April 14, 2023

Dale Myers
Washington State Department of Ecology
Northwest Regional Office
15700 Dayton Avenue North
Shoreline, WA 98133

Re: Progress Report No. 18 – 1st Quarter 2023
Texaco Strickland Cleanup Site
6808 196th Street SW
Lynnwood, Washington 98036
Agreed Order No. 14315
Ecology PM – Dale Myers
Aspect Project No. 180357

Dear Dale:

Aspect Consulting, LLC (Aspect) prepared Progress Report No. 18 on behalf of potentially liable persons (PLPs) Strickland Real Estate Holdings (SREH) and Chevron Environmental Management Company (CEMC), who are signatories to Washington State Department of Ecology (Ecology) Agreed Order (AO) #14315, effective September 10, 2018, for the Texaco Strickland Site (Site). The AO requires that the PLPs submit quarterly progress reports to Ecology until satisfaction of the Agreed Order.

This Progress Report No. 18 is for the first quarter 2023 reporting period ending on March 31, 2023.

Progress Made During the Reporting Period

The Remedial Investigation (RI) and Interim Action (IA) for the Site are progressing on separate tracks. The following sections detail the progress made on each during the reporting period.

Remedial Investigation

The only remaining RI data gap at the start of first quarter 2023 was potential petroleum vapor intrusion (PVI) associated with the Site. Four vapor intrusion assessment air sampling events have been conducted in an effort to assess the potential for PVI in the Chri-Mar Apartment building, which is located south-adjacent to the Site: three before crawlspace ventilation implementation and one after, as outlined below:

- The first sampling event (December 2021) was reported to Ecology via the final Vapor Intrusion Assessment Report (VIAR) on March 28, 2022. The second sampling event (November 2022) was transmitted to Ecology via email on December 13, 2022.

- Due to the results of the November 2022 air sampling event, Ecology requested a work plan to install crawlspace ventilation in the Chri-Mar Apartment building via email on December 13, 2022.

- A draft Ventilation Work Plan[1] was transmitted to Ecology on January 6, 2023. Ecology approved the Ventilation Work Plan via email on January 9, 2023.

- The third sampling event was conducted on January 10, 2023, immediately before crawlspace ventilation was installed. Air sampling methods and results evaluation in 2022 and 2023 were conducted in accordance with procedures outlined in the VIAR[2]. Adjusted indoor air concentrations of benzene, naphthalene, and/or total petroleum hydrocarbons (TPH) exceeded their respective indoor air MTCA Method B cleanup levels (indoor air cleanup levels) in three of the four indoor air sample locations during the January 2023 sampling event. The three TPH exceedances in Unit #125 and Unit #127 bathrooms correspond to crawlspace samples that also exhibit exceedances of indoor air cleanup levels. Benzene and naphthalene exceedances in Unit #131 did not correspond to the associated crawlspace sample results. Validated sampling results for the January 2023 event are included in Table 1.

- Crawlspace ventilation was installed on January 10 and 11, 2023, in accordance with the Ventilation Work Plan. The electrical was connected and the ventilation system became operational on January 17, 2023. The first operation and maintenance (O&M) visit was conducted at this time.

- The fourth sampling event was conducted on February 22 and 23, 2023, approximately a month after the active crawlspace ventilation began. A crawlspace ventilation system effluent sample was also collected concurrently during the February 2023 sampling event. The ventilation sample result was not adjusted for ambient, background conditions.

- Original and adjusted (net) indoor air concentrations of TPH exceeded their respective indoor air cleanup levels in two of the four indoor air sample locations (Unit #129 and Unit #131) during the February 2023 sampling event. Adjusted indoor air concentrations of benzene and naphthalene exceeded their respective indoor air cleanup levels in Unit #131. Draft, unvalidated sampling results for the February 2023 event are included in Table 2.

- For the February 2023 sampling event, both sampling locations (Unit #129 and Unit #131) with indoor air cleanup level exceedances had corresponding crawlspace concentrations comparable to ambient air and less than indoor air cleanup levels. These results indicate that PVI is not impacting indoor air quality. The tenants in Unit #131 smoke indoors, which is potentially influencing indoor air quality in that unit.

- Additional O&M visits occurred on February 22 and March 21, 2023. Each O&M visit has indicated that the fan is functional and inducing a vacuum in the crawlspace.

[1] Aspect Consulting, LLC (Aspect), 2023, Ventilation Work Plan, Texaco Strickland Site, draft January 6, 2023.
[2] Analytical results for air (both crawlspace and indoor air) were adjusted for ambient, background conditions in accordance with Ecology Guidance for Evaluating Vapor Intrusion in Washington State (Ecology, 2022) and compared to the generic MTCA Method B cleanup level for TPH in indoor air. The adjusted values are presented at net concentrations in Tables 1 and 2.

Interim Action

Progress on the IA during the first quarter 2023 is summarized as follows:

- Contaminated soil between the north wall and the property boundary was excavated using a vactor truck and exported for disposal at the Cadman facility in Everett. North wall vactor excavation was completed on January 4, 2023. All remaining exceedances of remediation levels at the final north wall limits are located in off-property soils in the right-of-way.

- Final IA construction closeout was completed on January 6, 2023, marking the completion of the IA implementation.

- Ecology provided comments on the draft Interim Action Status Letter (dated December 8, 2022) on February 8, 2023. Comments are addressed in the Ecology Review Draft Interim Action Report (IAR), and an Interim Action Status Letter Comment response memorandum was transmitted to Ecology along with the IAR on April 6, 2023.

Sampling and/or Testing Reports Received

Validated sampling results for the January 2023 air sampling event and draft, unvalidated sampling results for the February 2023 air sampling events are included in Tables 1 and 2, respectively. Laboratory reports for both air sampling events are included in Appendix A.

IA performance soil sampling results received in January 2023 are included in the draft IAR.

Summary of Deviations

The IA vactor excavation behind the north wall was a deviation from the IAWP, and was performed to achieve removal of contaminated soil to the maximum extent practicable at the Site during the IA. The north wall vactor excavation achieved removal of all remaining contaminated soil from the property.

Contacts with Other Entities or Public

The draft Ventilation Work Plan was transmitted to the Snohomish County Health Department (SCHD) on January 6, 2023, along with a ventilation implementation schedule. A follow-up email indicating that both pre-ventilation sampling and ventilation installation and startup had occurred was transmitted to SCHD on January 22, 2023.

Coordination with the Chri-Mar Apartment building manager occurred in advance of each sampling event, and in advance of crawlspace ventilation installation.

Potential Problems and Suggested Solutions

No potential problems are anticipated for second quarter 2023 activities.

Changes in Key Personnel

No changes in key personnel occurred during first quarter 2023.

Activities Planned for the Next Reporting Period

The following activities for the RI and IA are planned for the second quarter 2023:

Remedial Investigation

- Crawlspace ventilation O&M will continue monthly in accordance with the Ventilation Work Plan. The next air sampling event is scheduled to occur in the third quarter 2023, approximately 6 months after the start of ventilation.

- With the implementation of crawlspace ventilation on January 10, 2023, the remaining RI data gap is considered closed. Aspect filed an AO Schedule Extension Request on December 13, 2022, which was granted. The Agency Review Draft RI Report is now due to Ecology on July 10, 2023, and will include the crawlspace ventilation installation and performance.

Interim Action

- The Final IAR will be submitted to Ecology 30 days after we receive comments from Ecology.

- The analytical data collected during the Interim Action will also be uploaded to Ecology's Environmental Information Management (EIM) database within 60 days of it being validated in accordance with WAC 173-340-840(5), Ecology's Toxics Cleanup Program Policy 840 (Data Submittal Requirements), and the IAWP. Based on the date of received validated data, it will be uploaded to EIM by May 2, 2023.

- With completion of the IA and the pending submittal of the RI Report, a key technical meeting of Ecology and PLPs will be held during the next reporting period.

The next quarterly progress report will be submitted on or before July 10, 2023.

If you have any questions concerning this progress report, please contact Adam Griffin at 206-780-7746.

Sincerely,

Aspect Consulting, LLC

Adam Griffin, PE
Associate Remediation Engineer
agriffin@aspectconsulting.com

Breeyn Greer, PE
Project Engineer
bgreer@aspectconsulting.com

Attachments: Table 1 – Ambient, Crawlspace, and Indoor Air Analytical Results – January 2023
Table 2 – Ambient, Crawlspace, and Indoor Air Analytical Results – February 2023
Appendix A – Air Analytical Laboratory Reports Received in 2023

cc: Ryan Megenity – Rainier Property Management Co. LLC
Doug Steding – Northwest Resource Law PLLC
Nate Blomgren – Chevron Environmental Management Company
Jon-Erik Magnus – Rogers Joseph O'Donnell PLLC
Robert Goodman – Rogers Joseph O'Donnell PLLC
Eric Epple – Arcadis
Ada Hamilton – Arcadis

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TABLES

Table 1. Ambient, Crawlspace, and Indoor Air Analytical Results - January 2023

Project No. 180357, Texaco Strickland Site, Lynnwood, Washington

DRAFT

	Location/Unit	Ambient		Unit #125					
	Area	Outdoor, Upwind	Outdoor, Crosswind	Crawlspace Beneath Bathroom		Living Room		Bathroom	
	Sample Type	Background, Reported	Background, Reported	Crawlspace, Reported	Crawlspace, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]
	Sample ID	AMB-1-230109	AMB-2-230109	CS-125-230109	--	IA-125-1-230109	--	IA-125-2-230109	--
Chemical Name	**MTCA Method B CUL[2] (Unrestricted Use)**								
Petroleum Hydrocarbon Related Volatile Organic Compounds (µg/m³)									
Benzene	0.32	**0.54**	**0.52**	**2.1**	**1.56**	**0.58**	**0.04**	**0.54**	ND
Toluene	2,300	< 19 U	< 19 U	< 19 U	ND	< 19 U	ND	< 19 U	ND
Ethylbenzene	460	< 0.43 U	< 0.43 U	**2.6**	**2.6**	**0.64**	**0.64**	**0.63**	**0.63**
Total Xylenes	46	**1.76**	**1.64**	**13.8**	**12.04**	**2.81**	**1.05**	**2.8**	**1.04**
Naphthalene	0.074	< 0.26 U	< 0.26 U	< 0.26 U	ND	< 0.26 U	ND	< 0.26 U	ND
C5 - C8 Aliphatic Hydrocarbons	--	**1200**	**520**	**2300**	**1100**	**110**	ND	**99**	ND
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U	< 25 U	**66**	66	**27**	**27**	**52**	**52**
C9 - C10 Aromatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	< 25 U	ND	< 25 U	ND
Total Petroleum Hydrocarbons[3]	46	**1237**	**557**	**2407**	**1182**	**163**	**29**	**177**	**54**

	Location/Unit	Ambient		Unit #127					
	Area	Outdoor, Upwind	Outdoor, Crosswind	Crawlspace Beneath Bathroom		Living Room		Bathroom	
	Sample Type	Background, Reported	Background, Reported	Crawlspace, Reported	Crawlspace, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]
	Sample ID	AMB-1-230109	AMB-2-230109	CS-127-230109	--	IA-127-1-230109	--	IA-127-2-230109	--
Chemical Name	**MTCA Method B CUL[2] (Unrestricted Use)**								
Petroleum Hydrocarbon Related Volatile Organic Compounds (µg/m³)									
Benzene	0.32	**0.54**	**0.52**	**6**	**5**	**0.54**	ND	**0.54**	ND
Toluene	2,300	< 19 U	< 19 U	**86 J**	**86**	< 19 U	ND	< 19 U	ND
Ethylbenzene	460	< 0.43 U	< 0.43 U	**17**	**17**	**0.83**	**0.83**	**0.86**	**0.86**
Total Xylenes	46	**1.76**	**1.64**	**102 J**	**100 J**	**2.97**	**1.21**	**3.12**	**1.36**
Naphthalene	0.074	< 0.26 U	< 0.26 U	**4.4**	**4.4**	< 0.26 U	ND	< 0.26 U	ND
C5 - C8 Aliphatic Hydrocarbons	--	**1200**	**520**	**1600**	**400**	**100**	ND	**120**	ND
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U	< 25 U	**84**	**84**	**43**	**43**	**62**	**62**
C9 - C10 Aromatic Hydrocarbons	--	< 25 U	< 25 U	**130**	**130**	< 25 U	ND	< 25 U	ND
Total Petroleum Hydrocarbons[3]	46	**1237**	**557**	**2029 J**	**826.4 J**	**169**	**45**	**209**	**64**

Table 1. Ambient, Crawlspace, and Indoor Air Analytical Results - January 2023

DRAFT

Project No. 180357, Texaco Strickland Site, Lynnwood, Washington

	Location/Unit	Ambient		Unit #129					
	Area	Outdoor, Upwind	Outdoor, Crosswind	Crawlspace Beneath Bathroom		Living Room		Bathroom	
	Sample Type	Background, Reported	Background, Reported	Crawlspace, Reported	Crawlspace, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]
	Sample ID	AMB-1-230109	AMB-2-230109	CS-129-230109	--	IA-129-1-230109	--	IA-129-2-230109	--
Chemical Name	**MTCA Method B CUL[2] (Unrestricted Use)**								
Petroleum Hydrocarbon Related Volatile Organic Compounds (µg/m³)									
Benzene	0.32	**0.54**	**0.52**	**0.79**	**0.25**	**0.65**	**0.11**	**0.68**	**0.14**
Toluene	2,300	< 19 U	< 19 U	< 19 U	ND	< 19 U	ND	< 19 U	ND
Ethylbenzene	460	< 0.43 U	< 0.43 U	**1.1**	**1.1**	**0.67**	**0.67**	**0.71**	**0.71**
Total Xylenes	46	**1.76**	**1.64**	**5.7**	**3.94**	**3.16**	**1.4**	**3.32**	**1.56**
Naphthalene	0.074	< 0.26 U	< 0.26 U	**0.26**	**0.26**	< 0.26 U	ND	< 0.26 U	ND
C5 - C8 Aliphatic Hydrocarbons	--	**1200**	**520**	**690**	ND	**110**	ND	**110**	ND
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	**49**	**49**	**29**	**29**
C9 - C10 Aromatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	< 25 U	ND	< 25 U	ND
Total Petroleum Hydrocarbons[3]	46	**1237**	**557**	**732**	**6**	**186**	**51**	**166**	**31**

	Location/Unit	Ambient		Unit #131					
	Area	Outdoor, Upwind	Outdoor, Crosswind	Crawlspace Beneath Bathroom		Living Room			
	Sample Type	Background, Reported	Background, Reported	Crawlspace, Reported	Crawlspace, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]	Field Duplicate	Indoor Air, Net[1]
	Sample ID	AMB-1-230109	AMB-2-230109	CS-131-230109	--	IA-131-1-230109	--	IA-FD-230109	--
Chemical Name	**MTCA Method B CUL[2] (Unrestricted Use)**								
Petroleum Hydrocarbon Related Volatile Organic Compounds (µg/m³)									
Benzene	0.32	**0.54**	**0.52**	**8**	**7.46**	**1.2**	**0.7**	**1.2**	**0.66**
Toluene	2,300	< 19 U	< 19 U	**150 J**	**150 J**	< 19 U	ND	< 19 U	ND
Ethylbenzene	460	< 0.43 U	< 0.43 U	**33**	**33**	**0.73**	**0.73**	**0.77**	**0.77**
Total Xylenes	46	**1.76**	**1.64**	**192 J**	**190 J**	**3.22**	**1.46**	**3.39**	**1.63**
Naphthalene	0.074	< 0.26 U	< 0.26 U	**7.9**	**7.9**	**0.33**	**0.33**	**0.35**	**0.35**
C5 - C8 Aliphatic Hydrocarbons	--	**1200**	**520**	**2200**	**1000**	**130**	ND	**120**	ND
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U	< 25 U	**130**	**130**	**37**	**37**	**37**	**37**
C9 - C10 Aromatic Hydrocarbons	--	< 25 U	< 25 U	**230**	**230**	< 25 U	ND	< 25 U	ND
Total Petroleum Hydrocarbons[3]	46	**1237**	**557**	**2951 J**	**1748 J**	**194**	**40**	**185**	**40**

Notes:

(1) Adjusted results were calculated by subtracting the upwind ambient air result from the crawlspace or indoor air result. If the reported crawlspace or indoor air result was less than the upwind ambient air concentration or if a certain analyte was not detected in either the crawlspace or indoor air sample and the ambient air result, the net value is shown as ND and summed as zero in the Total Petroleum Hydrocarbon calculation.

(2) Model Toxic Control Act (MTCA) Method B Indoor Air Cleanup Levels (CULs), including the generic Total Petroleum Hydrocarbons CUL.

(3) Total petroleum hydrocarbon concentration is the sum total of volatile organic compounds and aliphatic and aromatic hydrocarbons; one-half of the laboratory reporting limit was used for non-detects in reported results. Non-detects in adjusted results (ND) were summed as zero.

Bold results indicate analyte was detected.

Blue-highlighted values exceed the MTCA Method B Indoor Air Cleanup Levels for Unrestricted Land Use; only ambient air, net crawlspace air, and net indoor air values are screened against the MTCA Method B Indoor Air Cleanup Levels.

µg/m³ = micrograms per cubic meter

-- = not applicable

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

Table 2. Ambient, Crawlspace, and Indoor Air Analytical Results - February 2023

Project No. 180357, Texaco Strickland Site, Lynnwood, Washington

DRAFT - UNVALIDATED DATA
SUBJECT TO CHANGE

	Location/Unit	Ambient		Unit #125					
	Area	Outdoor, Upwind	Outdoor, Crosswind	Crawlspace Beneath Bathroom		Living Room		Bathroom	
	Sample Type	Background, Reported	Background, Reported	Crawlspace, Reported	Crawlspace, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]
	Sample ID	AMB-1-230222	AMB-2-230222	CS-125-230222	--	IA-125-1-230222	--	IA-125-2-230222	--
Chemical Name	**MTCA Method B CUL[2] (Unrestricted Use)**								
Petroleum Hydrocarbon Related Volatile Organic Compounds (µg/m^3)									
Benzene	0.32	**0.37**	**0.37**	**0.56**	**0.19**	**0.36**	ND	**0.36**	ND
Toluene	2,300	< 19 U	< 19 U	< 19 U	ND	< 19 U	ND	< 19 U	ND
Ethylbenzene	460	< 0.43	< 0.43	< 0.43 U	ND	< 0.43 U	ND	< 0.43 U	ND
Total Xylenes	46	< 1.3 U	< 1.3 U	**1.93**	**1.93**	< 1.3 U	ND	< 1.3 U	ND
Naphthalene	0.074	< 0.047 J	< 0.047 J	< 0.047 J	ND	**0.063 J**	**0.063 J**	**0.079 J**	**0.079 J**
C5 - C8 Aliphatic Hydrocarbons	--	**120**	**120**	**350 x**	**230**	< 75 U	ND	**80**	ND
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	< 25 U	ND	< 25 U	ND
C9 - C10 Aromatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	< 25 U	ND	< 25 U	ND
Total Petroleum Hydrocarbons[3]	46	**156**	**156**	**387**	**232**	**73**	**0.063 J**	**116**	**0.079 J**

	Location/Unit	Ambient		Unit #127					
	Area	Outdoor, Upwind	Outdoor, Crosswind	Crawlspace Beneath Bathroom		Living Room		Bathroom	
	Sample Type	Background, Reported	Background, Reported	Crawlspace, Reported	Crawlspace, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]
	Sample ID	AMB-1-230222	AMB-2-230222	CS-127-230222	--	IA-127-1-230222	--	IA-127-2-230222	--
Chemical Name	**MTCA Method B CUL[2] (Unrestricted Use)**								
Petroleum Hydrocarbon Related Volatile Organic Compounds (µg/m^3)									
Benzene	0.32	**0.37**	**0.37**	**0.42**	**0.05**	**0.33**	ND	**0.35**	ND
Toluene	2,300	< 19 U	< 19 U	< 19 U	ND	< 19 U	ND	< 19 U	ND
Ethylbenzene	460	< 0.43	< 0.43	< 0.43 U	ND	< 0.43 U	ND	< 0.43 U	ND
Total Xylenes	46	< 1.3 U	< 1.3 U	**1.22**	**1.22**	**1.13**	**1.13**	< 1.3 U	ND
Naphthalene	0.074	< 0.047 J	< 0.047 J	< 0.047 J	ND	**0.12 J**	**0.12**	**0.079 J**	**0.079 J**
C5 - C8 Aliphatic Hydrocarbons	--	**120**	**120**	**150 x**	**30**	**110**	ND	**88**	ND
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	**57**	ND	**33**	ND
C9 - C10 Aromatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	< 25 U	ND	< 25 U	ND
Total Petroleum Hydrocarbons[3]	46	**156**	**156**	**187**	**31**	**191**	**1**	**124**	**0.079 J**

Table 2. Ambient, Crawlspace, and Indoor Air Analytical Results - February 2023

Project No. 180357, Texaco Strickland Site, Lynnwood, Washington

DRAFT - UNVALIDATED DATA
SUBJECT TO CHANGE

	Location/Unit	Ambient		Unit #129					
	Area	Outdoor, Upwind	Outdoor, Crosswind	Crawlspace Beneath Bathroom		Living Room		Bathroom	
	Sample Type	Background, Reported	Background, Reported	Crawlspace, Reported	Crawlspace, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]
	Sample ID	AMB-1-230222	AMB-2-230222	CS-129-230222	--	IA-129-1-230222	--	IA-129-2-230222	--
Chemical Name	**MTCA Method B CUL[2] (Unrestricted Use)**								
Petroleum Hydrocarbon Related Volatile Organic Compounds (µg/m^3)									
Benzene	0.32	**0.37**	**0.37**	**0.4**	**0.03**	**0.34**	ND	**0.33**	ND
Toluene	2,300	< 19 U	< 19 U	< 19 U	ND	< 19 U	ND	< 19 U	ND
Ethylbenzene	460	< 0.43	< 0.43	< 0.43 U	ND	< 0.43 U	ND	< 0.43 U	ND
Total Xylenes	46	< 1.3 U	< 1.3 U	< 1.3 U	ND	< 1.3 U	ND	< 1.3 U	ND
Naphthalene	0.074	< 0.047 J	< 0.047 J	< 0.047 J	ND	**0.15 J**	**0.15 J**	**0.068 J**	**0.068 J**
C5 - C8 Aliphatic Hydrocarbons	--	**120**	**120**	**95**	ND	**110**	ND	< 75 U	ND
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	**210**	**210**	**68**	**68**
C9 - C10 Aromatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	< 25 U	ND	< 25 U	ND
Total Petroleum Hydrocarbons[3]	46	**156**	**156**	**131**	**0.03**	**343**	**210**	**129**	**68**

	Location/Unit	Ambient		Unit #131					
	Area	Outdoor, Upwind	Outdoor, Crosswind	Crawlspace Beneath Bathroom		Living Room			
	Sample Type	Background, Reported	Background, Reported	Crawlspace, Reported	Crawlspace, Net[1]	Indoor Air, Reported	Indoor Air, Net[1]	Field Duplicate	Indoor Air, Net[1]
	Sample ID	AMB-1-230222	AMB-2-230222	CS-131-230222	--	IA-131-1-230222	--	IA-FD-230222	--
Chemical Name	**MTCA Method B CUL[2]**								
Petroleum Hydrocarbon Related Volatile Organic Compounds (µg/m^3)									
Benzene	0.32	**0.37**	**0.37**	**0.48**	**0.11**	**1.1**	**0.73**	**1.1**	**0.73**
Toluene	2,300	< 19 U	< 19 U	< 19 U	ND	< 19 U	ND	< 19 U	ND
Ethylbenzene	460	< 0.43	< 0.43	< 0.43 U	ND	**0.57**	**0.57**	**0.59**	**0.59**
Total Xylenes	46	< 1.3 U	< 1.3 U	**2.05**	**2.1**	**2.4**	**2.4**	**2.6**	**2.6**
Naphthalene	0.074	< 0.047 J	< 0.047 J	< 0.047 J	ND	**0.33**	**0.33**	**0.33**	**0.33**
C5 - C8 Aliphatic Hydrocarbons	--	**120**	**120**	**100**	ND	**160 x**	**40**	**150 x**	**30**
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	**46**	**46**	**41**	**41**
C9 - C10 Aromatic Hydrocarbons	--	< 25 U	< 25 U	< 25 U	ND	< 25 U	ND	< 25 U	ND
Total Petroleum Hydrocarbons[3]	46	**156**	**156**	**137**	**2.2**	**232**	**90**	**218**	**75**

Table 2. Ambient, Crawlspace, and Indoor Air Analytical Results - February 2023

Project No. 180357, Texaco Strickland Site, Lynnwood, Washington

DRAFT - UNVALIDATED DATA
SUBJECT TO CHANGE

Chemical Name	MTCA Method B CUL[2] (Unrestricted Use)	Sample Type: Active Ventilation Sample ID: VS-EFF-230222
Benzene	0.32	**0.35**
Toluene	2,300	< 19 U
Ethylbenzene	460	< 0.43 U
Total Xylenes	46	**1.10**
Naphthalene	0.074	**0.1 J**
C5 - C8 Aliphatic Hydrocarbons	--	**82**
C9 - C12 Aliphatic Hydrocarbons	--	< 25 U
C9 - C10 Aromatic Hydrocarbons	--	< 25 U
Total Petroleum Hydrocarbons[3]	46	**118**

Notes:

(1) Adjusted results were calculated by subtracting the upwind ambient air result from the crawlspace or indoor air result. If the reported crawlspace or indoor air result was less than the upwind ambient air concentration or if a certain analyte was not detected in either the crawlspace or indoor air sample and the ambient air result, the net value is shown as ND and summed as zero in the Total Petroleum Hydrocarbon calculation.

(2) Model Toxic Control Act (MTCA) Method B Indoor Air Cleanup Levels (CULs), including the generic Total Petroleum Hydrocarbons CUL.

(3) Total petroleum hydrocarbon concentration is the sum total of volatile organic compounds and aliphatic and aromatic hydrocarbons; one-half of the laboratory reporting limit was used for non-detects in reported results. Non-detects in adjusted results (ND) were summed as zero.

Bold results indicate analyte was detected.

Blue-highlighted values exceed the MTCA Method B Indoor Air Cleanup Levels for Unrestricted Land Use; only ambient air, net crawlspace air, and net indoor air values are screened against the MTCA Method B Indoor Air Cleanup Levels.

$\mu g/m^3$ = micrograms per cubic meter

-- = not applicable

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

X - The sample chromatographic pattern does not resemble the fuel standard used for quantitation

APPENDIX A

Air Analytical Laboratory Reports Received in 2023

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

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January 23, 2023

Andrew Yonkofski, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Mr Yonkofski:

Included are the results from the testing of material submitted on January 10, 2023 from the Texaco Strickland 180357, F&BI 301123 project. There are 35 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Aspect Data
ASP0123R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on January 10, 2023 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Texaco Strickland 180357 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
301123 -01	CS-125-230109
301123 -02	CS-127-230109
301123 -03	CS-131-230109
301123 -04	CS-129-230109
301123 -05	AMB-2-230109
301123 -06	AMB-1-230109
301123 -07	IA-125-1-230109
301123 -08	IA-125-2-230109
301123 -09	IA-127-1-230109
301123 -10	IA-127-2-230109
301123 -11	IA-129-1-230109
301123 -12	IA-129-2-230109
301123 -13	IA-131-1-230109
301123 -14	IA-FD-230109

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

The TO-15 method blank showed the presence of naphthalene. The method blank, and affected samples, were qualified accordingly.

All quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	CS-125-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-01
Date Analyzed:	01/17/23	Data File:	011624.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	2,300
APH EC9-12 aliphatics	66
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	CS-127-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-02
Date Analyzed:	01/17/23	Data File:	011625.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	99	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,600
APH EC9-12 aliphatics	84
APH EC9-10 aromatics	130

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	CS-131-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-03
Date Analyzed:	01/17/23	Data File:	011626.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	102	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	2,200
APH EC9-12 aliphatics	130
APH EC9-10 aromatics	230

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	CS-129-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-04
Date Analyzed:	01/17/23	Data File:	011627.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	690 x
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	AMB-2-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-05
Date Analyzed:	01/16/23	Data File:	011613.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	520 x
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	AMB-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-06
Date Analyzed:	01/16/23	Data File:	011614.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	1,200 x
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-125-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-07
Date Analyzed:	01/16/23	Data File:	011615.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	110
APH EC9-12 aliphatics	27
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-125-2-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-08
Date Analyzed:	01/16/23	Data File:	011617.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	99
APH EC9-12 aliphatics	52
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-127-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-09
Date Analyzed:	01/17/23	Data File:	011618.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	100
APH EC9-12 aliphatics	43
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-127-2-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-10
Date Analyzed:	01/17/23	Data File:	011619.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	120
APH EC9-12 aliphatics	62
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-129-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-11
Date Analyzed:	01/17/23	Data File:	011620.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	110
APH EC9-12 aliphatics	49
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-129-2-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-12
Date Analyzed:	01/17/23	Data File:	011621.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	110
APH EC9-12 aliphatics	29
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-131-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-13
Date Analyzed:	01/17/23	Data File:	011622.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	130
APH EC9-12 aliphatics	37
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-FD-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/23	Lab ID:	301123-14
Date Analyzed:	01/17/23	Data File:	011623.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	98	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	120
APH EC9-12 aliphatics	37
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/16/23	Lab ID:	03-0074 MB
Date Analyzed:	01/16/23	Data File:	011612.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CS-125-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-01
Date Analyzed:	01/17/23	Data File:	011624.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	2.1	0.67
Toluene	<19	<5
Ethylbenzene	2.6	0.61
m,p-Xylene	9.9	2.3
o-Xylene	3.9	0.89
Naphthalene	0.24 j fb	0.045 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CS-127-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-02
Date Analyzed:	01/17/23	Data File:	011625.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	99	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	6	1.9
Toluene	86 ve	23 ve
Ethylbenzene	17	4.0
m,p-Xylene	73 ve	17 ve
o-Xylene	29	6.6
Naphthalene	4.4	0.83

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CS-131-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-03
Date Analyzed:	01/17/23	Data File:	011626.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	101	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	8	2.5
Toluene	150 ve	39 ve
Ethylbenzene	33	7.5
m,p-Xylene	140 ve	32 ve
o-Xylene	52	12
Naphthalene	7.9	1.5

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CS-129-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-04
Date Analyzed:	01/17/23	Data File:	011627.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.79	0.25
Toluene	<19	<5
Ethylbenzene	1.1	0.25
m,p-Xylene	4.1	0.93
o-Xylene	1.6	0.36
Naphthalene	0.26 fb	0.050 fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	AMB-2-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-05
Date Analyzed:	01/16/23	Data File:	011613.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.52	0.16
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	1.2	0.28
o-Xylene	0.44	0.10
Naphthalene	0.068 j fb	0.013 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	AMB-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-06
Date Analyzed:	01/16/23	Data File:	011614.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.54	0.17
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	1.3	0.29
o-Xylene	0.46	0.11
Naphthalene	0.078 j fb	0.015 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-125-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-07
Date Analyzed:	01/16/23	Data File:	011615.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.58	0.18
Toluene	<19	<5
Ethylbenzene	0.64	0.15
m,p-Xylene	2.0	0.46
o-Xylene	0.81	0.19
Naphthalene	0.12 j fb	0.023 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-125-2-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-08
Date Analyzed:	01/16/23	Data File:	011617.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.54	0.17
Toluene	<19	<5
Ethylbenzene	0.63	0.15
m,p-Xylene	2.0	0.46
o-Xylene	0.80	0.18
Naphthalene	0.16 j fb	0.03 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-127-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-09
Date Analyzed:	01/17/23	Data File:	011618.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.54	0.17
Toluene	<19	<5
Ethylbenzene	0.83	0.19
m,p-Xylene	2.1	0.49
o-Xylene	0.87	0.20
Naphthalene	0.15 j fb	0.029 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-127-2-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-10
Date Analyzed:	01/17/23	Data File:	011619.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.54	0.17
Toluene	<19	<5
Ethylbenzene	0.86	0.20
m,p-Xylene	2.2	0.52
o-Xylene	0.92	0.21
Naphthalene	0.16 j fb	0.031 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-129-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-11
Date Analyzed:	01/17/23	Data File:	011620.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.65	0.20
Toluene	<19	<5
Ethylbenzene	0.67	0.15
m,p-Xylene	2.3	0.52
o-Xylene	0.86	0.20
Naphthalene	0.25 j fb	0.047 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-129-2-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-12
Date Analyzed:	01/17/23	Data File:	011621.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.68	0.21
Toluene	<19	<5
Ethylbenzene	0.71	0.16
m,p-Xylene	2.4	0.56
o-Xylene	0.92	0.21
Naphthalene	0.19 j fb	0.037 j fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-131-1-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-13
Date Analyzed:	01/17/23	Data File:	011622.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	1.2	0.37
Toluene	<19	<5
Ethylbenzene	0.73	0.17
m,p-Xylene	2.4	0.55
o-Xylene	0.82	0.19
Naphthalene	0.33 fb	0.062 fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-FD-230109	Client:	Aspect Consulting, LLC
Date Received:	01/10/23	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/09/22	Lab ID:	301123-14
Date Analyzed:	01/17/23	Data File:	011623.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	1.2	0.39
Toluene	<19	<5
Ethylbenzene	0.77	0.18
m,p-Xylene	2.5	0.59
o-Xylene	0.89	0.21
Naphthalene	0.35 fb	0.067 fb

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Texaco Strickland 180357, F&BI 301123
Date Collected:	01/16/22	Lab ID:	03-0074 MB
Date Analyzed:	01/16/23	Data File:	011612.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv
2-Propanol	<8.6	<3.5
Benzene	<0.32	<0.1
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.063 j fb	0.012 j fb

Date of Report: 01/23/23
Date Received: 01/10/23
Project: Texaco Strickland 180357, F&BI 301123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 301123-07 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	110	110	0
APH EC9-12 aliphatics	ug/m3	27	<25	nm
APH EC9-10 aromatics	ug/m3	<25	<25	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	73	70-130
APH EC9-12 aliphatics	ug/m3	67	98	70-130
APH EC9-10 aromatics	ug/m3	67	110	70-130

Date of Report: 01/23/23
Date Received: 01/10/23
Project: Texaco Strickland 180357, F&BI 301123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 301123-07 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Benzene	ug/m3	0.58	0.57	2
Toluene	ug/m3	<19	<19	nm
Ethylbenzene	ug/m3	0.64	0.65	2
m,p-Xylene	ug/m3	2.0	2.0	0
o-Xylene	ug/m3	0.81	0.82	1
Naphthalene	ug/m3	0.12 j fb	0.12 j fb	nm

Date of Report: 01/23/23
Date Received: 01/10/23
Project: Texaco Strickland 180357, F&BI 301123

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/m3	43	92	70-130
Toluene	ug/m3	51	95	70-130
Ethylbenzene	ug/m3	59	97	70-130
m,p-Xylene	ug/m3	120	99	70-130
o-Xylene	ug/m3	59	100	70-130
Naphthalene	ug/m3	71	90	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

30 11 23

SAMPLE CHAIN OF CUSTODY

01/10/23

Report To Andrew Yonkofski

Company Aspect Consulting

Address 710 Second Ave, #550

City, State, ZIP Seattle, WA 98104

Phone 401-272-3488 Email ayonkofski@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME & ADDRESS: Texaco Strickland

PO # 180357

NOTES:

INVOICE TO: AP

TURNAROUND TIME: (Standard) RUSH

Rush charges authorized by:

SAMPLE DISPOSAL
Default: Clean following final report delivery
Hold (Fee may apply):

SAMPLE INFORMATION / ANALYSIS REQUESTED

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time (01/09/23)	Final Vac. ("Hg)	Field Final Time (01/10/23)	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium		Notes
CS-125-230109	01	20543	15214	(IA) / SG	01/09/23	-29	0906	-7	0850		X		X			
CS-127-230109	02	18577	15213	(IA) / SG		-28.5	0906	-6	0850							
CS-131-230109	03	18574	15219	(IA) / SG		>-30	0906	-7	0851							
CS-129-230109	04	20550	15216	(IA) / SG		>-30	0906	-6.5	0851							
AMB-2-230109	05	18564	15210	(IA) / SG		-29	0908	-4.5	0908							
AMB-1-230109	06	21437	07896	(IA) / SG		>-30	0905	-6	0914							
IA-125-1-230109	07	18562	15217	(IA) / SG		-28	1106	-2	0954							
IA-125-2-230109	08	40706	05356	(IA) / SG		-29	1107	-7	0954		V		V			

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Nikolai Carlson	Aspect	01/10/23	1320
Received by:	ANH PHAN	FSB	01/10/23	13:20
Relinquished by:				
Received by:				

Samples received at 18 °C

301123

SAMPLE CHAIN OF CUSTODY

01/10/23

Report To Andrew Yonkofski
Company Aspect Consulting
Address 710 Second Ave, #550
City, State, ZIP Seattle, WA 98104
Phone _____ Email _____

SAMPLERS (*signature*)

PROJECT NAME & ADDRESS: Texaco Strickland

PO # 180357

NOTES:

INVOICE TO: AP

TURNAROUND TIME: (Standard) / RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
Default: Clean following final report delivery
Hold (Fee may apply): _____

SAMPLE INFORMATION

Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	01/09/23 Field Initial Time	Final Vac. ("Hg)	01/10/23 Field Final Time	ANALYSIS REQUESTED: TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium		Notes
IA-127-1-230109	09	23229	15215	(IA) / SG	01/09/23	-29	1110	-7	1000		X		X			
IA-127-2-230109	10	23230	15212	(IA) / SG		-30	1110	-8	1001		↓		↓			
IA-129-1-230109	11	40711	15208	(IA) / SG		-29.5	1108	-7	1006							
IA-129-2-230109	12	40713	15209	(IA) / SG		-29	1108	-8	1007							
IA-131-1-230109	13	18580	06602	(IA) / SG		-29	1111	-9	1011							
IA-FD-230109	14	20546	15211	(IA) / SG	↓	-29	1111	-6	1011		↓		↓			
				IA / SG												
				IA / SG												

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108
Ph. (206) 285-8282
Fax (206) 283-5044

FORMS\COC\COCTO-15.DOC

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Nikolai Carroll	Aspect	01/10/23	1320
Received by:	ANHPHAN	F&B	01/10/23	13:20
Relinquished by:				
Received by:		Samples received at 18°C		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Vineta Mills, M.S.
Eric Young, B.S.

5500 4th Avenue South
Seattle, WA 98108
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 7, 2023

Andrew Yonkofski, Project Manager
Aspect Consulting, LLC
710 2nd Ave S, Suite 550
Seattle, WA 98104

Dear Mr Yonkofski:

Included are the results from the testing of material submitted on February 23, 2023 from the Texaco Strickland 180357, F&BI 302329 project. There are 36 pages included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: Aspect Data
ASP0307R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 23, 2023 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Texaco Strickland 180357, F&BI 302329 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
302329 -01	CS-125-230222
302329 -02	CS-127-230222
302329 -03	CS-129-230222
302329 -04	CS-131-230222
302329 -05	VS-EFF-230222
302329 -06	AMB-1-230222
302329 -07	AMB-2-230222
302329 -08	IA-125-1-230222
302329 -09	IA-125-2-230222
302329 -10	IA-127-1-230222
302329 -11	IA-127-2-230222
302329 -12	IA-129-1-230222
302329 -13	IA-129-2-230222
302329 -14	IA-131-1-230222
302329 -15	IA-FD-230222

Non-petroleum compounds identified in the air phase hydrocarbon (APH) ranges were subtracted per the MA-APH method.

Material was detected in the APH EC5-8 aliphatics of samples CS-125-230222, CS-127-230222, IA-131-1-230222, and IA-FD-230222 that was not consistent with aliphatic hydrocarbons. The results were qualified accordingly.

All other quality control requirements were acceptable.

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	CS-125-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-01
Date Analyzed:	02/24/23	Data File:	022327.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	350 x
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	CS-127-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-02
Date Analyzed:	02/24/23	Data File:	022326.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	150 x
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	CS-129-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-03
Date Analyzed:	02/24/23	Data File:	022325.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	95
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	CS-131-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-04
Date Analyzed:	02/24/23	Data File:	022324.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	100
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	VS-EFF-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-05
Date Analyzed:	02/24/23	Data File:	022322.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	82
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	AMB-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-06
Date Analyzed:	02/23/23	Data File:	022312.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	86	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	120
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	AMB-2-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-07
Date Analyzed:	02/23/23	Data File:	022313.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	120
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-125-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-08
Date Analyzed:	02/24/23	Data File:	022314.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-125-2-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-09
Date Analyzed:	02/24/23	Data File:	022315.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	91	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	80
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-127-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-10
Date Analyzed:	02/24/23	Data File:	022316.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	110
APH EC9-12 aliphatics	57
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-127-2-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-11
Date Analyzed:	02/24/23	Data File:	022317.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	88
APH EC9-12 aliphatics	33
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-129-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-12
Date Analyzed:	02/24/23	Data File:	022318.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	97	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	110
APH EC9-12 aliphatics	210
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-129-2-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-13
Date Analyzed:	02/24/23	Data File:	022319.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	68
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-131-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-14
Date Analyzed:	02/24/23	Data File:	022320.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	160 x
APH EC9-12 aliphatics	46
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	IA-FD-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-15
Date Analyzed:	02/24/23	Data File:	022321.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	150 x
APH EC9-12 aliphatics	41
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method MA-APH

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Texaco Strickland 180357
Date Collected:	Not Applicable	Lab ID:	03-0350 MB
Date Analyzed:	02/23/23	Data File:	022311.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	86	70	130

Compounds:	Concentration ug/m3
APH EC5-8 aliphatics	<75
APH EC9-12 aliphatics	<25
APH EC9-10 aromatics	<25

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CS-125-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-01
Date Analyzed:	02/24/23	Data File:	022327.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.56	0.17
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	1.4	0.32
o-Xylene	0.53	0.12
Naphthalene	<0.047 j	<0.0089 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CS-127-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-02
Date Analyzed:	02/24/23	Data File:	022326.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.42	0.13
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	1.0	0.24
o-Xylene	<0.43	<0.1
Naphthalene	<0.047 j	<0.0089 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CS-129-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-03
Date Analyzed:	02/24/23	Data File:	022325.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.4	0.12
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.047 j	<0.0089 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	CS-131-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-04
Date Analyzed:	02/24/23	Data File:	022324.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.48	0.15
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	1.5	0.35
o-Xylene	0.55	0.13
Naphthalene	<0.047 j	<0.0089 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	VS-EFF-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-05
Date Analyzed:	02/24/23	Data File:	022322.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.35	0.11
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	0.88	0.20
o-Xylene	<0.43	<0.1
Naphthalene	0.1 j	0.02 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	AMB-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-06
Date Analyzed:	02/23/23	Data File:	022312.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	90	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.37	0.12
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.047 j	<0.0089 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	AMB-2-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-07
Date Analyzed:	02/23/23	Data File:	022313.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	92	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.37	0.12
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.047 j	<0.0089 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-125-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-08
Date Analyzed:	02/24/23	Data File:	022314.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	93	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.36	0.11
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.063 j	0.012 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-125-2-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-09
Date Analyzed:	02/24/23	Data File:	022315.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.36	0.11
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.079 j	0.015 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-127-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-10
Date Analyzed:	02/24/23	Data File:	022316.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.33	0.10
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	0.91	0.21
o-Xylene	<0.43	<0.1
Naphthalene	0.12 j	0.023 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-127-2-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-11
Date Analyzed:	02/24/23	Data File:	022317.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	94	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.35	0.11
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.079 j	0.015 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-129-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-12
Date Analyzed:	02/24/23	Data File:	022318.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	100	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.34	0.10
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.15 j	0.028 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-129-2-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-13
Date Analyzed:	02/24/23	Data File:	022319.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	0.33	0.10
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	0.068 j	0.013 j

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-131-1-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-14
Date Analyzed:	02/24/23	Data File:	022320.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	95	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	1.1	0.34
Toluene	<19	<5
Ethylbenzene	0.57	0.13
m,p-Xylene	1.9	0.44
o-Xylene	0.53	0.12
Naphthalene	0.33	0.062

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	IA-FD-230222	Client:	Aspect Consulting, LLC
Date Received:	02/23/23	Project:	Texaco Strickland 180357
Date Collected:	02/22/23	Lab ID:	302329-15
Date Analyzed:	02/24/23	Data File:	022321.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	96	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	1.1	0.35
Toluene	<19	<5
Ethylbenzene	0.59	0.14
m,p-Xylene	2.0	0.46
o-Xylene	0.57	0.13
Naphthalene	0.33	0.063

Analysis For Volatile Compounds By Method TO-15

Client Sample ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Texaco Strickland 180357
Date Collected:	Not Applicable	Lab ID:	03-0350 MB
Date Analyzed:	02/23/23	Data File:	022311.D
Matrix:	Air	Instrument:	GCMS7
Units:	ug/m3	Operator:	bat

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
4-Bromofluorobenzene	89	70	130

Compounds:	Concentration ug/m3	ppbv
Benzene	<0.32	<0.1
Toluene	<19	<5
Ethylbenzene	<0.43	<0.1
m,p-Xylene	<0.87	<0.2
o-Xylene	<0.43	<0.1
Naphthalene	<0.047 j	<0.0089 j

Date of Report: 03/07/23
Date Received: 02/23/23
Project: Texaco Strickland 180357, F&BI 302329

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD MA-APH

Laboratory Code: 302329-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
APH EC5-8 aliphatics	ug/m3	350	380	8
APH EC9-12 aliphatics	ug/m3	<25	<25	nm
APH EC9-10 aromatics	ug/m3	<25	<25	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
APH EC5-8 aliphatics	ug/m3	67	84	70-130
APH EC9-12 aliphatics	ug/m3	67	100	70-130
APH EC9-10 aromatics	ug/m3	67	92	70-130

Date of Report: 03/07/23
Date Received: 02/23/23
Project: Texaco Strickland 180357, F&BI 302329

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF AIR SAMPLES FOR VOLATILES BY METHOD TO-15

Laboratory Code: 302329-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 30)
Benzene	ug/m3	0.56	0.55	2
Toluene	ug/m3	<19	<19	nm
Ethylbenzene	ug/m3	<0.43	<0.43	nm
m,p-Xylene	ug/m3	1.4	1.4	0
o-Xylene	ug/m3	0.53	0.55	4
Naphthalene	ug/m3	<0.26	<0.26	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/m3	43	92	70-130
Toluene	ug/m3	51	94	70-130
Ethylbenzene	ug/m3	59	88	70-130
m,p-Xylene	ug/m3	120	96	70-130
o-Xylene	ug/m3	59	97	70-130
Naphthalene	ug/m3	71	88	70-130

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria, biased high; or, the calibration results for the analyte were outside of acceptance criteria, biased high, with a detection for the analyte in the sample. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the standard reporting limit. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

k – The calibration results for the analyte were outside of acceptance criteria, biased high, and the analyte was not detected in the sample.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

SAMPLE CHAIN OF CUSTODY

02/23/23

Page # 1 of 2

302329

Report To Andrew Yonkofski

Company Aspect Consulting

Address 710 Second Ave #550

City, State, ZIP Seattle, WA 98104

Phone 404-272-3488 Email ayonkofski@aspectconsulting.com

SAMPLERS (*signature*)

PROJECT NAME & ADDRESS: Texaco Stickland

PO # 180357

NOTES:

INVOICE TO: AP

TURNAROUND TIME: (Standard) RUSH

Rush charges authorized by:

SAMPLE DISPOSAL
Default: Clean following final report delivery
Hold (Fee may apply):

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	02/22/23 Field Initial Time	Final Vac. ("Hg)	02/23/23 Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium		Notes
CS-125-230222	01	20550	15211	(IA) / SG	02/22/23	-29	1140	-3	1143		X		X			
CS-127-230222	02	20552	15217	(IA) / SG		-28	1140	-5	1143							
CS-129-230222	03	18563	15208	(IA) / SG		-30	1140	-5	1144							
CS-131-230222	04	18580	15215	(IA) / SG		-29	1140	-4	1144							
VS-EFF-230222	05	18579	15209	(IA) / SG		-29	1140	-8	1145							
AMB-1-230222	06	18567	15219	(IA) / SG		7-30	1142	-5	1146							
AMB-2-230222	07	18575	15216	(IA) / SG		-30	1145	-5	1148							
IA-125-1-230222	08	20546	15212	(IA) / SG	↓	7-30	1146	-7.5	1128		↓		↓			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Nikolai Carroll	Aspect	02/23	1400
Received by:	ANH PHAN	FSB	02/23/23	14:00
Relinquished by:		Samples received at 16 °C		
Received by:				

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108
Ph. (206) 285-8282
Fax (206) 283-5044

SAMPLE CHAIN OF CUSTODY 02/23/23

302329

Report To Andrew Yonkofski

Company Aspect

Address

City, State, ZIP

Phone Email

SAMPLERS (*signature*)

PROJECT NAME & ADDRESS: Texaco Strickland

PO # 180357

NOTES:

INVOICE TO: AP

Page # 2 of 2

TURNAROUND TIME: ~~Standard~~ RUSH

Rush charges authorized by:

SAMPLE DISPOSAL
Default: Clean following final report delivery
Hold (Fee may apply):

SAMPLE INFORMATION										ANALYSIS REQUESTED						
Sample Name	Lab ID	Canister ID	Flow Cont. ID	Reporting Level: IA=Indoor Air SG=Soil Gas (Circle One)	Date Sampled	Initial Vac. ("Hg)	Field Initial Time	Final Vac. ("Hg)	Field Final Time	TO15 Full Scan	TO15 BTEXN	TO15 cVOCs	APH	Helium		Notes
IA-125-2-230222	09	18577	15214	(IA) / SG	02/22/23	~~-30~~ -29	1149	-7.5	1129		X		X			
IA-127-1-230222	10	10622	06606	(IA) / SG		-29	1148	-7.5	1132							
IA-127-2-230222	11	18573	15210	(IA) / SG		-30	1148	-7	1132							
IA-129-1-230222	12	20554	05347	(IA) / SG		-30	1149	-6	1136							
IA-129-2-230222	13	23230	15218	(IA) / SG		-30	1149	-6	1137							
IA-131-1-230222	14	37210	06601	(IA) / SG		-29	1150	-9	1140							
IA-FD-230222	15	18564	15213	(IA) / SG	↓	-29	1150	-6	1140		↓		↓			
				IA / SG												

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Nikolai Carroll	Aspect	02/23	1400
Received by:		ANH PHAN	F&B	02/23/23	14:00
Relinquished by:			Samples received at 16 °C		
Received by:					

Friedman & Bruya, Inc.
5500 4th Avenue South
Seattle, WA 98108
Ph. (206) 285-8282
Fax (206) 283-5044

LABORATORY DATA CONSULTANTS, INC.
2701 Loker Ave. West, Suite 220, Carlsbad, CA 92010 Bus: 760-827-1100 Fax: 760-827-1099

Aspect Consulting LLC
701 Second Ave., Suite 550
Seattle, WA 98104
ATTN: Jason Yabandeh
jyabandeh@aspectconsulting.com

February 28, 2023

SUBJECT: Aloha Café - Data Validation

Dear Mr. Yabandeh,

Enclosed are the final validation reports for the fraction listed below. This SDG was received on January 24, 2023. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project #55998:

SDG #	**Fraction**
301123	Volatiles

The data validation was performed under Stage 2A guidelines. The analysis was validated using the following documents, as applicable to each method:

- Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019)
- USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020)

Please feel free to contact us if you have any questions.

Sincerely,

Stella Cuenco
scuenco@lab-data.com
Project Manager/Senior Chemist

38 pages-EM

Attachment 1

Stage 2A EDD

LDC# 55998 (Aspect Consulting, LLC - Seattle, WA / Aloha Cafe)

LDC	SDG#	DATE REC'D	(3) DATE DUE	VOA (TO-15)		VOA (MA-APH)																														
Matrix:	Air/Water/Soil			A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S	A	S
A	301123	01/24/23	02/14/23	14	0	14	0																														
Total	TR/SC			14	0	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28

Shaded cells indicate Stage 4 validation (all other cells are Stage 2A validation). These sample counts do not include MS, MSD, or DUP's.

V:\LOGIN\Aspect Consulting\Aloha Cafe\55998ST.wpd

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: February 24, 2023

Parameters: Volatiles

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 301123

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
CS-125-230109	301123-01	Air	01/09/23
CS-127-230109	301123-02	Air	01/09/23
CS-131-230109	301123-03	Air	01/09/23
CS-129-230109	301123-04	Air	01/09/23
AMB-2-230109	301123-05	Air	01/09/23
AMB-1-230109	301123-06	Air	01/09/23
IA-125-1-230109	301123-07	Air	01/09/23
IA-125-2-230109	301123-08	Air	01/09/23
IA-127-1-230109	301123-09	Air	01/09/23
IA-127-2-230109	301123-10	Air	01/09/23
IA-129-1-230109	301123-11	Air	01/09/23
IA-129-2-230109	301123-12	Air	01/09/23
IA-131-1-230109	301123-13	Air	01/09/23
IA-FD-230109	301123-14	Air	01/09/23
IA-125-1-230109DUP	301123-07DUP	Air	01/09/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by Environmental Protection Agency (EPA) Method TO-15

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Stage 2A validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks with the following exceptions:

Blank ID	Analysis Date	Analyte	Concentration	Associated Samples
03-0074 MB	11/16/22	Naphthalene	0.063 ug/m^3	All samples in SDG 301123

Sample concentrations were compared to concentrations detected in the laboratory blanks. The sample concentrations were either not detected or were significantly greater (>10X for common contaminants, >5X for other contaminants) than the concentrations found in the associated laboratory blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
CS-125-230109	Naphthalene	0.24 ug/m^3	0.26U ug/m^3
AMB-2-230109	Naphthalene	0.068 ug/m^3	0.26U ug/m^3
AMB-1-230109	Naphthalene	0.078 ug/m^3	0.26U ug/m^3
IA-125-1-230109	Naphthalene	0.12 ug/m^3	0.26U ug/m^3
IA-125-2-230109	Naphthalene	0.16 ug/m^3	0.26U ug/m^3
IA-127-1-230109	Naphthalene	0.15 ug/m^3	0.26U ug/m^3

Sample	Analyte	Reported Concentration	Modified Final Concentration
IA-127-2-230109	Naphthalene	0.16 ug/m^3	0.26U ug/m^3
IA-129-1-230109	Naphthalene	0.25 ug/m^3	0.26U ug/m^3
IA-129-2-230109	Naphthalene	0.19 ug/m^3	0.26U ug/m^3

VI. Field Blanks

Samples AMB-2-230109 and AMB-1-230109 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-2-230109	Benzene m,p-Xylene o-Xylene Naphthalene	0.52 ug/m^3 1.2 ug/m^3 0.44 ug/m^3 0.068 ug/m^3
AMB-1-230109	Benzene m,p-Xylene o-Xylene Naphthalene	0.54 ug/m^3 1.3 ug/m^3 0.46 ug/m^3 0.078 ug/m^3

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples IA-131-1-230109 and IA-FD-230109 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/m³)		RPD (Limits)	Difference (Limits)
	IA-131-1-230109	IA-FD-230109		
Benzene	1.2	1.2	-	0 (≤0.64)
Ethylbenzene	0.73	0.77	-	0.04 (≤0.26)
m,p-Xylenes	2.4	2.5	-	0.10 (≤1.74)
o-Xylene	0.82	0.89	-	0.07 (≤0.86)
Naphthalene	0.33	0.35	-	0.02 (≤0.52)

XI. Internal Standards

Internal standards data were not reviewed for Stage 2A validation.

XII. Target Analyte Quantitation

All target analyte quantitations met validation criteria with the following exceptions:

Sample	Analyte	Finding	Criteria	Flag	A or P
CS-127-230109 CS-131-230109	Toluene m,p-Xylene	Sample result exceeded calibration range.	Reported result should be within calibration range.	J (all detects) J (all detects)	P

Raw data were not reviewed for Stage 2A validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Due to results exceeding calibration range, data were qualified as estimated in two samples.

Due to laboratory blank contamination, data were qualified as not detected in nine samples.

Aloha Café
Volatiles - Data Qualification Summary - SDG 301123

Sample	Analyte	Flag	A or P	Reason
CS-127-230109 CS-131-230109	Toluene m,p-Xylene	J (all detects) J (all detects)	P	Target analyte quantitation (exceeded range)

Aloha Café
Volatiles - Laboratory Blank Data Qualification Summary - SDG 301123

Sample	Analyte	Modified Final Concentration	A or P
CS-125-230109	Naphthalene	0.26U ug/m^3	A
AMB-2-230109	Naphthalene	0.26U ug/m^3	A
AMB-1-230109	Naphthalene	0.26U ug/m^3	A
IA-125-1-230109	Naphthalene	0.26U ug/m^3	A
IA-125-2-230109	Naphthalene	0.26U ug/m^3	A
IA-127-1-230109	Naphthalene	0.26U ug/m^3	A
IA-127-2-230109	Naphthalene	0.26U ug/m^3	A
IA-129-1-230109	Naphthalene	0.26U ug/m^3	A
IA-129-2-230109	Naphthalene	0.26U ug/m^3	A

Aloha Café
Volatiles - Field Blank Data Qualification Summary - SDG 301123

No Sample Data Qualified in this SDG

LDC #: 55998A48a

VALIDATION COMPLETENESS WORKSHEET

Stage 2A

Date: 02/22/23

SDG #: 301123

Page: 1 of 2

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Reviewer: DVG

2nd Reviewer:

METHOD: GC/MS Volatiles (EPA Method TO-15)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A/A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	SW	
VI.	Field blanks	SW	AB = 5, 6
VII.	Surrogate spikes	A	
VIII.	Duplicate sample analysis	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	SW	D = 13/14
XI.	Internal standards	N	
XII.	Target analyte quantitation	SW	
XIII.	Target analyte identification	N	
XIV.	~~Leak Check Compounds~~	-	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID		Lab ID	Matrix	Date
1	CS-125-230109		301123-01	Air	01/09/23
2	CS-127-230109		301123-02	Air	01/09/23
3	CS-131-230109		301123-03	Air	01/09/23
4	CS-129-230109		301123-04	Air	01/09/23
5	AMB-2-230109		301123-05	Air	01/09/23
6	AMB-1-230109		301123-06	Air	01/09/23
7	IA-125-1-230109		301123-07	Air	01/09/23
8	IA-125-2-230109		301123-08	Air	01/09/23
9	IA-127-1-230109		301123-09	Air	01/09/23
10	IA-127-2-230109		301123-10	Air	01/09/23
11	IA-129-1-230109		301123-11	Air	01/09/23
12	IA-129-2-230109		301123-12	Air	01/09/23
13	IA-131-1-230109	D	301123-13	Air	01/09/23
14	IA-FD-230109	D	301123-14	Air	01/09/23

LDC #: 55998A48a **VALIDATION COMPLETENESS WORKSHEET** Date: 02/22/23
SDG #: 301123 Stage 2A Page: 2 of 2
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JW
2nd Reviewer:

METHOD: GC/MS Volatiles (EPA Method TO-15)

	Client ID	Lab ID	Matrix	Date
15	IA-125-1-230109DUP	301123-07DUP	Air	01/09/23
16				
17				
18				

Notes:

+	03-0074 MB						

BTEX + Naphthalene

TARGET COMPOUND WORKSHEET

METHOD: VOA

A. Chloromethane	AA. Tetrachloroethene	AAA. 1,3,5-Trimethylbenzene	AAAA. Ethyl tert-butyl ether	A1. 1,3-Butadiene	A2. 1,2,4,5-Tetramethylbenzene
B. Bromomethane	BB. 1,1,2,2-Tetrachloroethane	BBB. 4-Chlorotoluene	BBBB. tert-Amyl methyl ether	B1. Hexane	B2. Octane
C. Vinyl choride	CC. Toluene	CCC. tert-Butylbenzene	CCCC. 1-Chlorohexane	C1. Heptane	C2.
D. Chloroethane	DD. Chlorobenzene	DDD. 1,2,4-Trimethylbenzene	DDDD. Isopropyl alcohol	D1. Propylene	D2.
E. Methylene chloride	EE. Ethylbenzene	EEE. sec-Butylbenzene	EEEE. Acetonitrile	E1. Freon 11	E2.
F. Acetone	FF. Styrene	FFF. 1,3-Dichlorobenzene	FFFF. Acrolein	F1. Freon 12	F2.
G. Carbon disulfide	GG. Xylenes, total	GGG. p-Isopropyltoluene	GGGG. Acrylonitrile	G1. Freon 113	G2.
H. 1,1-Dichloroethene	HH. Vinyl acetate	HHH. 1,4-Dichlorobenzene	HHHH. 1,4-Dioxane	H1. Freon 114	H2.
I. 1,1-Dichloroethane	II. 2-Chloroethylvinyl ether	III. n-Butylbenzene	IIII. Isobutyl alcohol	I1. 2-Nitropropane	I2.
J. 1,2-Dichloroethene, total	JJ. Dichlorodifluoromethane	JJJ. 1,2-Dichlorobenzene	JJJJ. Methacrylonitrile	J1. Dimethyl disulfide	J2.
K. Chloroform	KK. Trichlorofluoromethane	KKK. 1,2,4-Trichlorobenzene	KKKK. Propionitrile	K1. 2,3-Dimethyl pentane	K2.
L. 1,2-Dichloroethane	LL. Methyl-tert-butyl ether	LLL. Hexachlorobutadiene	LLLL. Ethyl ether	L1. 2,4-Dimethyl pentane	L2.
M. 2-Butanone	MM. 1,2-Dibromo-3-chloropropane	MMM. Naphthalene	MMMM. Benzyl chloride	M1. 3,3-Dimethyl pentane	M2.
N. 1,1,1-Trichloroethane	NN. Methyl ethyl ketone	NNN. 1,2,3-Trichlorobenzene	NNNN. Iodomethane	N1. 2-Methylpentane	N2.
O. Carbon tetrachloride	OO. 2,2-Dichloropropane	OOO. 1,3,5-Trichlorobenzene	OOOO.1,1-Difluoroethane	O1. 3-Methylpentane	O2.
P. Bromodichloromethane	PP. Bromochloromethane	PPP. trans-1,2-Dichloroethene	PPPP. Tetrahydrofuran	P1. 3-Ethylpentane	P2.
Q. 1,2-Dichloropropane	QQ. 1,1-Dichloropropene	QQQ. cis-1,2-Dichloroethene	QQQQ. Methyl acetate	Q1. 2,2-Dimethylpentane	Q2.
R. cis-1,3-Dichloropropene	RR. Dibromomethane	RRR. m,p-Xylenes	RRRR. Ethyl acetate	R1. 2,2,3- Trimethylbutane	R2.
S. Trichloroethene	SS. 1,3-Dichloropropane	SSS. o-Xylene	SSSS. Cyclohexane	S1. 2,2,4-Trimethylpentane	S2.
T. Dibromochloromethane	TT. 1,2-Dibromoethane	TTT. 1,1,2-Trichloro-1,2,2-trifluoroethane	TTTT. Methylcyclohexane	T1. 2-Methylhexane	T2.
U. 1,1,2-Trichloroethane	UU. 1,1,1,2-Tetrachloroethane	UUU. 1,2-Dichlorotetrafluoroethane	UUUU. Allyl chloride	U1. Nonanal	U2.
V. Benzene	VV. Isopropylbenzene	VVV. 4-Ethyltoluene	VVVV. Methyl methacrylate	V1. 2-Methylnaphthalene	V2.
W. trans-1,3-Dichloropropene	WW. Bromobenzene	WWW. Ethanol	WWWW. Ethyl methacrylate	W1. Methanol	W2.
X. Bromoform	XX. 1,2,3-Trichloropropane	XXX. Di-isopropyl ether	XXXX. cis-1,4-Dichloro-2-butene	X1. 1,2,3-Trimethylbenzene	X2.
Y. 4-Methyl-2-pentanone	YY. n-Propylbenzene	YYY. tert-Butanol	YYYY. trans-1,4-Dichloro-2-butene	Y1. 2-Propanol	Y2.
Z. 2-Hexanone	ZZ. 2-Chlorotoluene	ZZZ. tert-Butyl alcohol	ZZZZ. Pentachloroethane	Z1. p-Diethylbenzene	Z2.

LDC #: 55998A 48a

VALIDATION FINDINGS WORKSHEET
Blanks

Reviewer: JVG

METHOD: GC/MS VOA (EPA TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Was a method blank associated with every sample in this SDG?
Y N N/A Was a method blank analyzed at least once every 12 hours for each matrix and concentration?
Y N N/A Was there contamination in the method blanks? If yes, please see the qualifications below.

Blank analysis date: 11/16/22
Conc. units: ug/m3 Associated Samples: All

Compound	Blank ID	Sample Identification								
	03-0074 MB	1	5	6	7	8	9	10	11	
MMM	0.063	0.24 / 0.26U	0.068 / 0.26U	0.078 / 0.26U	0.12 / 0.26U	0.16 / 0.26U	0.15 / 0.26U	0.16 / 0.26U	0.25 / 0.26U	

Blank analysis date:
Conc. units: Associated Samples: Same as above

Compound	Blank ID	Sample Identification								
		12								
mmm		0.19 / 0.26U								

CIRCLED RESULTS WERE NOT QUALIFIED. ALL RESULTS NOT CIRCLED WERE QUALIFIED BY THE FOLLOWING STATEMENT:

Note: Common contaminants such as Methylene chloride, Acetone, 2-Butanone, and TICs that were detected in samples within ten times the associated method blank concentration were qualified as not detected, "U". Other contaminants within five times the method blank concentration were also qualified as not detected, "U".

LDC #: 55998A

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: JV6

METHOD: GC/MS VOA (EPA Method TO-15)

Y N N/A Were field blanks identified in this SDG?
Y N N/A Were target compounds detected in the field blanks?

Sample: 5 Field Blank / Other AB

Compound	Concentration units (ug/m3)
V	0.52
RRR	1.2
SSS	0.44
MMM	0.068

Sample: 6 Field Blank / Other AB

Compound	Concentration units (ug/m3)
V	0.54
RRR	1.3
SSS	0.46
MMM	0.078

Sample: Field Blank / Other

Compound	Concentration units ( )

LDC#: 55998A48a

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Reviewer: JVG

METHOD: GCMS VOA (EPA Method TO15)

Compound	Concentration (ug/m3)		RPD (≤35%)	Difference (mg/Kg)	Limits (≤2xLOQ)	Qualifications (Parent Only)
	13	14				
V	1.2	1.2		0	≤0.64	
EE	0.73	0.77		0.04	≤0.26	
RRR	2.4	2.5		0.10	≤1.74	
SSS	0.82	0.89		0.07	≤0.86	
MMM	0.33	0.35		0.02	≤0.52	

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LDC #: 55998A48a

VALIDATION FINDINGS WORKSHEET
Analyte Quantitation and RLs

Reviewer: JVG

METHOD: GC/MS VOA (EPA Method TO-15)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N (N/A) Were the correct internal standard (IS), quantitation ion and relative response factor (RRF) used to quantitate the analyte?

Y N (N/A) Were analyte quantitation and RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?

#	Date	Sample ID	Compound	Findings	Qualifications
		2, 3	CC, RRR	> cal range	J dets / P

Comments: See sample calculation verification worksheet for recalculations No dilution performed.

Laboratory Data Consultants, Inc.
Data Validation Report

Project/Site Name: Aloha Café

LDC Report Date: February 24, 2023

Parameters: Volatiles

Validation Level: Stage 2A

Laboratory: Friedman & Bruya, Inc., Seattle, WA

Sample Delivery Group (SDG): 301123

Sample Identification	Laboratory Sample Identification	Matrix	Collection Date
CS-125-230109	301123-01	Air	01/09/23
CS-127-230109	301123-02	Air	01/09/23
CS-131-230109	301123-03	Air	01/09/23
CS-129-230109	301123-04	Air	01/09/23
AMB-2-230109	301123-05	Air	01/09/23
AMB-1-230109	301123-06	Air	01/09/23
IA-125-1-230109	301123-07	Air	01/09/23
IA-125-2-230109	301123-08	Air	01/09/23
IA-127-1-230109	301123-09	Air	01/09/23
IA-127-2-230109	301123-10	Air	01/09/23
IA-129-1-230109	301123-11	Air	01/09/23
IA-129-2-230109	301123-12	Air	01/09/23
IA-131-1-230109	301123-13	Air	01/09/23
IA-FD-230109	301123-14	Air	01/09/23
IA-125-1-230109DUP	301123-07DUP	Air	01/09/23

Introduction

This Data Validation Report (DVR) presents data validation findings and results for the associated samples listed on the cover page. Data validation was performed in accordance with the Appendix E, CEMC Review Draft, Sampling and Analysis/Quality Assurance Project Plan (February 2019) and a modified outline of the USEPA National Functional Guidelines (NFG) for Organic Superfund Methods Data Review (November 2020). Where specific guidance was not available, the data has been evaluated in a conservative manner consistent with industry standards using professional experience.

The analyses were performed by the following method:

Volatile Organic Compounds (VOCs) by MA-APH

All sample results were subjected to Stage 2A data validation, which comprises an evaluation of quality control (QC) summary results.

The following are definitions of the data qualifiers utilized during data validation:

J (Estimated): The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U (Non-detected): The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.

UJ (Non-detected estimated): The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R (Rejected): The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.

DNR (Do Not Report): Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

NA (Not Applicable): The non-conformance discovered during data validation demonstrates a high bias, while the affected analyte in the associated sample(s) was reported as not detected by the laboratory and did not warrant the qualification of the data.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

I. Sample Receipt and Technical Holding Times

The canisters were properly pressurized and handled.

All technical holding time requirements were met.

II. GC/MS Instrument Performance Check

Instrument performance check data were not reviewed for Stage 2A validation.

III. Initial Calibration and Initial Calibration Verification

Initial calibration data were not reviewed for Stage 2A validation.

IV. Continuing Calibration

Continuing calibration data were not reviewed for Stage 2A validation.

V. Laboratory Blanks

Laboratory blanks were analyzed as required by the method. No contaminants were found in the laboratory blanks.

VI. Field Blanks

Samples AMB-2-230109 and AMB-1-230109 were identified as ambient blanks. No contaminants were found with the following exceptions:

Blank ID	Analyte	Concentration
AMB-2-230109	APC EC5-8 aliphatics	520 ug/m^3
AMB-1-230109	APC EC5-8 aliphatics	1200 ug/m^3

VII. Surrogates

Surrogates were added to all samples as required by the method. All surrogate recoveries (%R) were within QC limits.

VIII. Duplicate Sample Analysis

Duplicate (DUP) sample analysis was performed on an associated project sample. Results were within QC limits.

IX. Laboratory Control Samples

Laboratory control samples (LCS) were analyzed as required by the method. Percent recoveries (%R) were within QC limits.

X. Field Duplicates

Samples IA-131-1-230109 and IA-FD-230109 were identified as field duplicates. No results were detected in any of the samples with the following exceptions:

Analyte	Concentration (ug/m³)		RPD (Limits)	Difference (Limits)
	IA-131-1-230109	IA-FD-230109		
APH EC5-8 aliphatics	130	120	-	10 (≤150)
APH EC9-12 aliphatics	37	37	-	0 (≤50)

XI. Internal Standards

Internal standards data were not reviewed for Stage 2A validation.

XII. Target Analyte Quantitation

Raw data were not reviewed for Stage 2A validation.

XIII. Target Analyte Identification

Raw data were not reviewed for Stage 2A validation.

XIV. Overall Assessment of Data

The analysis was conducted within all specifications of the method. No results were rejected in this SDG.

Aloha Café
Volatiles - Data Qualification Summary - SDG 301123

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Laboratory Blank Data Qualification Summary - SDG 301123

No Sample Data Qualified in this SDG

Aloha Café
Volatiles - Field Blank Data Qualification Summary - SDG 301123

No Sample Data Qualified in this SDG

LDC #: 55998A48b **VALIDATION COMPLETENESS WORKSHEET** Date: 02/22/23
SDG #: 301123 Stage 2A Page: 1 of 2
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JM
2nd Reviewer:

METHOD: GC/MS Volatiles (MA-APH)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Sample receipt/Technical holding times	A / A	
II.	GC/MS Instrument performance check	N	
III.	Initial calibration/ICV	N/N	
IV.	Continuing calibration	N	
V.	Laboratory Blanks	A	
VI.	Field blanks	SW	AB = 5, 6
VII.	Surrogate spikes	A	
VIII.	Duplicate sample analysis	A	
IX.	Laboratory control samples	A	LCS
X.	Field duplicates	SW	D = 13/14
XI.	Internal standards	N	
XII.	Target analyte quantitation	N	
XIII.	Target analyte identification	N	
XIV.	~~Leak Check Compounds~~	-	
XV.	Overall assessment of data	A	

Note: A = Acceptable; N = Not provided/applicable; SW = See worksheet; ND = No compounds detected; R = Rinsate; FB = Field blank; D = Duplicate; TB = Trip blank; EB = Equipment blank; SB=Source blank; OTHER:

	Client ID		Lab ID	Matrix	Date
1	CS-125-230109		301123-01	Air	01/09/23
2	CS-127-230109		301123-02	Air	01/09/23
3	CS-131-230109		301123-03	Air	01/09/23
4	CS-129-230109		301123-04	Air	01/09/23
5	AMB-2-230109		301123-05	Air	01/09/23
6	AMB-1-230109		301123-06	Air	01/09/23
7	IA-125-1-230109		301123-07	Air	01/09/23
8	IA-125-2-230109		301123-08	Air	01/09/23
9	IA-127-1-230109		301123-09	Air	01/09/23
10	IA-127-2-230109		301123-10	Air	01/09/23
11	IA-129-1-230109		301123-11	Air	01/09/23
12	IA-129-2-230109		301123-12	Air	01/09/23
13	IA-131-1-230109	D	301123-13	Air	01/09/23
14	IA-FD-230109	D	301123-14	Air	01/09/23

LDC #: 55998A48b **VALIDATION COMPLETENESS WORKSHEET** Date: 02/22/23
SDG #: 301123 Stage 2A Page: 2 of 2
Laboratory: Friedman & Bruya, Inc., Seattle, WA Reviewer: JY
2nd Reviewer:

METHOD: GC/MS Volatiles (MA-APH)

	Client ID	Lab ID	Matrix	Date
15	IA-125-1-230109DUP	301123-07DUP	Air	01/09/23
16				
17				
18				

Notes:

F	03-0074 MB						

LDC #: 55998A486

VALIDATION FINDINGS WORKSHEET
Field Blanks

Reviewer: JVG

METHOD: / **GC** __ **HPLC**

(Y) N N/A Were field blanks identified in this SDG?

Y (N) N/A Were target compounds detected in the field blanks?

Blank units: ug/m3 **Associated sample units:** NA

Sampling date: 01/09/23

Field Blank type: (circle one) Field Blank / Trip Blank/ Atmospheric Blank/ (Ambient Blank) Associated Samples: NA

Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other:

Compound	~~Blank ID~~	Blank ID	Blk ID	Sample Identification						
		5	6							
APC ECS-8 Aliphatics		520	1200							

Blank units: _____ **Associated sample units:** _____

Sampling date: _____

Field blank type: (circle one) Field Blank / Trip Blank/ Atmospheric Blank/ Ambient Blank Associated Samples: _____

Rinsate / Equipment Rinsate / Equipment Blank / Source Blank / Other:

Compound	Blank ID	Blank ID	Sample Identification							

LDC#: 55998A48b

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: JVG

METHOD: GC Volatiles (MA-APH)

Compound	Concentration (ug/m3)		RPD (≤35%)	Difference (mg/Kg)	Limits (≤2xLOQ)	Qualifications (Parent Only)
	13	14				
APH EC5-8 aliphatics	130	120		10	≤150	
APH EC9-12 aliphatics	37	37		0	≤50	

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