<https://deq.nc.gov/about/divisions/waste-management/waste-management-permit-guidance/dwm-vapor-intrusion-guidance>). WSP personnel visited the subject property on February 8, 2024, to collect a soil-gas sample from point SV-2. The locations of the monitoring points are shown on Figure 2.

Prior to sample collection, the 1.4-liter "batch certified" Summa canister was inspected upon delivery from the laboratory. A "shut-in" test was performed on the container by placing the dedicated in-line vacuum gauge on the canister, sealing the canister, and opening the sampling valve. If the initial vacuum prior to sampling was in excess of 10% lower than the vacuum documented by the laboratory upon shipment, the canister would not be used. The Summa canister passed the "shut-in" test.

During the sampling event, prior to sample collection the sample train was purged of stagnant air at the vapor monitoring point. The purging was completed by attaching dedicated Teflon® tubing to the monitoring point. The tubing was then attached to a three-way valve with one side connected to a laboratory-provided, dedicated flow controller with an in-line vacuum gauge leading to a laboratory-provided Summa canister and the other side connected to a peristaltic pump for sample train purging. The sample train was purged at an approximate rate of approximately 201 milliliters per minute (ml/min) for five minutes. The purge rate was measured using a Sensidyne Go-Cal Air Flow Meter. After purging was complete, a leak-check was performed. The leak-check consisted of surrounding the sample train and Summa canisters with a helium shroud using plastic sheeting. The shroud was then filled with helium. The helium concentration inside the shroud was measured using an MGD-2002 Multi-Gas leak (di-electric) detector. A leak-check sample was then collected into a 1-liter Tedlar® bag using the peristaltic pump. The leak-check sample was screened in the field for helium using the helium detector. A leak was considered to have occurred when the helium concentration inside the Tedlar® bag is greater than 10% of the helium concentration within the shroud. No leaks were observed during each sampling event.

Following completion of the leak-check, a soil-gas sample was collected into the Summa canister at an approximate flow rate of 1407 ml/min. The sampling valve was closed on the Summa canister after the prescribed sampling time had elapsed (i.e., 9 minutes for a 1.4-liter Summa canister) or a residual vacuum between -2 and -5 inches of mercury was present in the Summa canister. Following collection of the sample, the Summa canister was shipped and delivered under chain-of-custody protocol by a courier to SGS North America Inc. (SGS) in Dayton, New Jersey for analysis. The soil-gas sample was analyzed by SGS for volatile organic compounds (VOCs) via EPA Method TO-15. No field duplicate sample was collected from SV-2 on this date. A soil-gas sampling field worksheet is included as Attachment A. The worksheet documents the outdoor weather conditions at the time of sampling, Summa canister and flow controller identification numbers, the start and finish vacuum readings, purge and sample flow rates, and other relevant sampling information. Final vacuum readings recorded in the field were compared to the vacuum readings recorded by the laboratory upon sample receipt. Upon receipt of the sample at the laboratory, the residual vacuum for sample SV-2 was recorded as -14.5 inches of mercury. The Summa canister and flow controller IDs are provided in the laboratory report and Table 1.

On February 8 and 9, 2024, WSP personnel also utilized a Landtec GEM 5000 landfill gas meter to measure static and differential pressures, methane and other gases at each soil-gas point. For SV-2, the methane readings were taken prior to purging. These results are summarized on Table 2. The field notes are included as Attachment A.

#### Soil-Gas Analytical Results

The soil-gas laboratory analytical results are shown on Table 1. Numerous VOC concentrations were identified above their respective method detection limits (MDLs) in sample SV-2. However, the concentrations identified did not exceed their respective NCDEQ Residential Soil-Gas Screening Levels (SGSLs). The laboratory analytical report and chain-of-custody form is included in Attachment B.

#### Methane Screening Results

In September 2023, a concentration of methane 21.1 (% by volume (bv)) was noted at soil-gas point SV-7. SV-7 is located near an area reportedly suspected to contain buried debris. On February 8 and 9, 2024, the methane concentrations ranged from 15.3 to 16.3 %bv, confirming the finding from the previous date. For February 2024, the methane concentrations in the remaining points ranged from 0.0 to 0.1 %bv.

#### Conclusions and Recommendations

Based on the results of the current soil-gas testing and methane screening, WSP recommends the following:

- No further sampling and analysis of soil-gas is needed relative to the subject property.
- During redevelopment (i.e. grading) of the property, particular attention should be given to the area where soil-gas point SV-7 is located. The methane screening data suggests that buried debris may be present in that area. It appears that decomposition of the debris is resulting in the generation of methane gas. Removal of potential buried debris from this area could be helpful in mitigating future generation of methane gas in this area.

#### Closing

WSP appreciates the opportunity to provide our services to you. If you have questions, please contact the undersigned below at (704) 357-8600.

Sincerely,

WSP USA Environment & Infrastructure Inc.



Robert Baker  
Geologist




Robert C. Foster, LG  
Geologist  
Registered, NC #1335

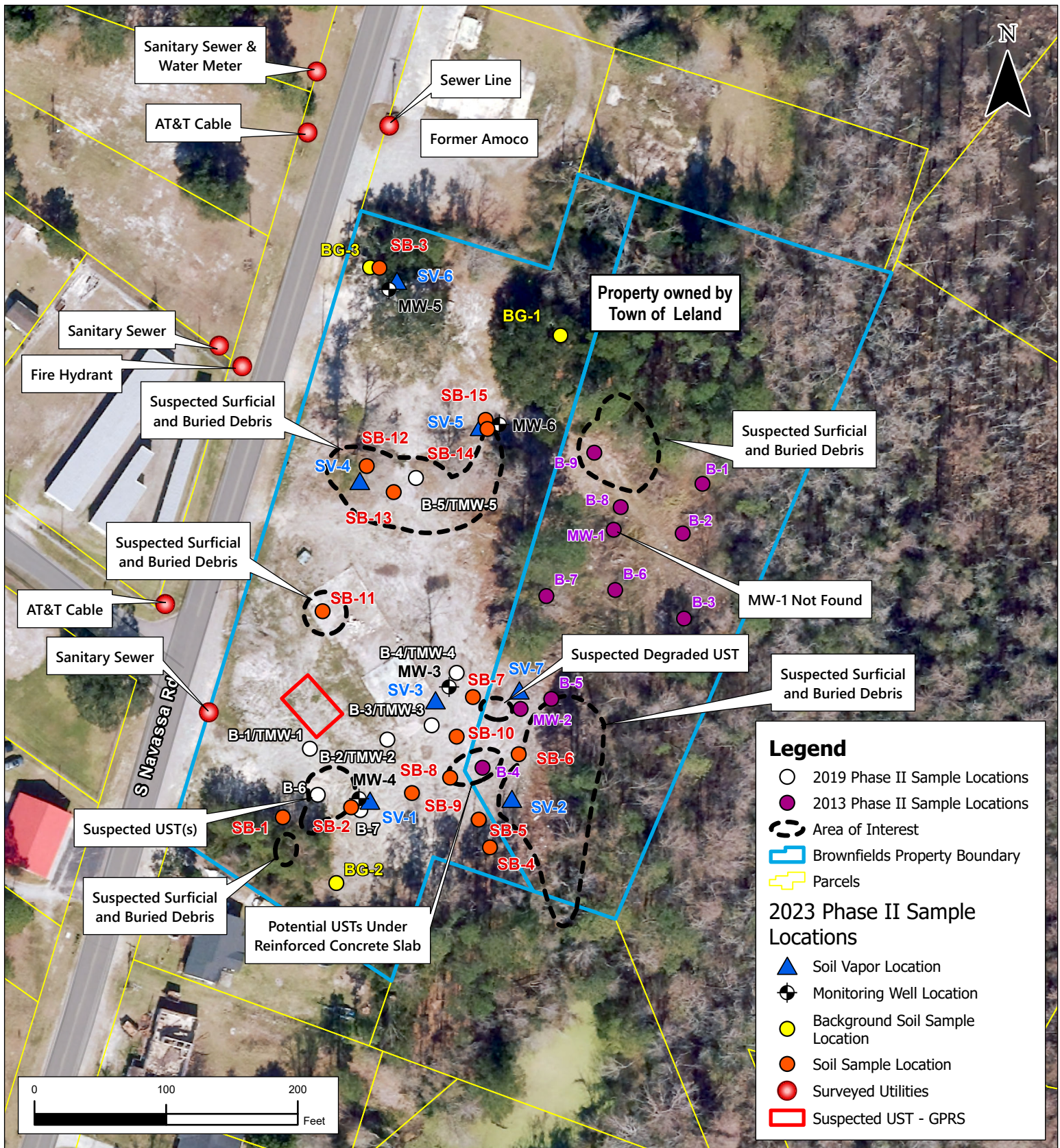


Enclosures





	<b>TITLE:</b> <b>SITE TOPOGRAPHIC MAP</b>	<b>CLIENT:</b> <b>NCDEQ</b> <b>BROWNFIELDS REDEVELOPMENT SECTION</b>		<b>FIGURE</b>  <b>1</b>
	<b>SITE:</b> <b>FORMER LELAND AUTO SALVAGE</b> <b>142 AND 150 S. NAVASSA ROAD</b> <b>LELAND, NORTH CAROLINA</b>	<b>SCALE:</b> AS SHOWN	<b>DATE:</b> 11/16/2023	<b>PROJECT NUMBER:</b> NA
		<b>DRAWN BY:</b> MJC	<b>CHECKED BY:</b> RF	
	LOCATION: \\c:\it1-fs1\projects\6228 Environmental\jobs\2023\6228-23-0133 Former Leland Auto Salvage (MARC Grant)\GIS			




	TITLE: <b>SAMPLE LOCATIONS</b>	CLIENT: <b>NCDEQ BROWNFIELDS REDEVELOPMENT SECTION</b>		<b>FIGURE 2</b>	
	SITE: <b>FORMER LELAND AUTO SALVAGE 142 AND 150 S. NAVASSA ROAD LELAND, NORTH CAROLINA</b>	SCALE: AS SHOWN	DATE: 11/16/2023		PROJECT NUMBER: NA
		DRAWN BY: MJC	CHECKED BY: RF		
	<small>LOCATIONPath: \\c:\it1-fs1\projects\6228 Environmental\jobs\2023\6228-23-0133 Former Leland Auto Salvage (MARC Grant)\GIS</small>				



Table 1: Summary of Detected Constituents in Soil Gas  
Former Leland Auto Salvage  
142 and 150 Navassa Road  
Leland, North Carolina  
WSP Project Number 6228-23-0133  
Brownfields Project No. 26001-22-010

Sample ID	SV-1	SV-2	SV-2	SV-3	DUPLICATE	SV-4	SV-5	SV-6	SV-7	
Sample Type	Soil Gas	Soil Gas	Soil-Gas	Soil Gas	Duplicate	Soil Gas	Soil Gas	Soil Gas	Soil Gas	
Sample Duration	8-min	7-min	9-min	10-min	10-min	10-min	10-min	10-min	10-min	
Sample Collection Date	9/21/2023	9/21/2023	2/8/2024	9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023	9/21/2023	
Canister Number	A2254	A1563	A2437	A1567	A2301	A2210	A2287	A2273	A2270	
Flow Controller Number	FC935	FC1195	FC1050	MC270	FC1197	FC1186	FC1016	FC897	FC1208	
Laboratory "Sent" Canister Pressure (in Hg)	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	-29.5	
Laboratory "Receipt" Canister Pressure (in Hg)	-4	-14.5	-2	-6	-6.5	-7.5	-7.5	-7.5	-6.5	
Canister Start Pressure (in Hg)	-30	--	-22	-29	-29	-28	-29	-28	-30	
Canister Finish Pressure (in Hg)	-4	--	-4	-5	-5	-5	-6	-6	-5	
Shroud Helium Concentration (ppm)	6,050	6,570	4,830	3,450	3,450	4,800	7,250	6,500	3,550	
Leak Check Helium Concentration (ppm)	265	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Methane (% bv)	0.3	1.6	0.0	0.1	0.1	0.0	0.0	0.0	21.2	
Acetone (2-Propanone)	22.0	52.5	64.6	19.0	29.2	18.0	37.3	19.0	ND (29)	NE
1,3-Butadiene	ND (0.75)	ND (0.75)	ND (0.75)	2.2	ND (0.75)	ND (0.75)	ND (0.75)	ND (0.75)	ND (15)	41
Benzene	2.0 J	1.9 J	5.1	3.5	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (38)	160
Bromodichloromethane	ND (0.80)	ND (0.80)	ND (0.80)	4.6 J	ND (0.80)	ND (0.80)	ND (0.80)	ND (0.80)	ND (16)	33
Bromomethane	ND (1.1)	ND (1.1)	ND (1.1)	3.4	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (21)	440
Bromoethene	ND (1.0)	ND (1.0)	ND (1.0)	3.7	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (21)	82
Carbon disulfide	ND (0.56)	ND (0.56)	ND (0.56)	3.0	ND (0.56)	ND (0.56)	ND (0.56)	ND (0.56)	ND (11)	64,000
Chlorobenzene	ND (1.4)	ND (1.4)	ND (1.4)	4.0	ND (1.4)	ND (1.4)	ND (1.4)	ND (1.4)	ND (27)	4,400
Chloroethane	ND (0.71)	ND (0.71)	ND (0.71)	2.2	ND (0.71)	ND (0.71)	ND (0.71)	ND (0.71)	ND (14)	350,000
Chloroform	ND (0.73)	ND (0.73)	6.3	5.4	ND (0.73)	ND (0.73)	ND (0.73)	ND (0.73)	ND (15)	53
Chloromethane	ND (0.74)	ND (0.74)	ND (0.74)	3.3	2.3	ND (0.74)	ND (0.74)	ND (0.74)	ND (15)	7,900
3-Chloropropene	ND (1.0)	ND (1.0)	ND (1.0)	3.0	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (21)	88
2-Chlorotoluene	ND (1.5)	ND (1.5)	ND (1.5)	3.9 J	ND (1.5)	ND (1.5)	ND (1.5)	ND (1.5)	ND (30)	NE
Carbon tetrachloride	ND (1.0)	ND (1.0)	ND (1.0)	3.7 J	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (20)	200
Cyclohexane	ND (0.62)	11.0	2.2 J	3.3	1.3 J	ND (0.62)	ND (0.62)	ND (0.62)	2030	530,000
1,1-Dichloroethane	ND (0.93)	ND (0.93)	ND (0.93)	3.6	ND (0.93)	ND (0.93)	ND (0.93)	ND (0.93)	ND (19)	770
1,1-Dichloroethylene	ND (0.95)	ND (0.95)	ND (0.95)	4.0	ND (0.95)	ND (0.95)	ND (0.95)	ND (0.95)	ND (19)	18,000
1,2-Dibromoethane (EDB)	ND (0.92)	ND (0.92)	ND (0.92)	7.0	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (18)	2
1,2-Dichloroethane	ND (1.1)	ND (1.1)	ND (1.1)	4.0	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (23)	47
1,2-Dichloropropane	ND (1.2)	ND (1.2)	ND (1.2)	4.5	1.8 J	ND (1.2)	ND (1.2)	ND (1.2)	ND (23)	330
1,4-Dioxane	ND (1.7)	ND (1.7)	ND (1.7)	2.8 J	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (34)	250
Dichlorodifluoromethane	ND (2.1)	2.2 J	3.2 J	5.9	3.5 J	ND (2.1)	ND (2.1)	ND (2.1)	ND (41)	8,800
Dibromochloromethane	ND (1.8)	ND (1.8)	ND (1.8)	3.9 J	ND (1.8)	ND (1.8)	ND (1.8)	ND (1.8)	ND (36)	NE
trans-1,2-Dichloroethylene	ND (0.44)	ND (0.44)	ND (0.44)	3.6	ND (0.44)	ND (0.44)	ND (0.44)	ND (0.44)	ND (8.7)	3,500
cis-1,2-Dichloroethylene	ND (0.48)	ND (0.48)	ND (0.48)	3.3	ND (0.48)	ND (0.48)	ND (0.48)	ND (0.48)	ND (9.5)	3,500
cis-1,3-Dichloropropene	ND (1.1)	ND (1.1)	ND (1.1)	3.8	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (23)	NE
m-Dichlorobenzene	ND (0.96)	ND (0.96)	3.0 J	4.4 J	ND (0.96)	ND (0.96)	ND (0.96)	ND (0.96)	ND (19)	NE
o-Dichlorobenzene	ND (1.7)	ND (1.7)	ND (1.7)	4.6 J	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (33)	18,000
p-Dichlorobenzene	ND (1.9)	ND (1.9)	ND (1.9)	4.7 J	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (38)	110
trans-1,3-Dichloropropene	ND (1.8)	ND (1.8)	ND (1.8)	3.5 J	ND (1.8)	ND (1.8)	ND (1.8)	ND (1.8)	ND (37)	NE
Ethanol	7.2	831 E	107	7.9	479 E	7.9	7.5	7.3	908	NE
Ethylbenzene	ND (1.0)	ND (1.0)	1.8 J	4.0	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (21)	490
Ethyl Acetate	ND (1.5)	5.8	1,210	3.3	3.6	ND (1.5)	ND (1.5)	ND (1.5)	ND (30)	6,100
4-Ethyltoluene	ND (1.9)	ND (1.9)	ND (1.9)	3.9	ND (1.9)	ND (1.9)	ND (1.9)	ND (1.9)	ND (37)	NE
Freon 113	ND (0.92)	ND (0.92)	ND (0.92)	7.0	ND (0.92)	ND (0.92)	ND (0.92)	ND (0.92)	ND (19)	440,000
Freon 114	ND (1.4)	ND (1.4)	ND (1.4)	6.0	ND (1.4)	ND (1.4)	ND (1.4)	ND (1.4)	ND (28)	NE
Heptane	ND (0.74)	8.6	1.8 J	4.9	2.0 J	ND (0.74)	ND (0.74)	ND (0.74)	1120	35,000
Hexachlorobutadiene	ND (2.7)	ND (2.7)	ND (2.7)	9.7	ND (2.7)	ND (2.7)	ND (2.7)	ND (2.7)	ND (53)	56
Hexane	10	64.2	6.0	8.5	5.6	4.2	2.6 J	12.0	8570	61,000
2-Hexanone	ND (2.4)	ND (2.4)	ND (2.4)	4.1	ND (2.4)	ND (2.4)	ND (2.4)	ND (2.4)	ND (49)	2,600
Isopropyl Alcohol	2.2	58.3	14	4.4	28.5	1.8 J	1.9 J	3.2	88.5	18,000
Methylene chloride	15.0	40.0	8.0	11.0	6.9	5.6	5.9	24.0	ND (16)	53,000
Methyl ethyl ketone	2.0 J	4.1	5.6	4.1	2.8	ND (1.3)	2.9	1.9 J	ND (26)	440,000
Methyl Isobutyl Ketone	1.6 J	12.0	ND (1.2)	6.1	4.1	2.0 J	1.6 J	2.3 J	ND (24)	260,000
Methyl Tert Butyl Ether	ND (1.2)	ND (1.2)	ND (1.2)	3.3	ND (1.2)	ND (1.2)	ND (1.2)	ND (1.2)	ND (23)	4,700
Methylmethacrylate	ND (1.1)	ND (1.1)	ND (1.1)	4.1	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (23)	61,000
Naphthalene	ND (2.7)	ND (2.7)	ND (2.7)	3.1 J	ND (2.7)	ND (2.7)	ND (2.7)	ND (2.7)	ND (52)	36
Propylene	ND (0.98)	ND (0.98)	5.5	2.2 J	1.4 J	ND (0.98)	ND (0.98)	ND (0.98)	ND (19)	260,000
Styrene	ND (0.89)	ND (0.89)	ND (0.89)	3.7	ND (0.89)	ND (0.89)	ND (0.89)	ND (0.89)	ND (18)	88,000
1,1,1-Trichloroethane	ND (0.82)	ND (0.82)	ND (0.82)	4.6	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (16)	440,000
1,1,2-Tetrachloroethane	ND (1.3)	ND (1.3)	ND (1.3)	6.2	ND (1.3)	ND (1.3)	ND (1.3)	ND (1.3)	ND (26)	21
1,1,2-Trichloroethane	ND (0.82)	ND (0.82)	ND (0.82)	5.3	ND (0.82)	ND (0.82)	ND (0.82)	ND (0.82)	ND (16)	18
1,2,4-Trichlorobenzene	ND (3.6)	ND (3.6)	ND (3.6)	4.0 J	ND (3.6)	ND (3.6)	ND (3.6)	ND (3.6)	ND (72)	180
1,2,4-Trimethylbenzene	ND (1.7)	ND (1.7)	ND (1.7)	4.2	ND (1.7)	ND (1.7)	ND (1.7)	ND (1.7)	ND (34)	5,300
1,3,5-Trimethylbenzene	ND (1.6)	ND (1.6)	ND (1.6)	4.0	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (31)	5,300
2,2,4-Trimethylpentane	ND (0.75)	131.0	ND (0.75)	4.7	2.2 J	ND (0.75)	ND (0.75)	ND (0.75)	14900	NE
Tertiary Butyl Alcohol	ND (1.1)	4.9	2.1 J	4.9	3.6	2.1 J	1.4 J	1.6 J	ND (22)	440,000
Tetrachloroethylene	ND (0.38)	ND (0.38)	2.4	8.8	3.8	ND (0.38)	ND (0.38)	ND (0.38)	ND (7.5)	3,500
Tetrahydrofuran	ND (1.1)	ND (1.1)	7.7	2.5	ND (1.1)	ND (1.1)	ND (1.1)	ND (1.1)	ND (21)	180,000
Toluene	4.5	2.4 J	36	4.1	1.8 J	1.8 J	1.7 J	1.6 J	ND (17)	440,000
Trichloroethylene	ND (0.41)	ND (0.41)	ND (0.41)	5.1	4.7	ND (0.41)	1.2	ND (0.41)	ND (8.1)	180
Trichlorofluoromethane	ND (3.5)	ND (3.5)	35	6.2	ND (3.5)	ND (3.5)	ND (3.5)	ND (3.5)	ND (67)	NE
Vinyl chloride	ND (0.72)	ND (0.72)	ND (0.72)	2.3	ND (0.72)	ND (0.72)	ND (0.72)	ND (0.72)	ND (14)	280
Vinyl Acetate	ND (1.6)	ND (1.6)	12	3.5	ND (1.6)	ND (1.6)	ND (1.6)	ND (1.6)	ND (32)	18,000
m,p-Xylene	2.7 J	ND (2.4)	6.9	7.8	2.9 J	ND (2.4)	ND (2.4)	ND (2.4)	ND (48)	8,800
o-Xylene	ND (1.3)	ND (1.3)	3.3 J	4.0	ND (1.3)	ND (1.3)	ND (1.3)	ND (1.3)	ND (27)	8,800
Xylenes (total)	2.7 J	ND (1.3)	10	12.0	2.9 J	ND (1.3)	ND (1.3)	ND (1.3)	ND (27)	8,800

Non-Residential SGLs  
(TCR = 1.0e<sup>-06</sup> and THQ = 0.2)

Notes:

- Concentrations shown in micrograms per meter cubed (µg/m<sup>3</sup>)
- in Hg = inches of mercury
- ppm = parts per million
- % bv = Percent by volume
- Samples analyzed for volatile organic compounds (VOCs) via EPA Method TO-15
- NCDEQ Residential SGLs = North Carolina Department of Environmental Quality Residential Sub-Slab and Exterior Soil-Gas Screening Levels, dated July 2023
- TCR = Target Cancer Risk
- THQ = Target Hazard Quotient
- ORANGE SHADED cell indicates concentration exceeded NCDEQ Non-Residential SGL with TCR = 1.0e<sup>-06</sup> and THQ = 0.2
- Values shown with "ND" were not detected above the referenced method detection limit (MDL)
- NE = Not established
- E = Indicates values exceeded calibration range.
- J = J-flag, value was detected above method detection limit but below laboratory reporting limit, value is considered an estimate
- DUP collected from parent sample SG-3
- Constituents detected in one or more samples are shown, see the laboratory analytical report for the complete constituent list
- = Flow controller FC1195 malfunctioned in the field. Sample collection terminated after 7-minute sample period

Prepared by: RJB 2-26-24  
Checked by: RCF 2-29-24



Table 2: Summary of Soil-Gas Point Pressures and Gaseous Concentrations

Former Leland Auto Salvage  
 142 and 150 Navassa Road  
 Leland, North Carolina  
 WSP Project Number 6228-23-0133  
 Brownfields Project No. 26001-22-010

Sample ID	SV-1		SV-2		SV-3		SV-4		SV-5		SV-6		SV-7	
Sample Type	Soil Gas	Soil Gas	Soil-Gas	Soil-Gas	Soil Gas	Soil-Gas	Soil Gas	Soil-Gas	Soil Gas	Soil-Gas	Soil Gas	Soil-Gas	Soil Gas	Soil-Gas
Sample Collection Date	2/8/2024	2/9/2024	2/8/2024	2/9/2024	2/8/2024	2/9/2024	2/8/2024	2/9/2024	2/8/2024	2/9/2024	2/8/2024	2/9/2024	2/8/2024	2/9/2024
Static Pressure (in H <sub>2</sub> O)	0.00	0.01	0.00	0.02	-0.05	0.02	0.01	-0.01	0.01	0.01	0.03	0.00	0.03	0.01
Differential Pressure (in H <sub>2</sub> O)	-0.002	0.000	-0.005	-0.002	0.061	0.004	0.000	0.002	-0.003	-0.004	-0.002	0.000	-0.012	-0.003
Barometer Reading (in Hg)	30.11	30.26	30.35	30.26	30.37	30.25	30.35	30.26	30.37	30.23	30.37	30.26	30.34	30.27
Temperature (°F)	47	55	50	55	46	54	46	54	45	51	46	54	47	55
Methane (% bv)	0.0	0.0	0.0	0.0	0.1	0.1	0	0.0	0.1	0.1	0.0	0.0	16.3	15.3
Carbon Dioxide (% bv)	0.7	0.7	10.5	10.5	12.0	11.6	1.3	1.7	5.2	5.0	0.5	0.5	18.1	17.6
Oxygen (% bv)	20.8	20.9	8.9	9.0	21	2.7	20.8	20.0	16.4	16.6	21.3	21.0	0.1	0.6
Hydrogen Sulfide (ppm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32	29.0

Notes:

1. Units are expressed as shown above.
2. Measurements obtained using a Landtec GEM 5000 Plus Landfill Gas Monitor.

Prepared By/Date: RJB 2-26-24  
 Checked By/Date: RCF 2-29-24



ATTACHMENT A

---

Soil-Gas Sampling Field Worksheets and Field Notes

2/8/24

Leland Auto Salvage BP

NW

Sunny 43°F

0930 - WSP onsite; reviewed site/field safety info

- Tasks: - Collect Methane/pressure readings on all SV points

- collect SV Sample from SV-2

0950 - SV-5 Methane/Pressure Readings

CH<sub>4</sub>: 0.1 %

CO<sub>2</sub>: 5.2 %

O<sub>2</sub>: 16.4 %

H<sub>2</sub>S: 0 ppm

Static Pressure: 0.01 "H<sub>2</sub>O

Diff Pressure: -0.003 "H<sub>2</sub>O

Baro: 30.37 "Hg

Temp: 45°F

1010 - SV-6 Gas/Pressure Readings

CH<sub>4</sub>: 0.0 %

CO<sub>2</sub>: 0.5 %

O<sub>2</sub>: 21.3 %

H<sub>2</sub>S: 0 ppm

Static Press: 0.03 "H<sub>2</sub>O

Diff Press: -0.002 "H<sub>2</sub>O

Baro: 30.37 "Hg

Temp: 46.0°F

1025 - SV-4 Gas/Pressure Readings

CH<sub>4</sub>: 0.0 %

CO<sub>2</sub>: 1.3 %

O<sub>2</sub>: 20.8 %

H<sub>2</sub>S: 0 ppm

Static Press: 0.01 "H<sub>2</sub>O

Diff Press: 0.000 "H<sub>2</sub>O

Baro: 30.35 "Hg

Temp: 46.0°F

2/24

Leland Auto Salvage BF

NW

1035 - SV-3 Gas/Pressure Readings

CH<sub>4</sub>: 0.1%

Static Press: -0.05 "H<sub>2</sub>O

CO<sub>2</sub>: 12.0%

Diff Press: 0.061 "H<sub>2</sub>O

O<sub>2</sub>: 2.1%

Baro: 30.37 "Hg

H<sub>2</sub>S: 0 ppm

Temp: 46.0°F

1045 - SV-7 Gas/Pressure Readings

CH<sub>4</sub>: 16.3%

Static Press: 0.03 "H<sub>2</sub>O

CO<sub>2</sub>: 18.1%

Diff Press: -0.012 "H<sub>2</sub>O

O<sub>2</sub>: 0.1%

Baro: 30.34 "Hg

H<sub>2</sub>S: 32 ppm

Temp: 47.0°F

1055 - SV-1 Gas/Pressure Readings

CH<sub>4</sub>: 0.0%

Static Press: 0.00 "H<sub>2</sub>O

CO<sub>2</sub>: 0.7%

Diff Press: -0.002 "H<sub>2</sub>O

O<sub>2</sub>: 20.8%

Baro: 30.11 "Hg

H<sub>2</sub>S: 0 ppm

Temp: 47.0°F

1105 - SV-2 Gas/Pressure Readings

CH<sub>4</sub>: 0.0%

Static Press: 0.00 "H<sub>2</sub>O

CO<sub>2</sub>: 10.5%

Diff Press: -0.005 "H<sub>2</sub>O

O<sub>2</sub>: 8.9%

Baro: 30.35 "Hg

H<sub>2</sub>S: 0 ppm

Temp: 50°F

2/8/24

Leland Auto Salvage BF

NW

1115 - Set up SV sampling @ SV-2

1140 - Start SV-2 purge

1204 - Collect SV-2 sample start

1213 - Collect SV-2 sample end

1230 - Clean up + off site

Scale: 1 square = \_\_\_\_\_

2/9/24 Leland Auto Salvage BIF MW  
Overcast 52°F

1015 - WSP onsite; reviewed site/field safety info  
Tasks! - Collect Day 2 Gas/Pressure Readings @ all SVs

1040 - SV-5 Gas/Pressure Readings

CH<sub>4</sub>: 0.1%

CO<sub>2</sub>: 5.0%

O<sub>2</sub>: 16.6%

H<sub>2</sub>S: 0 ppm

Static Press: 0.01 "H<sub>2</sub>O

Diff Press: -0.004 "H<sub>2</sub>O

Baro: 30.23 "Hg

Temp: 51°F

1045 - SV-6 Gas/Pressure Readings

CH<sub>4</sub>: 0.0%

CO<sub>2</sub>: 0.5%

O<sub>2</sub>: 21.0%

H<sub>2</sub>S: 0 ppm

Static Press: 0.00 "H<sub>2</sub>O

Diff Press: 0.000 "H<sub>2</sub>O

Baro: 30.26 "Hg

Temp: 54°F

1050 - SV-4 Gas/Pressure Readings

CH<sub>4</sub>: 0.0%

CO<sub>2</sub>: 1.7%

O<sub>2</sub>: 20.0%

H<sub>2</sub>S: 0 ppm

Static Press: -0.01 "H<sub>2</sub>O

Diff Press: 0.002 "H<sub>2</sub>O

Baro: 30.26 "Hg

Temp: 54°F

2/9/24

Leland Auto Salvage Bf

mm

1056 - SV-3 Gas/Pressure Readings

CH<sub>4</sub>: 0.1%

CO<sub>2</sub>: 11.6%

O<sub>2</sub>: 2.7%

H<sub>2</sub>S: 0 ppm

Static Press: 0.02 "H<sub>2</sub>O

Diff Press: 0.004 "H<sub>2</sub>O

Baro: 30.25 "Hg

Temp: 54°F

1102 - SV-7 Gas/Pressure Readings

CH<sub>4</sub>: 15.3%

CO<sub>2</sub>: 17.6%

O<sub>2</sub>: 0.6%

H<sub>2</sub>S: 29 ppm

Static Press: 0.01 "H<sub>2</sub>O

Diff Press: -0.003 "H<sub>2</sub>O

Baro: 30.27 "Hg

Temp: 55°F

1108 - SV-1 Gas/Pressure Readings

CH<sub>4</sub>: 0.0%

CO<sub>2</sub>: 0.7%

O<sub>2</sub>: 20.9%

H<sub>2</sub>S: 0 ppm

Static Press: 0.01 "H<sub>2</sub>O

Diff Press: -0.000 "H<sub>2</sub>O

Baro: 30.26 "Hg

Temp: 55°F

1113 - SV-2 Gas/Pressure Readings

CH<sub>4</sub>: 0.0%

CO<sub>2</sub>: 10.5%

O<sub>2</sub>: 9.0%

H<sub>2</sub>S: 0 ppm

Static Press: 0.02 "H<sub>2</sub>O

Diff Press: -0.002 "H<sub>2</sub>O

Baro: 30.26 "Hg

Temp: 55°F



### SOIL-GAS SAMPLING FIELD WORKSHEET

PROJECT NUMBER	<u>6228-23-0133</u>	SAMPLE LOCATION ID	<u>SV-2</u>
SITE NAME	<u>Leland Auto Salvage</u>	SAMPLE DATE	<u>02/08/2024</u>
OUTDOOR TEMPERATURE (°F)	<u>50°</u>	OUTDOOR RELATIVE HUMIDITY (%)	<u>54%</u>
OUTDOOR PRESSURE (in Hg)	<u>30.35</u>	WIND SPEED (mph) and DIRECTION	<u>5 mph NE</u>
ATMOSPHERIC OBSERVATIONS	<u>Sunny/Clear</u>		
SUMMA CANISTER NUMBER	<u>A2437</u>	FLOW CONTROLER NUMBER	<u>FC 1050</u>
SAMPLE START TIME	<u>1204</u>	SAMPLE END TIME	<u>1213</u>
INITIAL CANISTER PRESSURE (in Hg)	<u>-22</u>	FINAL CANISTER PRESSURE (in Hg)	<u>-4</u>
SAMPLE LOCATION DESCRIPTION	<u>SE area of site</u>		
FLOW METER READING DURING SAMPLE TRAIN PURGE (L/min)	<u>0.201 L/min</u>		
SAMPLE TRAIN PURGE TIME (min)	<u>24 min</u>	SUMMA CANISTER CAPACITY	<u>1.4</u> liters
TOTAL AMOUNT PURGED (liters)	<u>4.8 L</u>	SUMMA CANISTER FLOW RATE	<u>107</u> mL/min
SHROUD He CONCENTRATION (ppm)	<u>4830</u>	LEAK CHECK SAMPLE He CONCENTRATION (ppm)	<u>0</u>
LEAK CHECK PERCENT DIFFERENCE	<u>0</u> %	(sample/shroud)*100	
METHAN CONCENTRATION (%)	<u>0.0%</u>	CARBON DIOXIDE CONCENTRATION (%)	<u>0.3%</u>
FIELD SAMPLING EQUIPMENT USED	<u>Peristaltic pump, air flow meter, helium/methane detectors</u>		
COMMENTS	<u>Start Purge: 1135 1140</u> <u>SW 2/8/24</u>		

1 vol: 1.6L  
3 vol: 4.8L





ATTACHMENT B

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Laboratory Analytical Reports and Chain-of-Custody Forms

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

*e-Hardcopy 2.0*  
*Automated Report*

## Technical Report for

**WSP USA Environment & Infrastructure Inc**

**Leland, NC**

**6228230133**

**SGS Job Number: JD82176**

**Sampling Date: 02/08/24**



**Report to:**

**WSP USA Environment & Infrastructure Inc  
5710 Oleander Drive Suite 110  
Wilmington, NC 28403  
rob.foster@wsp.com**

**ATTN: Rob Foster**

**Total number of pages in report: 42**



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: Marie Meidhof 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

This report shall not be reproduced, except in its entirety, without the written approval of SGS.  
Test results relate only to samples analyzed.

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1

2

3

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6



## Sample Summary

WSP USA Environment & Infrastructure Inc

Job No: JD82176

Leland, NC

Project No: 6228230133

Sample Number	Collected Date	Time By	Received	Matrix Code Type	Client Sample ID
---------------	----------------	---------	----------	------------------	------------------

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

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JD82176-1	02/08/24	12:13 NW	02/09/24	AIR	Soil Vapor Comp.	SV-2
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## CASE NARRATIVE / CONFORMANCE SUMMARY

**Client:** WSP USA Environment & Infrastructure Inc

**Job No:** JD82176

**Site:** Leland, NC

**Report Date** 2/19/2024 3:21:32 AM

On 02/09/2024, 1 sample(s), 0 Trip Blank(s), 0 Equip. Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. The samples were intact and properly preserved, unless noted below. An SGS Job Number of JD82176 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 TO-15

<b>Matrix:</b> AIR	<b>Batch ID:</b> V8W174
--------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD82207-1DUP were used as the QC samples indicated.

<b>Matrix:</b> AIR	<b>Batch ID:</b> V8W175
--------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD81850-1DUP 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: JD82176  
 Account: WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC  
 Collected: 02/08/24



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

JD82176-1 SV-2

Acetone (2-Propanone)	27.2	0.80	0.58	ppbv	TO-15
Benzene	1.6	0.80	0.096	ppbv	TO-15
Chloroform	1.3	0.80	0.15	ppbv	TO-15
Cyclohexane	0.64 J	0.80	0.18	ppbv	TO-15
Dichlorodifluoromethane	0.64 J	0.80	0.42	ppbv	TO-15
m-Dichlorobenzene	0.50 J	0.80	0.16	ppbv	TO-15
Ethanol	56.9	2.0	1.6	ppbv	TO-15
Ethylbenzene	0.41 J	0.80	0.24	ppbv	TO-15
Ethyl Acetate	335	8.0	4.2	ppbv	TO-15
Heptane	0.43 J	0.80	0.18	ppbv	TO-15
Hexane	1.7	0.80	0.21	ppbv	TO-15
Isopropyl Alcohol	5.8	0.80	0.56	ppbv	TO-15
Methylene chloride	2.3	0.80	0.22	ppbv	TO-15
Methyl ethyl ketone	1.9	0.80	0.44	ppbv	TO-15
Propylene	3.2	2.0	0.57	ppbv	TO-15
Tertiary Butyl Alcohol	0.69 J	0.80	0.37	ppbv	TO-15
Tetrachloroethylene	0.36	0.16	0.056	ppbv	TO-15
Tetrahydrofuran	2.6	0.80	0.36	ppbv	TO-15
Toluene	9.5	0.80	0.23	ppbv	TO-15
Trichlorofluoromethane	6.3	0.80	0.62	ppbv	TO-15
Vinyl Acetate	3.4	0.80	0.45	ppbv	TO-15
m,p-Xylene	1.6	0.80	0.56	ppbv	TO-15
o-Xylene	0.77 J	0.80	0.31	ppbv	TO-15
Xylenes (total)	2.4	0.80	0.31	ppbv	TO-15
Acetone (2-Propanone)	64.6	1.9	1.4	ug/m3	TO-15
Benzene	5.1	2.6	0.31	ug/m3	TO-15
Chloroform	6.3	3.9	0.73	ug/m3	TO-15
Cyclohexane	2.2 J	2.8	0.62	ug/m3	TO-15
Dichlorodifluoromethane	3.2 J	4.0	2.1	ug/m3	TO-15
m-Dichlorobenzene	3.0 J	4.8	0.96	ug/m3	TO-15
Ethanol	107	3.8	3.0	ug/m3	TO-15
Ethylbenzene	1.8 J	3.5	1.0	ug/m3	TO-15
Ethyl Acetate	1210	29	15	ug/m3	TO-15
Heptane	1.8 J	3.3	0.74	ug/m3	TO-15
Hexane	6.0	2.8	0.74	ug/m3	TO-15
Isopropyl Alcohol	14	2.0	1.4	ug/m3	TO-15
Methylene chloride	8.0	2.8	0.76	ug/m3	TO-15
Methyl ethyl ketone	5.6	2.4	1.3	ug/m3	TO-15
Propylene	5.5	3.4	0.98	ug/m3	TO-15
Tertiary Butyl Alcohol	2.1 J	2.4	1.1	ug/m3	TO-15
Tetrachloroethylene	2.4	1.1	0.38	ug/m3	TO-15
Tetrahydrofuran	7.7	2.4	1.1	ug/m3	TO-15
Toluene	36	3.0	0.87	ug/m3	TO-15

## Summary of Hits

**Job Number:** JD82176  
**Account:** WSP USA Environment & Infrastructure Inc  
**Project:** Leland, NC  
**Collected:** 02/08/24



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
		35	4.5	3.5	ug/m3	TO-15
		12	2.8	1.6	ug/m3	TO-15
		6.9	3.5	2.4	ug/m3	TO-15
		3.3 J	3.5	1.3	ug/m3	TO-15
		10	3.5	1.3	ug/m3	TO-15

**Sample Results**

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**Report of Analysis**

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# Report of Analysis

<b>Client Sample ID:</b> SV-2		
<b>Lab Sample ID:</b> JD82176-1		<b>Date Sampled:</b> 02/08/24
<b>Matrix:</b> AIR - Soil Vapor Comp.	<b>Summa ID:</b> A2437	<b>Date Received:</b> 02/09/24
<b>Method:</b> TO-15		<b>Percent Solids:</b> n/a
<b>Project:</b> Leland, NC		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	8W04492.D	1	02/15/24 19:37	WC	n/a	n/a	V8W175
Run #2	8W04458.D	1	02/14/24 18:36	WC	n/a	n/a	V8W174

Run #	Initial Volume
Run #1	100 ml
Run #2	10.0 ml

## VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
67-64-1	58.08	Acetone (2-Propanone)	27.2	0.80	0.58	ppbv		64.6	1.9	1.4	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.80	0.34	ppbv		ND	1.8	0.75	ug/m3
71-43-2	78.11	Benzene	1.6	0.80	0.096	ppbv		5.1	2.6	0.31	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.80	0.12	ppbv		ND	5.4	0.80	ug/m3
75-25-2	252.8	Bromoform	ND	0.80	0.28	ppbv		ND	8.3	2.9	ug/m3
74-83-9	94.94	Bromomethane	ND	0.80	0.28	ppbv		ND	3.1	1.1	ug/m3
593-60-2	106.9	Bromoethene	ND	0.80	0.24	ppbv		ND	3.5	1.0	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.80	0.50	ppbv		ND	4.1	2.6	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.80	0.18	ppbv		ND	2.5	0.56	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.80	0.30	ppbv		ND	3.7	1.4	ug/m3
75-00-3	64.52	Chloroethane	ND	0.80	0.27	ppbv		ND	2.1	0.71	ug/m3
67-66-3	119.4	Chloroform	1.3	0.80	0.15	ppbv		6.3	3.9	0.73	ug/m3
74-87-3	50.49	Chloromethane	ND	0.80	0.36	ppbv		ND	1.7	0.74	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.80	0.33	ppbv		ND	2.5	1.0	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.80	0.29	ppbv		ND	4.1	1.5	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.80	0.16	ppbv		ND	5.0	1.0	ug/m3
110-82-7	84.16	Cyclohexane	0.64	0.80	0.18	ppbv	J	2.2	2.8	0.62	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.80	0.23	ppbv		ND	3.2	0.93	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.80	0.24	ppbv		ND	3.2	0.95	ug/m3
106-93-4	187.9	1,2-Dibromoethane (EDB)	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.80	0.28	ppbv		ND	3.2	1.1	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.80	0.25	ppbv		ND	3.7	1.2	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.80	0.47	ppbv		ND	2.9	1.7	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.64	0.80	0.42	ppbv	J	3.2	4.0	2.1	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.80	0.21	ppbv		ND	6.8	1.8	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.80	0.11	ppbv		ND	3.2	0.44	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.80	0.12	ppbv		ND	3.2	0.48	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.80	0.25	ppbv		ND	3.6	1.1	ug/m3
541-73-1	147	m-Dichlorobenzene	0.50	0.80	0.16	ppbv	J	3.0	4.8	0.96	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.80	0.28	ppbv		ND	4.8	1.7	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.80	0.32	ppbv		ND	4.8	1.9	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.80	0.40	ppbv		ND	3.6	1.8	ug/m3

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

4.1  
4

# Report of Analysis

<b>Client Sample ID:</b> SV-2		
<b>Lab Sample ID:</b> JD82176-1		<b>Date Sampled:</b> 02/08/24
<b>Matrix:</b> AIR - Soil Vapor Comp.	<b>Summa ID:</b> A2437	<b>Date Received:</b> 02/09/24
<b>Method:</b> TO-15		<b>Percent Solids:</b> n/a
<b>Project:</b> Leland, NC		

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VOA TO15 List

CAS No.	MW	Compound	Result	RL	MDL	Units	Q	Result	RL	MDL	Units
64-17-5	46.07	Ethanol	56.9	2.0	1.6	ppbv		107	3.8	3.0	ug/m3
100-41-4	106.2	Ethylbenzene	0.41	0.80	0.24	ppbv	J	1.8	3.5	1.0	ug/m3
141-78-6	88	Ethyl Acetate	335 <sup>a</sup>	8.0	4.2	ppbv		1210 <sup>a</sup>	29	15	ug/m3
622-96-8	120.19	4-Ethyltoluene	ND	0.80	0.38	ppbv		ND	3.9	1.9	ug/m3
76-13-1	187.4	Freon 113	ND	0.80	0.12	ppbv		ND	6.1	0.92	ug/m3
76-14-2	170.9	Freon 114	ND	0.80	0.20	ppbv		ND	5.6	1.4	ug/m3
142-82-5	100.2	Heptane	0.43	0.80	0.18	ppbv	J	1.8	3.3	0.74	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.80	0.25	ppbv		ND	8.5	2.7	ug/m3
110-54-3	86.18	Hexane	1.7	0.80	0.21	ppbv		6.0	2.8	0.74	ug/m3
591-78-6	100	2-Hexanone	ND	0.80	0.58	ppbv		ND	3.3	2.4	ug/m3
67-63-0	60.1	Isopropyl Alcohol	5.8	0.80	0.56	ppbv		14	2.0	1.4	ug/m3
75-09-2	84.94	Methylene chloride	2.3	0.80	0.22	ppbv		8.0	2.8	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	1.9	0.80	0.44	ppbv		5.6	2.4	1.3	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.80	0.29	ppbv		ND	3.3	1.2	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.80	0.32	ppbv		ND	2.9	1.2	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.80	0.28	ppbv		ND	3.3	1.1	ug/m3
91-20-3	128.17	Naphthalene	ND	0.80	0.51	ppbv		ND	4.2	2.7	ug/m3
115-07-1	42	Propylene	3.2	2.0	0.57	ppbv		5.5	3.4	0.98	ug/m3
100-42-5	104.1	Styrene	ND	0.80	0.21	ppbv		ND	3.4	0.89	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
79-34-5	167.85	1,1,2,2-Tetrachloroethane	ND	0.80	0.19	ppbv		ND	5.5	1.3	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.80	0.15	ppbv		ND	4.4	0.82	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.80	0.48	ppbv		ND	5.9	3.6	ug/m3
95-63-6	120.19	1,2,4-Trimethylbenzene	ND	0.80	0.35	ppbv		ND	3.9	1.7	ug/m3
108-67-8	120.19	1,3,5-Trimethylbenzene	ND	0.80	0.32	ppbv		ND	3.9	1.6	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.80	0.16	ppbv		ND	3.7	0.75	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	0.69	0.80	0.37	ppbv	J	2.1	2.4	1.1	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.36	0.16	0.056	ppbv		2.4	1.1	0.38	ug/m3
109-99-9	72.11	Tetrahydrofuran	2.6	0.80	0.36	ppbv		7.7	2.4	1.1	ug/m3
108-88-3	92.14	Toluene	9.5	0.80	0.23	ppbv		36	3.0	0.87	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.16	0.076	ppbv		ND	0.86	0.41	ug/m3
75-69-4	137.4	Trichlorofluoromethane	6.3	0.80	0.62	ppbv		35	4.5	3.5	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.80	0.28	ppbv		ND	2.0	0.72	ug/m3
108-05-4	86	Vinyl Acetate	3.4	0.80	0.45	ppbv		12	2.8	1.6	ug/m3
	106.2	m,p-Xylene	1.6	0.80	0.56	ppbv		6.9	3.5	2.4	ug/m3
95-47-6	106.2	o-Xylene	0.77	0.80	0.31	ppbv	J	3.3	3.5	1.3	ug/m3
1330-20-7	106.2	Xylenes (total)	2.4	0.80	0.31	ppbv		10	3.5	1.3	ug/m3

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

## Report of Analysis

<b>Client Sample ID:</b> SV-2		
<b>Lab Sample ID:</b> JD82176-1		<b>Date Sampled:</b> 02/08/24
<b>Matrix:</b> AIR - Soil Vapor Comp.	<b>Summa ID:</b> A2437	<b>Date Received:</b> 02/09/24
<b>Method:</b> TO-15		<b>Percent Solids:</b> n/a
<b>Project:</b> Leland, NC		

VOA TO15 List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	98%	100%	65-128%

(a) Result is from Run# 2

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

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**Misc. Forms**

**Custody Documents and Other Forms**

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**Includes the following where applicable:**

- Chain of Custody
- Summa Canister and Flow Controller Log



AIR CHAIN OF CUSTODY

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

FED-EX Tracking #
SGS Quote #
SGS Job #
JD82176

Air

Client / Reporting Information: WSP USA, 5710 Oleander Dr, Suite 110, Wilmington, NC 28403
Project Information: Leland, NC, 150 S. Navassa Road, Leland, NC
Weather Parameters: Temperature (Fahrenheit) Start: 1140, Maximum: 50°F, Stop: 1813, Minimum: 47°F
Other weather comment: Sunny / Clear

Table with columns: Lab Sample #, Field ID / Point of Collection, Air Type, Sampling Equipment Info, Start Sampling Information, Stop Sampling Information. Row 1: SV-2, SV, A2437, 1.4L, FC1050, 02/08/24, 1204, -22, -, NW, 02/08/24, 1813, -4, -, NW, X

Turnaround Time (Business days): Standard - 15 Days
Data Deliverable Information: All NJDEP TO-15 is Mandatory Full T1
Comments / Remarks: Initial Assessment 4A En, Label Verification

Table with columns: Relinquished by, Date Time, Received By, Date Time, Relinquished By, Date Time, Received By. Row 1: 1, 2/8/24 1430, [Signature], 2, 2/9/24 1630, [Signature]



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VT0 15 STD, VMS + NAP

## SGS Sample Receipt Summary

Job Number: JD82176

Client: WSP USA ENVIRONMENT & INFRASTRU

Project: LELAND, NC

Date / Time Received: 2/9/2024 10:15:00 AM

Delivery Method: FEDEX

Airbill #'s: \_\_\_\_\_

**Cooler Temps (Raw Measured) °C:**

**Cooler Temps (Corrected) °C:**

**Cooler Security**

Y or N

Y or N

- |                           |                                     |                          |                       |                                     |                          |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact:  | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Cooler Temperature**

Y or N

- |                              |                          |                          |
|------------------------------|--------------------------|--------------------------|
| 1. Temp criteria achieved:   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | <u>N/A</u>               |                          |
| 3. Cooler media:             | <u>N/A</u>               |                          |
| 4. No. Coolers:              | <u>N/A</u>               |                          |

**Quality Control Preservation**

Y or N

N/A

- |                                 |                                     |                          |                                     |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC:    | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly:  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |                                     |
| 4. VOCs headspace free:         | <input type="checkbox"/>            | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

**Sample Integrity - Documentation**

Y or N

- |  |                                     |                          |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles:   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete:        | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Sample Integrity - Condition**

Y or N

- |                                  |                                     |                          |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT:       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample:          | <u>Intact</u>                       |                          |

**Sample Integrity - Instructions**

Y or N

N/A

- |   |                                     |                                     |                                     |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear:           | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 2. Bottles received for unspecified tests | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                                     |
| 3. Sufficient volume recvd for analysis:  | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                                     |
| 4. Compositing instructions clear:        | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear:          | <input type="checkbox"/>            | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |

Test Strip Lot #s:	pH 1-12: <u>231619</u>	pH 12+: <u>203117A</u>	Other: (Specify) _____
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Comments

SM089-03  
Rev. Date 12/7/17

**JD82176: Chain of Custody**

**Page 2 of 2**

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# Summa Canister and Flow Controller Log

**Job Number:** JD82176  
**Account:** AMECNCC WSP USA Environment & Infrastructure Inc  
**Project:** Leland, NC  
**Received:** 02/09/24

SUMMA CANISTERS													
Shipping						Receiving							
Summa ID	Vac L	Date " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A2437	1.4	29.5	02/02/24	ML	CP12604	3W84620.D	JD82176-1	02/12/24	WC	2			1

FLOW CONTROLLERS / OTHER										
Shipping					Receiving					
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Flow RPD	Equipment Type	
FC1050	02/02/24	ML	106	.1667	02/12/24	DG	107	0.9	Flow Controller	

**SGS Bottle Order(s):**  
 MM-02224-11

**Prep Date**      **Room Temp(F)**      **Bar Pres "Hg**  
 02/02/24          70                                  29.92

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## MS Volatiles

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### QC Data Summaries

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#### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Surrogate Recovery Summaries



# Method Blank Summary

Job Number: JD82176  
Account: AMECNCC WSP USA Environment & Infrastructure Inc  
Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W174-MB	8W04453.D	1	02/14/24	WC	n/a	n/a	V8W174

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	100% 65-128%

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# Method Blank Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W175-MB	8W04484.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.024	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.072	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.045	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.030	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.10	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.030	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.069	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.079	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3

## Method Blank Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W175-MB	8W04484.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.045	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.052	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.053	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.040	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.15	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

# Method Blank Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W175-MB	8W04484.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	96% 65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.69	1.4	ppbv	J
	Total TIC, Volatile		0	ppbv	

6.1.2  
6

## Method Blank Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-MB	8W04094.D	1	01/30/24	TS	n/a	n/a	V8W162

The QC reported here applies to the following samples:

Method: TO-15

V8W162-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.024	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.072	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.045	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.030	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.10	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.030	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.069	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.079	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3

## Method Blank Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-MB	8W04094.D	1	01/30/24	TS	n/a	n/a	V8W162

The QC reported here applies to the following samples:

Method: TO-15

V8W162-SCC

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.045	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.052	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.053	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.040	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.15	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

# Method Blank Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-MB	8W04094.D	1	01/30/24	TS	n/a	n/a	V8W162

The QC reported here applies to the following samples:

Method: TO-15

V8W162-SCC

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	system artifact	1.69	1.1	ppbv	J
	Total TIC, Volatile		0	ppbv	

6.1.3  
6

# Blank Spike/Blank Spike Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W174-BS	8W04448.D	1	02/14/24	WC	n/a	n/a	V8W174
V8W174-BSD	8W04449.D	1	02/14/24	WC	n/a	n/a	V8W174

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
141-78-6	Ethyl Acetate	10	10.5	105	10.6	106	1	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	102%	101%	65-128%

\* = Outside of Control Limits.



# Blank Spike/Blank Spike Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W175-BS	8W04481.D	1	02/15/24	WC	n/a	n/a	V8W175
V8W175-BSD	8W04482.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	8.8	88	8.9	89	1	70-130/30
106-99-0	1,3-Butadiene	10	9.0	90	9.0	90	0	70-130/30
71-43-2	Benzene	10	10.4	104	10.4	104	0	70-130/30
75-27-4	Bromodichloromethane	10	10.8	108	10.9	109	1	70-130/30
75-25-2	Bromoform	10	11.8	118	11.7	117	1	70-130/30
74-83-9	Bromomethane	10	10.4	104	10.4	104	0	70-130/30
593-60-2	Bromoethene	10	10.8	108	10.8	108	0	70-130/30
100-44-7	Benzyl Chloride	10	10.9	109	11.0	110	1	70-130/30
75-15-0	Carbon disulfide	10	10.1	101	10.2	102	1	70-130/30
108-90-7	Chlorobenzene	10	10.9	109	10.9	109	0	70-130/30
75-00-3	Chloroethane	10	9.4	94	9.3	93	1	70-130/30
67-66-3	Chloroform	10	10.0	100	10.0	100	0	70-130/30
74-87-3	Chloromethane	10	9.0	90	8.9	89	1	70-130/30
107-05-1	3-Chloropropene	10	9.8	98	9.9	99	1	70-130/30
95-49-8	2-Chlorotoluene	10	11.2	112	11.3	113	1	70-130/30
56-23-5	Carbon tetrachloride	10	11.1	111	11.0	110	1	70-130/30
110-82-7	Cyclohexane	10	11.1	111	11.2	112	1	70-130/30
75-34-3	1,1-Dichloroethane	10	9.5	95	9.5	95	0	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.3	103	10.2	102	1	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	10.9	109	11.2	112	3	70-130/30
107-06-2	1,2-Dichloroethane	10	9.0	90	9.0	90	0	70-130/30
78-87-5	1,2-Dichloropropane	10	8.8	88	8.9	89	1	70-130/30
123-91-1	1,4-Dioxane	10	10.7	107	10.7	107	0	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.4	104	10.3	103	1	70-130/30
124-48-1	Dibromochloromethane	10	11.1	111	11.2	112	1	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.9	109	10.9	109	0	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.9	109	10.9	109	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.7	107	10.9	109	2	70-130/30
541-73-1	m-Dichlorobenzene	10	11.2	112	11.3	113	1	70-130/30
95-50-1	o-Dichlorobenzene	10	11.0	110	11.1	111	1	70-130/30
106-46-7	p-Dichlorobenzene	10	11.4	114	11.4	114	0	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	10.9	109	11.2	112	3	70-130/30
64-17-5	Ethanol	10	9.5	95	9.5	95	0	70-130/30
100-41-4	Ethylbenzene	10	11.3	113	11.3	113	0	70-130/30
622-96-8	4-Ethyltoluene	10	11.7	117	11.7	117	0	70-130/30
76-13-1	Freon 113	10	10.5	105	10.5	105	0	70-130/30

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W175-BS	8W04481.D	1	02/15/24	WC	n/a	n/a	V8W175
V8W175-BSD	8W04482.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-14-2	Freon 114	10	10.3	103	10.3	103	0	70-130/30
142-82-5	Heptane	10	9.1	91	9.2	92	1	70-130/30
87-68-3	Hexachlorobutadiene	10	11.8	118	11.8	118	0	70-130/30
110-54-3	Hexane	10	8.5	85	8.5	85	0	70-130/30
591-78-6	2-Hexanone	10	9.2	92	9.2	92	0	70-130/30
67-63-0	Isopropyl Alcohol	10	9.5	95	9.4	94	1	70-130/30
75-09-2	Methylene chloride	10	9.8	98	9.8	98	0	70-130/30
78-93-3	Methyl ethyl ketone	10	10.1	101	10.0	100	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	8.6	86	8.8	88	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.9	109	10.9	109	0	70-130/30
80-62-6	Methylmethacrylate	10	10.4	104	10.6	106	2	70-130/30
91-20-3	Naphthalene	10	12.2	122	12.1	121	1	70-130/30
115-07-1	Propylene	10	8.5	85	8.4	84	1	70-130/30
100-42-5	Styrene	10	11.8	118	11.9	119	1	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.8	108	10.8	108	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.3	103	10.4	104	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.1	101	10.3	103	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	12.6	126	12.5	125	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.0	110	11.0	110	0	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.5	115	11.6	116	1	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	8.6	86	8.8	88	2	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	9.3	93	9.3	93	0	70-130/30
127-18-4	Tetrachloroethylene	10	11.8	118	12.0	120	2	70-130/30
109-99-9	Tetrahydrofuran	10	10.4	104	10.5	105	1	70-130/30
108-88-3	Toluene	10	10.9	109	11.1	111	2	70-130/30
79-01-6	Trichloroethylene	10	10.7	107	10.9	109	2	70-130/30
75-69-4	Trichlorofluoromethane	10	10.3	103	10.3	103	0	70-130/30
75-01-4	Vinyl chloride	10	9.3	93	9.2	92	1	70-130/30
108-05-4	Vinyl Acetate	10	11.8	118	11.7	117	1	70-130/30
	m,p-Xylene	20	22.5	113	22.6	113	0	70-130/30
95-47-6	o-Xylene	10	11.2	112	11.3	113	1	70-130/30
1330-20-7	Xylenes (total)	30	33.7	112	33.9	113	1	70-130/30

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: JD82176

Account: AMECNCC WSP USA Environment & Infrastructure Inc

Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W175-BS	8W04481.D	1	02/15/24	WC	n/a	n/a	V8W175
V8W175-BSD	8W04482.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	98%	97%	65-128%

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-BS	8W04091.D	1	01/30/24	TS	n/a	n/a	V8W162
V8W162-BSD	8W04092.D	1	01/30/24	TS	n/a	n/a	V8W162

The QC reported here applies to the following samples:

Method: TO-15

V8W162-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone (2-Propanone)	10	10.3	103	10.6	106	3	70-130/30
106-99-0	1,3-Butadiene	10	10.0	100	10.1	101	1	70-130/30
71-43-2	Benzene	10	11.3	113	11.4	114	1	70-130/30
75-27-4	Bromodichloromethane	10	11.0	110	11.2	112	2	70-130/30
75-25-2	Bromoform	10	11.8	118	11.9	119	1	70-130/30
74-83-9	Bromomethane	10	11.8	118	11.9	119	1	70-130/30
593-60-2	Bromoethene	10	12.2	122	12.3	123	1	70-130/30
100-44-7	Benzyl Chloride	10	9.9	99	10.0	100	1	70-130/30
75-15-0	Carbon disulfide	10	10.5	105	10.6	106	1	70-130/30
108-90-7	Chlorobenzene	10	11.2	112	11.4	114	2	70-130/30
75-00-3	Chloroethane	10	10.7	107	10.8	108	1	70-130/30
67-66-3	Chloroform	10	10.4	104	10.5	105	1	70-130/30
74-87-3	Chloromethane	10	10	100	10.2	102	2	70-130/30
107-05-1	3-Chloropropene	10	10.7	107	10.9	109	2	70-130/30
95-49-8	2-Chlorotoluene	10	11.3	113	11.5	115	2	70-130/30
56-23-5	Carbon tetrachloride	10	11.2	112	11.3	113	1	70-130/30
110-82-7	Cyclohexane	10	11.8	118	12.0	120	2	70-130/30
75-34-3	1,1-Dichloroethane	10	10	100	10.1	101	1	70-130/30
75-35-4	1,1-Dichloroethylene	10	11.1	111	11.3	113	2	70-130/30
106-93-4	1,2-Dibromoethane (EDB)	10	11.6	116	11.8	118	2	70-130/30
107-06-2	1,2-Dichloroethane	10	8.6	86	8.8	88	2	70-130/30
78-87-5	1,2-Dichloropropane	10	8.8	88	9.0	90	2	70-130/30
123-91-1	1,4-Dioxane	10	11.0	110	11.1	111	1	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.7	107	10.7	107	0	70-130/30
124-48-1	Dibromochloromethane	10	10.9	109	11.1	111	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	12.4	124	12.5	125	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	11.8	118	11.9	119	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	11.0	110	11.2	112	2	70-130/30
541-73-1	m-Dichlorobenzene	10	11.7	117	11.7	117	0	70-130/30
95-50-1	o-Dichlorobenzene	10	11.7	117	11.8	118	1	70-130/30
106-46-7	p-Dichlorobenzene	10	11.8	118	11.9	119	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	11.1	111	11.4	114	3	70-130/30
64-17-5	Ethanol	10	10.0	100	10.2	102	2	70-130/30
100-41-4	Ethylbenzene	10	11.5	115	11.8	118	3	70-130/30
141-78-6	Ethyl Acetate	10	9.3	93	9.5	95	2	70-130/30
622-96-8	4-Ethyltoluene	10	12.0	120	12.2	122	2	70-130/30

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-BS	8W04091.D	1	01/30/24	TS	n/a	n/a	V8W162
V8W162-BSD	8W04092.D	1	01/30/24	TS	n/a	n/a	V8W162

The QC reported here applies to the following samples:

Method: TO-15

V8W162-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.7	107	10.8	108	1	70-130/30
76-14-2	Freon 114	10	10.8	108	10.9	109	1	70-130/30
142-82-5	Heptane	10	7.8	78	8.0	80	3	70-130/30
87-68-3	Hexachlorobutadiene	10	12.5	125	12.7	127	2	70-130/30
110-54-3	Hexane	10	8.5	85	8.6	86	1	70-130/30
591-78-6	2-Hexanone	10	8.6	86	8.8	88	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.6	96	9.9	99	3	70-130/30
75-09-2	Methylene chloride	10	10.6	106	10.8	108	2	70-130/30
78-93-3	Methyl ethyl ketone	10	10.9	109	11.0	110	1	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	8.3	83	8.4	84	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.6	106	10.9	109	3	70-130/30
80-62-6	Methylmethacrylate	10	10.6	106	10.9	109	3	70-130/30
91-20-3	Naphthalene	10	12.1	121	12.1	121	0	70-130/30
115-07-1	Propylene	10	7.4	74	7.6	76	3	70-130/30
100-42-5	Styrene	10	11.6	116	11.9	119	3	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.9	109	11.1	111	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	11.0	110	11.2	112	2	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.9	109	11.0	110	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	13.2	132* a	13.3	133* a	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.5	115	11.6	116	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	11.7	117	12.0	120	3	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	8.2	82	8.4	84	2	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	7.8	78	8.1	81	4	70-130/30
127-18-4	Tetrachloroethylene	10	12.1	121	12.4	124	2	70-130/30
109-99-9	Tetrahydrofuran	10	11.4	114	11.6	116	2	70-130/30
108-88-3	Toluene	10	11.6	116	11.8	118	2	70-130/30
79-01-6	Trichloroethylene	10	11.1	111	11.3	113	2	70-130/30
75-69-4	Trichlorofluoromethane	10	10.4	104	10.5	105	1	70-130/30
75-01-4	Vinyl chloride	10	10.1	101	10.2	102	1	70-130/30
108-05-4	Vinyl Acetate	10	12.9	129	13.1	131* a	2	70-130/30
	m,p-Xylene	20	22.9	115	23.4	117	2	70-130/30
95-47-6	o-Xylene	10	11.5	115	11.7	117	2	70-130/30
1330-20-7	Xylenes (total)	30	34.4	115	35.2	117	2	70-130/30

\* = Outside of Control Limits.

# Blank Spike/Blank Spike Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-BS	8W04091.D	1	01/30/24	TS	n/a	n/a	V8W162
V8W162-BSD	8W04092.D	1	01/30/24	TS	n/a	n/a	V8W162

The QC reported here applies to the following samples:

Method: TO-15

V8W162-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	96%	96%	65-128%

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

\* = Outside of Control Limits.

# Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD82207-1DUP	8W04457.D	1	02/14/24	WC	n/a	n/a	V8W174
JD82207-1	8W04456.D	1	02/14/24	WC	n/a	n/a	V8W174

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	JD82207-1 ppbv	DUP Q	ppbv	Q	RPD	Limits
141-78-6	Ethyl Acetate	7.6		8.1		6	25

CAS No.	Surrogate Recoveries	DUP	JD82207-1	Limits
460-00-4	4-Bromofluorobenzene	101%	100%	65-128%

\* = Outside of Control Limits.

# Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD81850-1DUP	8W04486.D	1	02/15/24	WC	n/a	n/a	V8W175
JD81850-1	8W04485.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	JD81850-1 ppbv	DUP Q	ppbv	Q	RPD	Limits
67-64-1	Acetone (2-Propanone)	17.1		18.1		6	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	0.83		0.85		2	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	ND		ND		nc	25
74-87-3	Chloromethane	0.42		0.41		2	25
107-05-1	3-Chloropropene	ND		ND		nc	25
95-49-8	2-Chlorotoluene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	0.52		0.53		2	25
75-34-3	1,1-Dichloroethane	0.12	J	0.12	J	0	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane (EDB)	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.26		0.27		4	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
64-17-5	Ethanol	62.4	E	65.1	E	4	25
100-41-4	Ethylbenzene	0.50		0.50		0	25
622-96-8	4-Ethyltoluene	ND		ND		nc	25
76-13-1	Freon 113	ND		ND		nc	25

\* = Outside of Control Limits.



# Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD81850-1DUP	8W04486.D	1	02/15/24	WC	n/a	n/a	V8W175
JD81850-1	8W04485.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Compound	JD81850-1 ppbv	DUP Q	ppbv	Q	RPD	Limits
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	0.53		0.54		2	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	1.4		1.5		7	25
591-78-6	2-Hexanone	ND		ND		nc	25
67-63-0	Isopropyl Alcohol	0.71		0.73		3	25
75-09-2	Methylene chloride	0.61		0.62		2	25
78-93-3	Methyl ethyl ketone	1.3		1.3		0	25
108-10-1	Methyl Isobutyl Ketone	0.13	J	0.13	J	0	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
91-20-3	Naphthalene	ND		ND		nc	25
115-07-1	Propylene	ND		ND		nc	25
100-42-5	Styrene	ND		ND		nc	25
71-55-6	1,1,1-Trichloroethane	0.68		0.69		1	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	0.15	J	0.14	J	7	25
108-67-8	1,3,5-Trimethylbenzene	ND		ND		nc	25
540-84-1	2,2,4-Trimethylpentane	0.54		0.54		0	25
75-65-0	Tertiary Butyl Alcohol	ND		ND		nc	25
127-18-4	Tetrachloroethylene	0.29		0.28		4	25
109-99-9	Tetrahydrofuran	0.12	J	0.12	J	0	25
108-88-3	Toluene	2.8		2.9		4	25
79-01-6	Trichloroethylene	0.33		0.33		0	25
75-69-4	Trichlorofluoromethane	0.25		0.26		4	25
75-01-4	Vinyl chloride	ND		ND		nc	25
108-05-4	Vinyl Acetate	ND		ND		nc	25
	m,p-Xylene	1.3		1.3		0	25
95-47-6	o-Xylene	0.38		0.38		0	25
1330-20-7	Xylenes (total)	1.7		1.7		0	25

\* = Outside of Control Limits.

## Duplicate Summary

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD81850-1DUP	8W04486.D	1	02/15/24	WC	n/a	n/a	V8W175
JD81850-1	8W04485.D	1	02/15/24	WC	n/a	n/a	V8W175

The QC reported here applies to the following samples:

Method: TO-15

JD82176-1

CAS No.	Surrogate Recoveries	DUP	JD81850-1	Limits
460-00-4	4-Bromofluorobenzene	98%	98%	65-128%

\* = Outside of Control Limits.

# Summa Cleaning Certification

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-SCC	8W04109.D	1	01/31/24	TS	n/a	n/a	V8W162

The QC reported here (Summa A1982) applies to the following samples: Method: TO-15

Batch CP12604 cleaned 01/25/24: JD82176-1(A2437)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
67-64-1	Acetone (2-Propanone)	ND	0.20	0.15	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	0.084	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	0.024	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	0.030	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	0.071	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	0.069	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	0.045	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	0.074	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	0.068	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	0.037	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	0.090	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	0.083	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	0.072	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	0.040	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	0.045	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	0.057	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	0.059	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane (EDB)	ND	0.20	0.030	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	0.070	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	0.062	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	0.12	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	0.10	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	0.052	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	0.028	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	0.030	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	0.062	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	0.040	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	0.069	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	0.079	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	0.10	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	0.39	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	0.061	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	0.10	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	0.095	ppbv		ND	0.98	ug/m3

# Summa Cleaning Certification

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-SCC	8W04109.D	1	01/31/24	TS	n/a	n/a	V8W162

The QC reported here (Summa A1982) applies to the following samples: Method: TO-15

Batch CP12604 cleaned 01/25/24: JD82176-1(A2437)

CAS No.	Compound	Result	RL	MDL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	0.031	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	0.050	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	0.045	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	0.062	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	0.052	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	0.15	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	0.14	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	0.056	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	0.11	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	0.073	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	0.080	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	0.070	ppbv		ND	0.82	ug/m3
91-20-3	Naphthalene	ND	0.20	0.13	ppbv		ND	1.0	ug/m3
115-07-1	Propylene	ND	0.50	0.14	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	0.053	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	0.037	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	0.048	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	0.038	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	0.12	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	0.087	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	0.080	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	0.040	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	0.093	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	0.014	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	0.090	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	0.057	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	0.019	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	0.15	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	0.069	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	0.11	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	0.14	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	0.077	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	0.077	ppbv		ND	0.87	ug/m3

# Summa Cleaning Certification

Job Number: JD82176  
Account: AMECNCC WSP USA Environment & Infrastructure Inc  
Project: Leland, NC

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V8W162-SCC	8W04109.D	1	01/31/24	TS	n/a	n/a	V8W162

The QC reported here (Summa A1982) applies to the following samples: Method: TO-15

Batch CP12604 cleaned 01/25/24: JD82176-1(A2437)

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	94% 65-128%

6.4.1  
6

# Instrument Performance Check (BFB)

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample: V8W124-BFB	Injection Date: 12/19/23
Lab File ID: 8W03113.D	Injection Time: 20:37
Instrument ID: GCMS8W	

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	33235	18.0	Pass
75	30.0 - 66.0% of mass 95	91059	49.3	Pass
95	Base peak, 100% relative abundance	184597	100.0	Pass
96	5.0 - 9.0% of mass 95	12182	6.60	Pass
173	Less than 2.0% of mass 174	921	0.50 (0.65) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	142784	77.3	Pass
175	4.0 - 9.01% of mass 174	10030	5.43 (7.02) <sup>a</sup>	Pass
176	93.0 - 101.0% of mass 174	137472	74.5 (96.3) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	8885	4.81 (6.46) <sup>b</sup>	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
V8W124-IC0124	8W03114.D	12/19/23	21:11	00:34	Initial cal 0.04
V8W124-IC0124	8W03115.D	12/19/23	21:45	01:08	Initial cal 0.10
V8W124-IC0124	8W03116.D	12/19/23	22:20	01:43	Initial cal 0.20
V8W124-IC0124	8W03117.D	12/19/23	22:56	02:19	Initial cal 0.50
V8W124-IC0124	8W03119.D	12/20/23	00:03	03:26	Initial cal 5
V8W124-ICC0124	8W03120.D	12/20/23	00:38	04:01	Initial cal 10
V8W124-IC0124	8W03121.D	12/20/23	01:14	04:37	Initial cal 20
V8W124-IC0124	8W03122.D	12/20/23	01:55	05:18	Initial cal 40
V8W124-IC0124	8W03123.D	12/20/23	02:37	06:00	Initial cal 50
V8W124-ICV0124	8W03126.D	12/20/23	04:21	07:44	Initial cal verification 10

# Instrument Performance Check (BFB)

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample:	V8W162-BFB	Injection Date:	01/30/24
Lab File ID:	8W04089.D	Injection Time:	12:37
Instrument ID:	GCMS8W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	20949	12.2	Pass
75	30.0 - 66.0% of mass 95	76565	44.7	Pass
95	Base peak, 100% relative abundance	171435	100.0	Pass
96	5.0 - 9.0% of mass 95	11345	6.62	Pass
173	Less than 2.0% of mass 174	996	0.58 (0.66) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	151808	88.6	Pass
175	4.0 - 9.01% of mass 174	10842	6.32 (7.14) <sup>a</sup>	Pass
176	93.0 - 101.0% of mass 174	148501	86.6 (97.8) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	9615	5.61 (6.47) <sup>b</sup>	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
V8W162-CC124	8W04090.D	01/30/24	13:12	00:35	Continuing cal 10
V8W162-BS	8W04091.D	01/30/24	14:02	01:25	Blank Spike
V8W162-BSD	8W04092.D	01/30/24	14:38	02:01	Blank Spike Duplicate
V8W162-MB	8W04094.D	01/30/24	16:14	03:37	Method Blank
JD81246-1	8W04095.D	01/30/24	17:06	04:29	(used for QC only; not part of job JD82176)
JD81246-1DUP	8W04096.D	01/30/24	17:42	05:05	Duplicate
ZZZZZZ	8W04097.D	01/30/24	18:19	05:42	(unrelated sample)
ZZZZZZ	8W04098.D	01/30/24	18:54	06:17	(unrelated sample)
ZZZZZZ	8W04099.D	01/30/24	19:30	06:53	(unrelated sample)
ZZZZZZ	8W04100.D	01/30/24	20:06	07:29	(unrelated sample)
ZZZZZZ	8W04101.D	01/30/24	20:42	08:05	(unrelated sample)
ZZZZZZ	8W04102.D	01/30/24	21:27	08:50	(unrelated sample)
ZZZZZZ	8W04103.D	01/30/24	22:09	09:32	(unrelated sample)
ZZZZZZ	8W04104.D	01/30/24	22:44	10:07	(unrelated sample)
ZZZZZZ	8W04105.D	01/30/24	23:26	10:49	(unrelated sample)
ZZZZZZ	8W04106.D	01/31/24	00:09	11:32	(unrelated sample)
ZZZZZZ	8W04107.D	01/31/24	00:50	12:13	(unrelated sample)
V8W162-SCC	8W04109.D	01/31/24	01:59	13:22	Summa Cleaning Certification
V8W162-SCC	8W04110.D	01/31/24	02:34	13:57	Summa Cleaning Certification
V8W162-SCC	8W04112.D	01/31/24	03:44	15:07	Summa Cleaning Certification
V8W162-SCC	8W04113.D	01/31/24	04:20	15:43	Summa Cleaning Certification
V8W162-SCC	8W04114.D	01/31/24	04:55	16:18	Summa Cleaning Certification
V8W162-SCC	8W04115.D	01/31/24	05:36	16:59	Summa Cleaning Certification
V8W162-SCC	8W04116.D	01/31/24	06:17	17:40	Summa Cleaning Certification

# Instrument Performance Check (BFB)

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample:	V8W174-BFB	Injection Date:	02/14/24
Lab File ID:	8W04446.D	Injection Time:	07:35
Instrument ID:	GCMS8W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	21763	16.0	Pass
75	30.0 - 66.0% of mass 95	66389	48.9	Pass
95	Base peak, 100% relative abundance	135848	100.0	Pass
96	5.0 - 9.0% of mass 95	8761	6.45	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	113675	83.7	Pass
175	4.0 - 9.01% of mass 174	8288	6.10 (7.29) <sup>a</sup>	Pass
176	93.0 - 101.0% of mass 174	110403	81.3 (97.1) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	7255	5.34 (6.57) <sup>b</sup>	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
V8W174-CC124	8W04447.D	02/14/24	08:31	00:56	Continuing cal 10
V8W174-BS	8W04448.D	02/14/24	09:38	02:03	Blank Spike
V8W174-BSD	8W04449.D	02/14/24	10:13	02:38	Blank Spike Duplicate
V8W174-MB	8W04453.D	02/14/24	14:59	07:24	Method Blank
JD82207-1	8W04456.D	02/14/24	17:24	09:49	(used for QC only; not part of job JD82176)
JD82207-1DUP	8W04457.D	02/14/24	18:01	10:26	Duplicate
JD82176-1	8W04458.D	02/14/24	18:36	11:01	SV-2
ZZZZZZ	8W04459.D	02/14/24	19:12	11:37	(unrelated sample)
ZZZZZZ	8W04460.D	02/14/24	19:48	12:13	(unrelated sample)
ZZZZZZ	8W04461.D	02/14/24	20:23	12:48	(unrelated sample)
ZZZZZZ	8W04462.D	02/14/24	21:05	13:30	(unrelated sample)
ZZZZZZ	8W04463.D	02/14/24	21:41	14:06	(unrelated sample)
ZZZZZZ	8W04464.D	02/14/24	22:21	14:46	(unrelated sample)
ZZZZZZ	8W04465.D	02/14/24	23:02	15:27	(unrelated sample)
V8W174-SCC	8W04470.D	02/15/24	01:55	18:20	Summa Cleaning Certification
V8W174-SCC	8W04472.D	02/15/24	03:05	19:30	Summa Cleaning Certification
V8W174-SCC	8W04473.D	02/15/24	03:46	20:11	Summa Cleaning Certification
V8W174-SCC	8W04474.D	02/15/24	04:27	20:52	Summa Cleaning Certification
V8W174-SCC	8W04477.D	02/15/24	06:30	22:55	Summa Cleaning Certification
V8W174-SCC	8W04478.D	02/15/24	07:10	23:35	Summa Cleaning Certification



# Instrument Performance Check (BFB)

Job Number: JD82176  
 Account: AMECNCC WSP USA Environment & Infrastructure Inc  
 Project: Leland, NC

Sample:	V8W175-BFB	Injection Date:	02/15/24
Lab File ID:	8W04479.D	Injection Time:	09:50
Instrument ID:	GCMS8W		

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance	Pass/Fail
50	8.0 - 40.0% of mass 95	23523	15.4	Pass
75	30.0 - 66.0% of mass 95	72971	47.7	Pass
95	Base peak, 100% relative abundance	153045	100.0	Pass
96	5.0 - 9.0% of mass 95	10300	6.73	Pass
173	Less than 2.0% of mass 174	0	0.00 (0.00) <sup>a</sup>	Pass
174	50.0 - 120.0% of mass 95	131328	85.8	Pass
175	4.0 - 9.01% of mass 174	9807	6.41 (7.47) <sup>a</sup>	Pass
176	93.0 - 101.0% of mass 174	128805	84.2 (98.1) <sup>a</sup>	Pass
177	5.0 - 9.0% of mass 176	8429	5.51 (6.54) <sup>b</sup>	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
V8W175-CC124	8W04480.D	02/15/24	10:24	00:34	Continuing cal 10
V8W175-BS	8W04481.D	02/15/24	11:20	01:30	Blank Spike
V8W175-BSD	8W04482.D	02/15/24	11:55	02:05	Blank Spike Duplicate
V8W175-MB	8W04484.D	02/15/24	13:58	04:08	Method Blank
JD81850-1	8W04485.D	02/15/24	14:55	05:05	(used for QC only; not part of job JD82176)
JD81850-1DUP	8W04486.D	02/15/24	15:38	05:48	Duplicate
ZZZZZZ	8W04487.D	02/15/24	16:19	06:29	(unrelated sample)
ZZZZZZ	8W04488.D	02/15/24	17:00	07:10	(unrelated sample)
ZZZZZZ	8W04489.D	02/15/24	17:40	07:50	(unrelated sample)
ZZZZZZ	8W04490.D	02/15/24	18:21	08:31	(unrelated sample)
ZZZZZZ	8W04491.D	02/15/24	19:01	09:11	(unrelated sample)
JD82176-1	8W04492.D	02/15/24	19:37	09:47	SV-2
ZZZZZZ	8W04493.D	02/15/24	20:12	10:22	(unrelated sample)
ZZZZZZ	8W04494.D	02/15/24	20:54	11:04	(unrelated sample)
ZZZZZZ	8W04495.D	02/15/24	21:35	11:45	(unrelated sample)
ZZZZZZ	8W04496.D	02/15/24	22:16	12:26	(unrelated sample)
ZZZZZZ	8W04497.D	02/15/24	22:57	13:07	(unrelated sample)
ZZZZZZ	8W04498.D	02/15/24	23:39	13:49	(unrelated sample)
V8W175-SCC	8W04500.D	02/16/24	00:52	15:02	Summa Cleaning Certification
V8W175-SCC	8W04501.D	02/16/24	01:32	15:42	Summa Cleaning Certification
V8W175-SCC	8W04502.D	02/16/24	02:13	16:23	Summa Cleaning Certification
V8W175-SCC	8W04503.D	02/16/24	02:53	17:03	Summa Cleaning Certification
V8W175-SCC	8W04504.D	02/16/24	03:33	17:43	Summa Cleaning Certification
V8W175-SCC	8W04505.D	02/16/24	04:14	18:24	Summa Cleaning Certification

# Instrument Performance Check (BFB)

**Job Number:** JD82176  
**Account:** AMECNCC WSP USA Environment & Infrastructure Inc  
**Project:** Leland, NC

<b>Sample:</b> V8W175-BFB	<b>Injection Date:</b> 02/15/24
<b>Lab File ID:</b> 8W04479.D	<b>Injection Time:</b> 09:50
<b>Instrument ID:</b> GCMS8W	

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V8W175-SCC	8W04506.D	02/16/24	04:53	19:03	Summa Cleaning Certification
V8W175-SCC	8W04507.D	02/16/24	05:33	19:43	Summa Cleaning Certification

6.5.4

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# Surrogate Recovery Summary

Job Number: JD82176  
Account: AMECNCC WSP USA Environment & Infrastructure Inc  
Project: Leland, NC

Method: TO-15	Matrix: AIR
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD82176-1	8W04458.D	100
JD82176-1	8W04492.D	98
JD81850-1DUP	8W04486.D	98
JD82207-1DUP	8W04457.D	101
V8W162-SCC	8W04109.D	94
V8W174-BS	8W04448.D	102
V8W174-BSD	8W04449.D	101
V8W174-MB	8W04453.D	100
V8W175-BS	8W04481.D	98
V8W175-BSD	8W04482.D	97
V8W175-MB	8W04484.D	96
V8W162-BS	8W04091.D	96
V8W162-BSD	8W04092.D	96
V8W162-MB	8W04094.D	94

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

6.6.1  
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