December 14, 2021
Project No. 0818.02.01

Mary Monahan
Washington State Department of Ecology
1250 W Alder Street
Union Gap, Washington 98903-0009

Re: Draft July 2021 Supplemental Air Quality Assessment
Former Tiger Oil Site
Facility Site ID: 469, Cleanup Site ID: 4919
2312 W Nob Hill Boulevard, Yakima, Washington

Dear Mary Monahan:

Maul Foster & Alongi, Inc. (MFA) prepared this memorandum to describe results from the July 2021 supplemental air quality assessment conducted at the former Tiger Oil site, located at 2312 W Nob Hill Boulevard in Yakima, Washington (the Site) (see Figure 1). The air quality assessment was conducted to evaluate vapor intrusion potential from residual contamination associated with the former retail gasoline fueling station at the Site and halogenated volatile organic compound (HVOC)-impacted groundwater from upgradient, off-property releases. Activities were conducted in accordance with the Washington State Department of Ecology (Ecology) guidance (Ecology, 2009, 2018).

BACKGROUND

Prior to the July 2021 supplemental air quality assessment, MFA conducted two air quality assessments at the Site in 2019: an initial indoor air assessment in July, and a supplemental indoor and ambient (outdoor) air quality assessment in November (MFA, 2019, 2020a). During both assessments, indoor air samples were collected from businesses adjoining the Site, including the Xochimilco Mexican Restaurant; Barber HQ; and 1 Up Games. During the November 2019 assessment, an ambient air sample was collected from the north-northwestern portion of the Site.

In May 2020, the analytical laboratory notified MFA of HVOC detections in groundwater at the Site. Following this discovery, the laboratory provided HVOC results from the November 2019 semiannual groundwater monitoring event (MFA, 2020b). HVOCs, specifically tetrachloroethene (PCE) and vinyl chloride, are considered additional indicator hazardous substances for the Site and are now included in the semiannual groundwater monitoring. Due to these findings, PCE and its breakdown products (including trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichlorothene, 1,1-dichloroethene, and VC) were included in the July 2021 air quality assessment. Details of the July 2021 air quality assessment are provided below.

FIELD AND ANALYTICAL METHODS

On July 27, 2021, Yen-Vy Van of MFA conducted a walk-through of businesses adjoining the Site, including the Xochimilco Mexican Restaurant, Barber HQ, and 1 Up Games (see Figure 2). Yen-Vy Van did not observe materials in the businesses that could be sources of petroleum volatile organic compounds (VOCs) in indoor air (see attachments A and B). The Xochimilco Mexican Restaurant building has been closed for remodeling and unoccupied since October 2018. The heating, ventilation, and air conditioning (HVAC) system in the restaurant was not operating during the Site walk-through. The building containing Barber HQ and 1 Up Games was occupied and the HVAC system was operational during the Site walk.

On July 28, 2021, MFA collected indoor air samples from the same locations as the initial indoor air samples collected in July 2019. Air samples were collected from the following locations (see Figure 2 and Attachment A):

- Restaurant IA-3A—In the central dining area of the restaurant
- Restaurant IA-3B—In the kitchen area of the restaurant
- Barber IA-3—In the customer service area at the barber shop
- Video IA-3—In the customer service area at the video game shop
- UPG Outdoor-2—Outside in the north-northwest portion of the Site

The air samples were analyzed for the following chemicals by U.S. Environmental Protection Agency (EPA) Method Toxics Organics-15:

- VOCs, including HVOCs
- Oxygenates
- Naphthalene
- Petroleum hydrocarbons as gasoline-range organics (GRO)

Five 6-liter Summa® canisters (four indoor air canisters and one outdoor air canister) were individually certified by the analytical laboratory, H&P Mobile Geochemistry, Inc., and outfitted with 8-hour air flow controllers. The Summa canisters were placed at each sampling location in the breathing zone, approximately 3 to 5 feet above ground surface. The initial vacuum gauge was noted for each Summa canister, then the sample valve was opened to begin sample collection.

The Summa canisters were monitored throughout the sample collection period to ensure that the canisters were steadily collecting air. Indoor air samples were collected until the vacuum gauge of each canister read -5 inches of mercury, indicating that the canister was nearly full. Samples were shipped to H&P Mobile Geochemistry, Inc., in Carlsbad, California, following standard chain-of-custody procedures. The indoor air sampling durations ranged from

approximately 6.5 hours to 8.5 hours based on the flow rate of the 8-hour flow controller. The ambient air sampling duration was slightly over 8 hours. The field sampling data sheet is provided in Attachment B.

RESULTS

Laboratory analytical results were screened against Ecology Model Toxics Control Act Method B indoor air cleanup levels (CULs) for both carcinogenic and non-carcinogenic chemicals of concern (see Figure 2 and the Table).

Analytical results produced during this supplemental air quality assessment were reviewed for usability and are qualified consistent with EPA procedures as well as appropriate laboratory and method-specific guidelines. This review was performed consistent with accepted EPA procedures for evaluating laboratory analytical data (EPA, 1986, 2020). Laboratory analytical reports and a data validation memorandum summarizing data evaluation procedures, data usability, and deviations from specific field and/or laboratory methods for the air data are provided as attachments C and D, respectively. The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

Laboratory analytical data for the five air samples contained the following results:

- Xochimilco Mexican Restaurant.
  - Benzene was detected in both samples at concentrations of 0.52 and 0.58 micrograms per cubic meter (ug/m^3), above the Method B cancer CUL of 0.32 ug/m^3.
  - GRO were detected in both samples. The sample in the kitchen area (Restaurant IA-3B) contained a GRO detection of 170 ug/m^3, above the total petroleum hydrocarbon (TPH) CUL of 140 ug/m^3. The sample in the central dining area (Restaurant IA-3A) contained GRO detection of 130 ug/m^3, below the CUL.
  - PCE and trans-1,2-dichloroethene were detected in one sample in the kitchen area of the restaurant (Restaurant IA-3B) below their respective Method B CULs.
- 1 Up Games.
  - Benzene was detected at a concentration of 0.32 ug/m^3, at the Method B cancer CUL.
  - GRO were detected at a concentration of 630 ug/m^3, above the TPH CUL of 140 ug/m^3.
- Barber HQ.

  - Benzene was detected at a concentration of 0.32 ug/m^3, at the Method B cancer CUL.
  - GRO were detected at a concentration of 130 ug/m^3, below the TPH CUL of 140 ug/m^3.
- Ambient air (north-northwest area of the Site).
  - Benzene was detected at a concentration of 0.65 ug/m^3, above the Method B cancer CUL 0.32 ug/m^3.
  - GRO was not detected.

CONCLUSIONS

Findings from the supplemental air quality assessment are as follows:

- The GRO detections from the July 2019, November 2019, and July 2021 air quality assessments and HVOC detections in July 2021 indicate that vapor intrusion from residual petroleum-contaminated soil and from the HVOC plume at the Site is likely occurring in the businesses adjoining the former Tiger Oil facility.
- Similar to the November 2019 air quality assessment, based on detections observed in the outdoor air sample, it appears that petroleum vapors emitted from constant traffic on the roads bordering to the Site to the north and west may be migrating into the adjacent businesses and contributing to benzene detections in indoor air.
- Concentrations of GRO have decreased since the initial July 2019 air monitoring event in all sample locations, with the exception of the indoor air sample collected in 1 Up Games.

Based on the results of the July 2021 indoor air quality assessment additional air sampling is likely warranted.

If you have any questions, please feel free to contact either of us.

Sincerely,

Maul Foster & Alongi, Inc.

Amanda Bixby, GIT
Staff Geologist

Michael Murray, LHG, PE
Principal Hydrogeologist

Attachments: Limitations
References
Table
Figures
Attachment A—Site Photographs
Attachment B—Field Sampling Data Sheet
Attachment C—Laboratory Analytical Report
Attachment D—Data Validation Memorandum

cc: Bill Preston, City of Yakima

LIMITATIONS

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

REFERENCES

Ecology. 2009. Draft: guidance for evaluating soil vapor intrusion in Washington State: investigation and remedial action. Washington State Department of Ecology, Lacey, Washington. Draft for public comment. November 2021.

Ecology. 2018. Implementation memorandum no. 18: petroleum vapor intrusion (VI): updated screening levels, cleanup levels, and assessing PVI threats to future buildings. Washington State Department of Ecology, Lacey, Washington. Revised January.

EPA. 1986. Test methods for evaluating solid waste, physical/chemical methods. EPA publication SW-846. 3d ed. U.S. Environmental Protection Agency. Final updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), V (2015), VI phase I (2017), VI phase II (2018), VI phase III (2019).

EPA. 2020. EPA contract laboratory program, national functional guidelines for Superfund organic methods data review. EPA 540-R-20-005. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. November.

MFA. 2019. Memorandum (re: indoor air quality assessment: former Tiger Oil site, West Nob Hill, Yakima) to M. Monahan, Washington State Department of Ecology, from Y. Van, Maul Foster & Alongi, Inc., Seattle, Washington. August 16.

MFA. 2020a. Memorandum (re: supplemental air quality assessment 2019: former Tiger Oil site, West Nob Hill, Yakima) to M. Monahan, Washington State Department of Ecology, from Y. Van, Maul Foster & Alongi, Inc., Seattle, Washington. January 30.

MFA. 2020b. Memorandum (re: halogenated volatile organic compounds impacted groundwater, former Tiger Oil site, facility site ID: 469; cleanup site ID: 4919, 2312 West Nob Hill Boulevard, Yakima, Washington) to M. Monahan, Washington State Department of Ecology, from Y. Van and J. Maul, Maul Foster & Alongi, Inc., Seattle, Washington. June 25.

TABLE

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Table
Summary of Supplemental Air Quality Analytical Results
Former Tiger Oil Site
Yakima, Washington

Location	Ecology Indoor Air CUL, Method B[a][1]	Barber HQ			Mexican Restaurant 1			Mexican Restaurant 2			1 Up Games			Northwest Area Former Tiger Oil Facility	
Sample Name		Barber IA	Barber IA-2B	Barber-IA-3	Restaurant IA-1	Restaurant IA-1B	Restaurant IA-3A	Restaurant IA-2	Restaurant IA-2B	Restaurant IA-3B	Video IA	Video IA-2B	Video IA-3	UPG OUTDOOR	UPG Outdoor 2
Collection Date		07/10/2019	11/06/2019	07/28/2021	07/10/2019	11/06/2019	07/28/2021	07/10/2019	11/06/2019	07/28/2021	07/09/2019	11/06/2019	07/28/2021	11/06/2019	07/28/2021
VOCs (ug/m^3)															
1,1,1,2-Tetrachloroethane	0.34	--	--	0.7 U	--	--	0.7 U	--	--	0.7 U	--	--	0.7 U	--	0.7 U
1,1,1-Trichloroethane	2,300	--	--	0.55 U	--	--	0.55 U	--	--	0.55 U	--	--	0.55 U	--	0.55 U
1,1,2,2-Tetrachloroethane	0.04	--	--	0.7 U	--	--	0.7 U	--	--	0.7 U	--	--	0.7 U	--	0.7 U
1,1,2-Trichloroethane	0.16	--	--	0.55 U	--	--	0.55 U	--	--	0.55 U	--	--	0.55 U	--	0.55 U
1,1-Dichloroethane	1.60	--	--	0.41 U	--	--	0.41 U	--	--	0.41 U	--	--	0.41 U	--	0.41 U
1,1-Dichloroethene	91	--	--	0.4 U	--	--	0.4 U	--	--	0.4 U	--	--	0.4 U	--	0.4 U
1,2,4-Trichlorobenzene	0.91	--	--	1.9 U	--	--	1.9 U	--	--	1.9 U	--	--	1.9 U	--	1.9 U
1,2,4-Trimethylbenzene	27	--	--	0.5	--	--	2.5	--	--	3.4	--	--	0.5 U	--	0.6
1,2-Dibromoethane	0.0042	--	--	0.78 U	--	--	0.78 U	--	--	0.78 U	--	--	0.78 U	--	0.78 U
1,2-Dichlorobenzene	91	--	--	0.61 U	--	--	0.61 U	--	--	0.61 U	--	--	0.61 U	--	0.61 U
1,2-Dichloroethane	0.10	--	--	0.41 U	--	--	0.41 U	--	--	0.41 U	--	--	0.41 U	--	0.41 U
1,2-Dichloropropane	0.68	--	--	0.47 U	--	--	0.56	--	--	0.61	--	--	0.47 U	--	0.47 U
1,3,5-Trimethylbenzene	27	--	--	0.5 U	--	--	0.7	--	--	0.9	--	--	0.5 U	--	0.5 U
1,3-Dichlorobenzene	NV	--	--	0.61 U	--	--	0.61 U	--	--	0.61 U	--	--	0.61 U	--	0.61 U
1,4-Dichlorobenzene	0.23	--	--	0.61 U	--	--	0.61 U	--	--	0.61 U	--	--	0.61 U	--	0.61 U
2-Butanone	2,300	--	--	4.6	--	--	3.2	--	--	3.6	--	--	3.6	--	1.2
2-Hexanone	14	--	--	0.83 U	--	--	0.83 U	--	--	0.83 U	--	--	0.83 U	--	0.83 U
4-Ethyltoluene	NV	--	--	0.5 U	--	--	0.85	--	--	1.2	--	--	0.5 U	--	0.5 U
4-Methyl-2-pentanone	1,400	--	--	0.83 U	--	--	0.83 U	--	--	0.83 U	--	--	1.2	--	0.83 U
Benzene	0.32	0.32	1	0.32	0.49	1.6	0.52	0.45	1.7	0.58	0.32	1.2	0.32	1.8	0.65
Bromodichloromethane	0.07	--	--	0.68 U	--	--	0.68 U	--	--	0.68 U	--	--	0.68 U	--	0.68 U
Bromoform	2.30	--	--	1 U	--	--	1 U	--	--	1 U	--	--	1 U	--	1 U
Bromomethane	2.3	--	--	0.39 U	--	--	0.39 U	--	--	0.39 U	--	--	0.39 U	--	0.39 U
Carbon disulfide	320	--	--	0.32 U	--	--	0.32 U	--	--	0.32 U	--	--	0.32 U	--	0.32 U
Carbon tetrachloride	0.42	--	--	0.64 U	--	--	0.64 U	--	--	0.64 U	--	--	0.64 U	--	0.64 U
Chlorobenzene	23	--	--	0.47 U	--	--	0.47 U	--	--	0.47 U	--	--	0.47 U	--	0.47 U
Chloroethane	4,600	--	--	0.27 U	--	--	0.27 U	--	--	0.27 U	--	--	0.27 U	--	0.27 U
Chloroform	0.11	--	--	0.25 U	--	--	0.25 U	--	--	0.25 U	--	--	0.25 U	--	0.25 U
Chloromethane	41	--	--	1.2	--	--	1.3	--	--	1.3	--	--	1.3	--	1.1
cis-1,2-Dichloroethene	NV	--	--	0.4 U	--	--	0.4 U	--	--	0.4 U	--	--	0.4 U	--	0.4 U
cis-1,3-Dichloropropene	NV	--	--	0.46 U	--	--	0.46 U	--	--	0.46 U	--	--	0.46 U	--	0.46 U
Dibromochloromethane	NV	--	--	1.7 U	--	--	1.7 U	--	--	1.7 U	--	--	1.7 U	--	1.7 U
Dichlorodifluoromethane (Freon 12)	46	--	--	1.4	--	--	16	--	--	16	--	--	1.4	--	1.4
Diisopropyl ether	NV	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Ethylbenzene	460	0.44 U	1	0.48	0.88	1.6	0.57	1.4	1.8	0.62	0.44 U	0.92	0.48	1	0.48

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Table
Summary of Supplemental Air Quality Analytical Results
Former Tiger Oil Site
Yakima, Washington

Location	Ecology Indoor Air CUL, Method B[a][1]	Barber HQ			Mexican Restaurant 1			Mexican Restaurant 2			1 Up Games			Northwest Area Former Tiger Oil Facility	
Sample Name		Barber IA	Barber IA-2B	Barber-IA-3	Restaurant IA-1	Restaurant IA-1B	Restaurant IA-3A	Restaurant IA-2	Restaurant IA-2B	Restaurant IA-3B	Video IA	Video IA-2B	Video IA-3	UPG OUTDOOR	UPG Outdoor 2
Collection Date		07/10/2019	11/06/2019	07/28/2021	07/10/2019	11/06/2019	07/28/2021	07/10/2019	11/06/2019	07/28/2021	07/09/2019	11/06/2019	07/28/2021	11/06/2019	07/28/2021
Freon 113	2,300	--	--	0.77 U	--	--	0.77 U	--	--	0.77 U	--	--	0.77 U	--	0.77 U
Freon 114	NV	--	--	0.71 U	--	--	0.71 U	--	--	0.71 U	--	--	0.71 U	--	0.71 U
Hexachlorobutadiene	0.11	--	--	2.7 U	--	--	2.7 U	--	--	2.7 U	--	--	2.7 U	--	2.7 U
m,p-Xylene	NV	1.5	4.2	1.9	3.8	6.5	2.4	6.2	7.7	2.3	0.92	3.6	2.3	4.1	1.8
Methyl tert-butyl ether	9.6	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U	0.91 U
Methylene chloride	66	--	--	0.63	--	--	0.35 U	--	--	0.35	--	--	0.46	--	0.39
Naphthalene	0.07	--	--	0.53 U	--	--	0.53 U	--	--	0.53 U	--	--	0.53 U	--	0.53 U
o-Xylene	NV	0.66	1.4	0.84	1.7	2.4	1.4	2.7	2.7	1.4	0.44	1.4	1.2	1.5	0.75
Styrene	460	--	--	0.65	--	--	35	--	--	49	--	--	0.47	--	0.43 U
tert-Amyl methyl ether	NV	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
tert-Butyl alcohol	NV	3.6	2.8	4.8	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.6	1.5 U	1.5 U	2.4	1.5 U	1.5 U
tert-Butyl ethyl ether	NV	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U	0.85 U
Tetrachloroethene	9.60	--	--	0.69 U	--	--	0.69 U	--	--	1.5	--	--	0.69 U	--	0.69 U
Toluene	2,300	1.6	4.2	1.9	2.6	5.6	2.9	2.3	5.7	2.7	1.5	4.7	2.7	5.2	2.6
trans-1,2-Dichloroethene	18	--	--	0.4 U	--	--	0.4 U	--	--	0.4	--	--	0.4 U	--	0.4 U
trans-1,3-Dichloropropene	NV	--	--	0.46 U	--	--	0.46 U	--	--	0.46 U	--	--	0.46 U	--	0.46 U
Trichloroethene	0.33	--	--	0.55 U	--	--	0.55 U	--	--	0.55 U	--	--	0.55 U	--	0.55 U
Trichlorofluoromethane (Freon 11)	320	--	--	1.1	--	--	97	--	--	100	--	--	0.96	--	1
Vinyl chloride	0.28	--	--	0.13 U	--	--	0.13 U	--	--	0.13 U	--	--	0.13 U	--	0.13 U
Xylenes, total [b]	46	2.16	5.6	2.7	5.5	8.9	3.8	8.9	10.4	3.7	1.36	5	3.5	5.6	2.6
TPH (ug/m^3)															
Gasoline-Range Hydrocarbons	140[c]	180	160	130	150	100 U	130	190	100 U	170	110	160	630	100 U	100 U

NOTES:

Shading indicates values that exceed Method B indoor air criteria; non-detect results ("U") were not compared with screening criteria.

CUL = cleanup level.

NV = no value.

TPH = total petroleum hydrocarbon.

U = Result is non-detect to method reporting limit.

ug/m^3 = micrograms per cubic meter.

VOCs = volatile organic compounds.

[a]CUL applied is the lower of available cancer or noncancer Method B indoor air CULs.

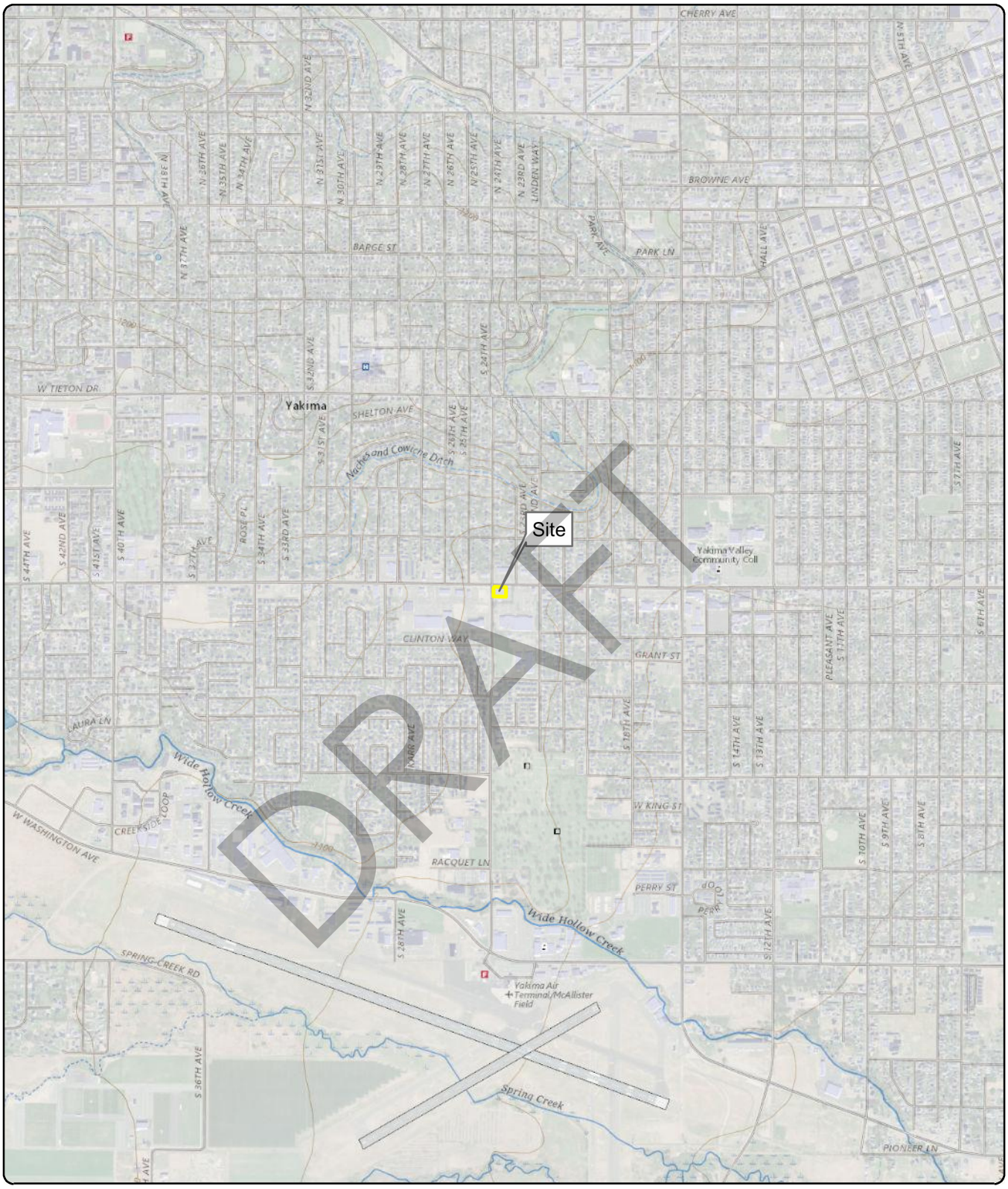
[b]Total xylenes is the sum of m,p- and o-xylene.

[c]Generic TPH CUL.

REFERENCE:

[1]Ecology, Cleanup Levels and Risk Calculation (CLARC) table. February 2021.

FIGURES



Note:
Site address is 2312 W Nob Hill Boulevard, Yakima, WA.

Sources:
Parcels obtained from City of Yakima.
US Geological Survey (1990) 7.5-minute topographic quadrangle: Yakima West.
Section 26, Township 13 North, Range 18 East

Legend

Former Tiger Oil Property

Figure 1
Site Location

City of Yakima
Former Tiger Oil Site
Yakima, Washington

0 1,000 2,000
Feet

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Print Date: 12/8/2021
Approved By: abixby
Produced By: abixby
Project: 0818.02.01

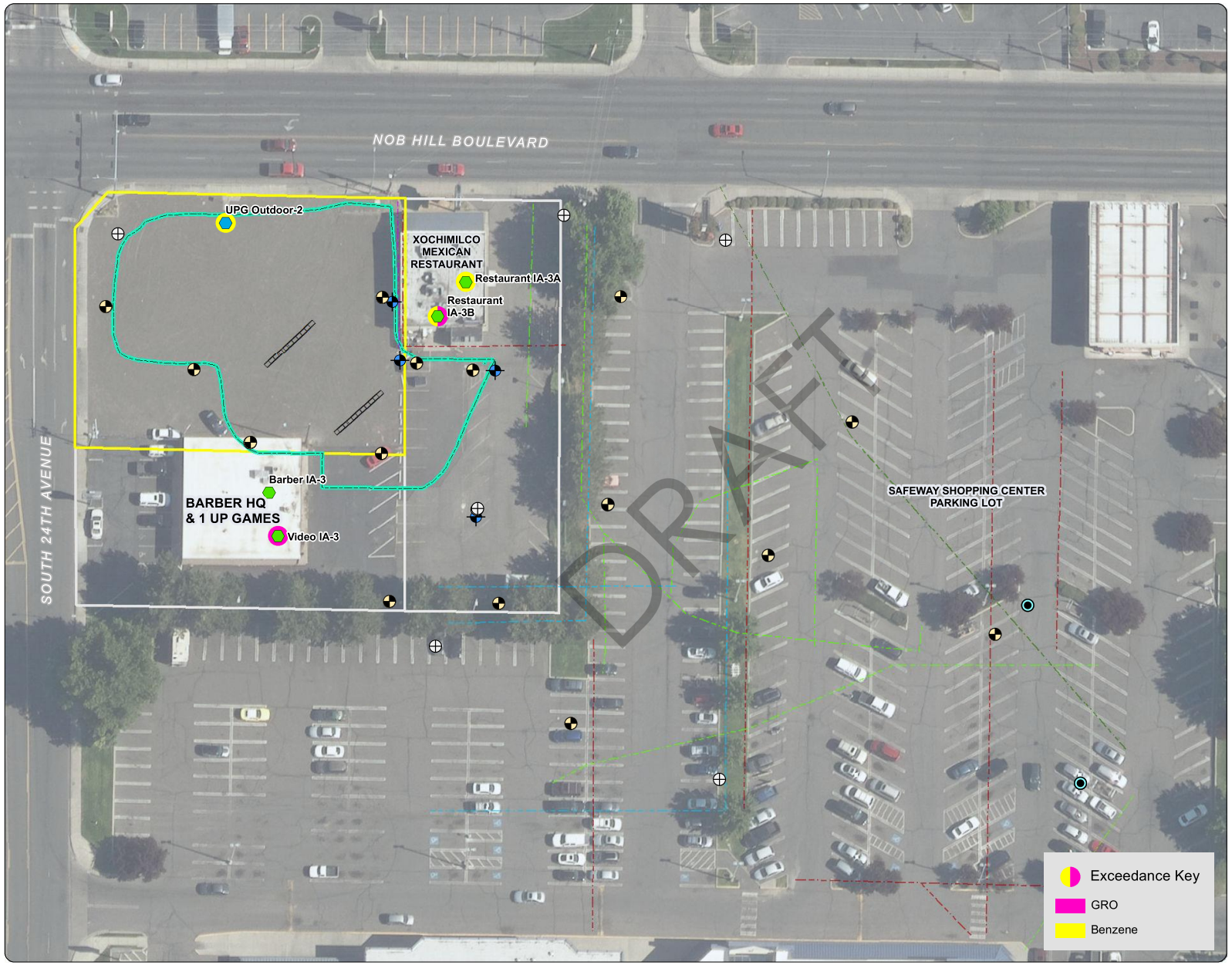

Figure 2
July 2021 Air Quality Assessment Results

City of Yakima
Former Tiger Oil Site
Yakima, Washington

Legend

- Indoor Air Sample
- Ambient Air Sample
- Monitoring Network Well
- Monitoring Well
- Sentry Monitoring Well
- Soil Vapor Probe Monitoring Well
- Infiltration Gallery
- Electric Line
- Gas Line
- Sewer Line
- Stormwater Line
- Water Line
- Interim Remedial Action Area (May 2015)
- Former Tiger Oil Property Boundary
- Adjacent Tax Lot Boundaries

Notes:
All air samples were collected on July 28, 2021.
Air sample results were compared to MTCA Method B CULs.
Benzene was compared to the CUL of 0.32 ug/m3.
GRO was compared to the CUL for TPH of 140 ug/m3.
CULs = cleanup levels.
GRO = gasoline-range organics.
MFA = Maul Foster & Alongi, Inc.
MTCA = Model Toxics Control Act.
TPH = total petroleum hydrocarbons.
ug/m3 = micrograms per cubic meter.

0 25 50
Feet

Sources:
Aerial photograph obtained from Esri ArcGIS Online.
Infiltration Gallery delineated by MFA.
Sstormwater line and parcels obtained from City of Yakima.
All other features obtained from PLSA Engineering & Surveying.

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Path: X:\0818.02 City of Yakima\01 Tiger Oil RFP\27\Fig2_AirMonitoringResults_July2021.mxd
Print Date: 1/28/2021
Approved By: abixby
Produced By: abixby
Project: 0818.02.01

ATTACHMENT A

SITE PHOTOGRAPHS

PHOTOGRAPHS

Project Name: Former Tiger Oil Site—July 2021 Air Assessment
Project Number: 0818.02.01
Location: Yakima, Washington

Photo No. 1.

Description
6-liter Summa® canister placed in the 1 Up Games customer service area for indoor air sample collection (VideoIA-3).

Photo No. 2.

Description
6-liter Summa canister placed in the dining area at the Xochimilco Mexican Restaurant for indoor air sample collection (RestaurantIA-3A).

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PHOTOGRAPHS

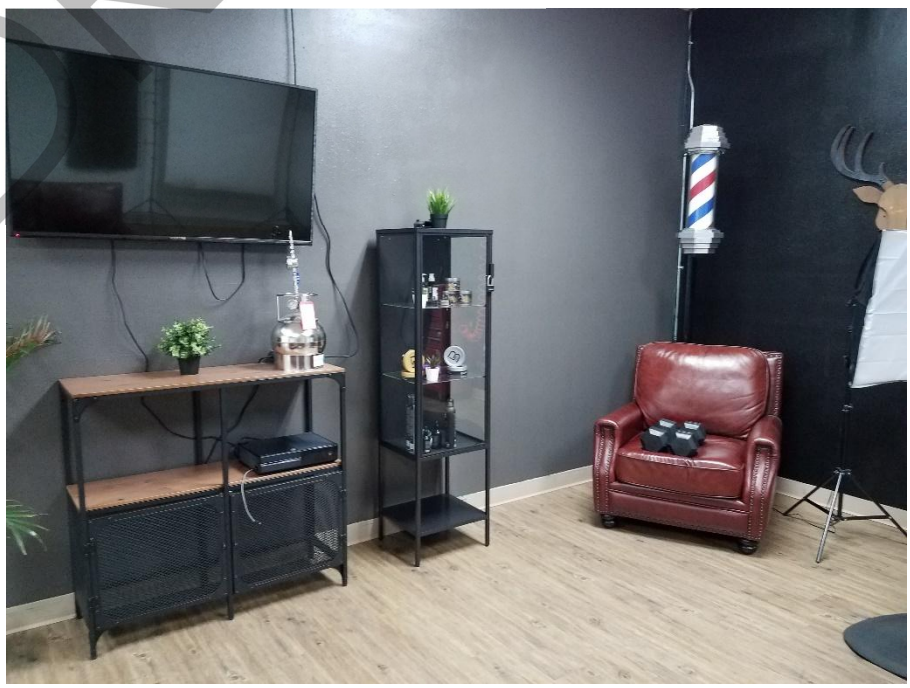
Project Name: Former Tiger Oil Site—July 2021 Air Assessment
Project Number: 0818.02.01
Location: Yakima, Washington

Photo No. 3.

Description
6-liter Summa canister in the kitchen area at the Xochimilco Mexican Restaurant for indoor air sample collection (RestaurantIA-3B).

Photo No. 4.

Description
6-liter Summa canister in the customer lounge area of Barber HQ for indoor air sample collection (Barber IA-3).



PHOTOGRAPHS

Project Name: Former Tiger Oil Site—July 2021 Air Assessment
Project Number: 0818.02.01
Location: Yakima, Washington

Photo No. 5.

Description
6-liter Summa canister placed outside in the north-northwest area of the former Tiger Oil facility for ambient air sample collection (UPG Outdoor-2).

ATTACHMENT B

FIELD SAMPLING DATA SHEET

H&P

Air Sampling into Summa (Indoor, Outdoor, Ambient)

Site Address: 2312 WEST NOB HILL BLVD, YAKIMA, WA Date: 7/28/21

Project Name: FORMER TIGER OIL - INDOOR & AMBIENT AIR QUALITY ASSESSMENT Arrival Time:

Sample Collector: Y. VAN Departure Time:

	Sample Information					Sample Start		Sample Check		Sample Check		Sample End		Field Notes
	Sample ID	Date	Summa ID #	Flow Controller ID #	Flow Rate (hrs or cc/min)	Start Time	Initial Vacuum (" Hg)	Check Time	Check Vacuum (" Hg)	Check Time	Check Vacuum (" Hg)	End Time	End Vacuum (" Hg)	
1	RESTAURANT IA-3A	7/28/21	881	F225	11.5	0801	-30.0	1048	-20.5	1345	-10.5	1628	-5.0	in dining room area
2	BARBER IA-3	7/28/21	892	F227	11.5	0852	-30.0	1051	-23.5	1350	-12.0	1700	-5.0	
3	RESTAURANT IA-3B	7/28/21	897	F228	11.5	0802	-30.0	1049	-22.0	1347	-10.5	1631	-5.0	in kitchen area
4	VIDEO IA-3	7/28/21	894	F230	11.5	0959	-30.0	1052	-26.0	1352	-15.0	1719	-4.0	
5	UPG OUTDOOR-2	7/28/21	896	F246	11.5	0532	-30.5	0754	-24.0	1034	-13.8	1333	-5.0	
6														
7														
8														
9														
10														

Weather Conditions

Weather Summary:

Barometric Pressure: 30.04 in.

Ambient Temp Avg: 95° F

Ambient Temp High/Low: 95/65°

Indoor Air Temp Avg: Variable

Wind Speed/Direction: 4 mph

Other:

Potential Outdoor Sources of Pollution

Source	Location
VEHICLES - BUSY INTERSECTION	UPG OUTDOOR-2

Household Products

Type	Ingredient(s)

Mobile Geochemistry, Inc.
2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com
P 760.804.9678 F 760.804.9159

VAPOR / AIR Chain of Custody

DATE: 7/28/21
Page 1 of 1

Lab Client and Project Information

Lab Client/Consultant: HAULFOSTER ALONGI, INC.	Project Name / #: FORMER TIGER OIL 8218-02-01-27
Lab Client Project Manager: Y. VAN	Project Location: 2312 W. NOB HILL BLVD YAKIMA, WA
Lab Client Address: 2815 2ND AVE, SUITE 540	Report E-Mail(s): YVAN@HAULFOSTER.COM
Lab Client City, State, Zip: SEATTLE, WA 98121	
Phone Number: 253-320-15178	

Reporting Requirements

- [x] Standard Report [ ] Level III [ ] Level IV
- [x] Excel EDD [ ] Other EDD:_____
- [ ] CA Geotracker Global ID:_____

Turnaround Time

- [x] **Standard** (7 days for preliminary report, 10 days for final report)
- [ ] **Rush** (specify):_____

Sampler Information

Sampler(s): Y. VAN
Signature:
Date: 7/28/21

Sample Receipt (Lab Use Only)

Date Rec'd:	Control #:
H&P Project #	
Lab Work Order #	
Sample Intact: [ ] Yes [ ] No [ ] See Notes Below	
Receipt Gauge ID:	Temp:
Outside Lab:	
Receipt Notes/Tracking #:	
Lab PM Initials:	

Additional Instructions to Laboratory:

** Preferred VOC units (please choose one):*
[ ] µg/L [x] µg/m³ [ ] ppbv [ ] ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List [ ] 8260SV [x] TO-15	VOCs Short List / Project List [ ] 8260SV [ ] TO-15	Oxygenates [ ] 8260SV [x] TO-15	Naphthalene [ ] 8260SV [x] TO-15	TPHv as Gas [ ] 8260SVm [x] TO-15m	Aromatic/Aliphatic Fractions [ ] 8260SVm [ ] TO-15m	Leak Check Compound [ ] DFA [ ] IPA [ ] He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 [ ] CO2 [ ] O2 [ ] N2				
RESTAURANT IA-3A		07/28/21	1628	IA	6L	881		X		X	X	X									
BARBER IA-3			1705	IA		893		X		X	X	X									
RESTAURANT IA-3B			1631	IA		897		X		X	X	X									
VIDEO IA-3			1719	IA		894		X		X	X	X									
UPK OUTDOOR-2			1323	AA		896		X		X	X	X									

Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
	HFA	7/29/21	1020				
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:
Approved/Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:

**Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back*

ATTACHMENT C

LABORATORY ANALYTICAL REPORT

H&P Mobile Geochemistry Inc.

12 August 2021

Yen-Vy Van
Maul Foster & Alongi, Inc.
2815 2nd Avenue, Suite 540
Seattle, WA 98121

H&P Project: MFA080421-11
Client Project: Former Tiger Oil / 0818.02.01-27

Dear Yen-Vy Van:

Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 03-Aug-21 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

For
Lisa Eminhizer
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC) for the fields of proficiency and analytes listed on those certificates. H& P is approved as an Environmental Testing Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs for the fields of proficiency and analytes included in the certification process and to the extent offered by the accreditation agency . Unless otherwise noted, accreditation certificate numbers, expiration of certificates, and scope of accreditation can be found at: www.handpmg.com/about/certifications. Fields of services and analytes contained in this report that are not listed on the certificates should be considered uncertified or unavailable for certification.

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Restaurant IA-3A	E108011-01	Vapor	28-Jul-21	03-Aug-21
Barber IA-3	E108011-02	Vapor	28-Jul-21	03-Aug-21
Restaurant IA-3B	E108011-03	Vapor	28-Jul-21	03-Aug-21
Video IA-3	E108011-04	Vapor	28-Jul-21	03-Aug-21
UPG Outdoor - 2	E108011-05	Vapor	28-Jul-21	03-Aug-21

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Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
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Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

DETECTIONS SUMMARY

Sample ID: **Restaurant IA-3A** Laboratory ID: **E108011-01**

Analyte	Result	Reporting Limit	Units	Method	Notes
Dichlorodifluoromethane (F12)	**16**	1.0	ug/m3	EPA TO-15	
Chloromethane	**1.3**	0.21	ug/m3	EPA TO-15	
Trichlorofluoromethane (F11)	**97**	0.56	ug/m3	EPA TO-15	
2-Butanone (MEK)	**3.2**	0.60	ug/m3	EPA TO-15	
Benzene	**0.52**	0.16	ug/m3	EPA TO-15	
1,2-Dichloropropane	**0.56**	0.47	ug/m3	EPA TO-15	
Toluene	**2.9**	0.76	ug/m3	EPA TO-15	
Ethylbenzene	**0.57**	0.44	ug/m3	EPA TO-15	
m,p-Xylene	**2.4**	0.44	ug/m3	EPA TO-15	
Styrene	**35**	0.43	ug/m3	EPA TO-15	
o-Xylene	**1.4**	0.44	ug/m3	EPA TO-15	
4-Ethyltoluene	**0.85**	0.50	ug/m3	EPA TO-15	
1,3,5-Trimethylbenzene	**0.70**	0.50	ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	**2.5**	0.50	ug/m3	EPA TO-15	
TPHv (C5 - C12)	**130**	100	ug/m3	EPA TO-15	

Sample ID: **Barber IA-3** Laboratory ID: **E108011-02**

Analyte	Result	Reporting Limit	Units	Method	Notes
Dichlorodifluoromethane (F12)	**1.4**	1.0	ug/m3	EPA TO-15	
Chloromethane	**1.2**	0.21	ug/m3	EPA TO-15	
Trichlorofluoromethane (F11)	**1.1**	0.56	ug/m3	EPA TO-15	
Tertiary-butyl alcohol (TBA)	**4.8**	1.5	ug/m3	EPA TO-15	
Methylene chloride (Dichloromethane)	**0.63**	0.35	ug/m3	EPA TO-15	
2-Butanone (MEK)	**4.6**	0.60	ug/m3	EPA TO-15	
Benzene	**0.32**	0.16	ug/m3	EPA TO-15	
Toluene	**1.9**	0.76	ug/m3	EPA TO-15	
Ethylbenzene	**0.48**	0.44	ug/m3	EPA TO-15	
m,p-Xylene	**1.9**	0.44	ug/m3	EPA TO-15	
Styrene	**0.65**	0.43	ug/m3	EPA TO-15	
o-Xylene	**0.84**	0.44	ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	**0.50**	0.50	ug/m3	EPA TO-15	
TPHv (C5 - C12)	**130**	100	ug/m3	EPA TO-15	

Sample ID: **Restaurant IA-3B** Laboratory ID: **E108011-03**

Analyte	Result	Reporting Limit	Units	Method	Notes

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2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
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Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Sample ID: **Restaurant IA-3B** Laboratory ID: **E108011-03**

Analyte	Result	Reporting Limit	Units	Method	Notes
Dichlorodifluoromethane (F12)	**16**	1.0	ug/m3	EPA TO-15	
Chloromethane	**1.3**	0.21	ug/m3	EPA TO-15	
Trichlorofluoromethane (F11)	**100**	0.56	ug/m3	EPA TO-15	
Tertiary-butyl alcohol (TBA)	**1.6**	1.5	ug/m3	EPA TO-15	
Methylene chloride (Dichloromethane)	**0.35**	0.35	ug/m3	EPA TO-15	
trans-1,2-Dichloroethene	**0.40**	0.40	ug/m3	EPA TO-15	
2-Butanone (MEK)	**3.6**	0.60	ug/m3	EPA TO-15	
Benzene	**0.58**	0.16	ug/m3	EPA TO-15	
1,2-Dichloropropane	**0.61**	0.47	ug/m3	EPA TO-15	
Toluene	**2.7**	0.76	ug/m3	EPA TO-15	
Tetrachloroethene	**1.5**	0.69	ug/m3	EPA TO-15	
Ethylbenzene	**0.62**	0.44	ug/m3	EPA TO-15	
m,p-Xylene	**2.3**	0.44	ug/m3	EPA TO-15	
Styrene	**49**	0.43	ug/m3	EPA TO-15	
o-Xylene	**1.4**	0.44	ug/m3	EPA TO-15	
4-Ethyltoluene	**1.2**	0.50	ug/m3	EPA TO-15	
1,3,5-Trimethylbenzene	**0.90**	0.50	ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	**3.4**	0.50	ug/m3	EPA TO-15	
TPHv (C5 - C12)	**170**	100	ug/m3	EPA TO-15	

Sample ID: **Video IA-3** Laboratory ID: **E108011-04**

Analyte	Result	Reporting Limit	Units	Method	Notes
Dichlorodifluoromethane (F12)	**1.4**	1.0	ug/m3	EPA TO-15	
Chloromethane	**1.3**	0.21	ug/m3	EPA TO-15	
Trichlorofluoromethane (F11)	**0.96**	0.56	ug/m3	EPA TO-15	
Tertiary-butyl alcohol (TBA)	**2.4**	1.5	ug/m3	EPA TO-15	
Methylene chloride (Dichloromethane)	**0.46**	0.35	ug/m3	EPA TO-15	
2-Butanone (MEK)	**3.6**	0.60	ug/m3	EPA TO-15	
Benzene	**0.32**	0.16	ug/m3	EPA TO-15	
4-Methyl-2-pentanone (MIBK)	**1.2**	0.83	ug/m3	EPA TO-15	
Toluene	**2.7**	0.76	ug/m3	EPA TO-15	
Ethylbenzene	**0.48**	0.44	ug/m3	EPA TO-15	
m,p-Xylene	**2.3**	0.44	ug/m3	EPA TO-15	
Styrene	**0.47**	0.43	ug/m3	EPA TO-15	
o-Xylene	**1.2**	0.44	ug/m3	EPA TO-15	
TPHv (C5 - C12)	**630**	100	ug/m3	EPA TO-15	

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2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

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2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Sample ID: **UPG Outdoor - 2** Laboratory ID: **E108011-05**

Analyte	Result	Reporting Limit	Units	Method	Notes
Dichlorodifluoromethane (F12)	**1.4**	1.0	ug/m3	EPA TO-15	
Chloromethane	**1.1**	0.21	ug/m3	EPA TO-15	
Trichlorofluoromethane (F11)	**1.0**	0.56	ug/m3	EPA TO-15	
Methylene chloride (Dichloromethane)	**0.39**	0.35	ug/m3	EPA TO-15	
2-Butanone (MEK)	**1.2**	0.60	ug/m3	EPA TO-15	
Benzene	**0.65**	0.16	ug/m3	EPA TO-15	
Toluene	**2.6**	0.76	ug/m3	EPA TO-15	
Ethylbenzene	**0.48**	0.44	ug/m3	EPA TO-15	
m,p-Xylene	**1.8**	0.44	ug/m3	EPA TO-15	
o-Xylene	**0.75**	0.44	ug/m3	EPA TO-15	
1,2,4-Trimethylbenzene	**0.60**	0.50	ug/m3	EPA TO-15	

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Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Restaurant IA-3A (E108011-01) Vapor	**Sampled: 28-Jul-21**	**Received: 03-Aug-21**							
Dichlorodifluoromethane (F12)	**16**	1.0	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Chloromethane	**1.3**	0.21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	0.71	"	"	"	"	"	"	
Vinyl chloride	ND	0.13	"	"	"	"	"	"	
Bromomethane	ND	0.39	"	"	"	"	"	"	
Chloroethane	ND	0.27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	**97**	0.56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	1.5	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	ND	0.35	"	"	"	"	"	"	
Carbon disulfide	ND	0.32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.91	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
2-Butanone (MEK)	**3.2**	0.60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	0.85	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	0.85	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.41	"	"	"	"	"	"	
Benzene	**0.52**	0.16	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.64	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	0.85	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
1,2-Dichloropropane	**0.56**	0.47	"	"	"	"	"	"	
Bromodichloromethane	ND	0.68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	0.83	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
Toluene	**2.9**	0.76	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	0.83	"	"	"	"	"	"	
Dibromochloromethane	ND	1.7	"	"	"	"	"	"	
Tetrachloroethene	ND	0.69	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.78	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Restaurant IA-3A (E108011-01) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
Chlorobenzene	ND	0.47	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Ethylbenzene	**0.57**	0.44	"	"	"	"	"	"	
m,p-Xylene	**2.4**	0.44	"	"	"	"	"	"	
Styrene	**35**	0.43	"	"	"	"	"	"	
o-Xylene	**1.4**	0.44	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	
4-Ethyltoluene	**0.85**	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**0.70**	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**2.5**	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
Naphthalene	ND	0.53	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.9	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.7	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*96.8 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*100 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*102 %*		*77-127*	"	"	"	"	
Barber IA-3 (E108011-02) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
Dichlorodifluoromethane (F12)	**1.4**	1.0	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Chloromethane	**1.2**	0.21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	0.71	"	"	"	"	"	"	
Vinyl chloride	ND	0.13	"	"	"	"	"	"	
Bromomethane	ND	0.39	"	"	"	"	"	"	
Chloroethane	ND	0.27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	**1.1**	0.56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	**4.8**	1.5	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	**0.63**	0.35	"	"	"	"	"	"	
Carbon disulfide	ND	0.32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.91	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
2-Butanone (MEK)	**4.6**	0.60	"	"	"	"	"	"	

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Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Barber IA-3 (E108011-02) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
cis-1,2-Dichloroethene	ND	0.40	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Diisopropyl ether (DIPE)	ND	0.85	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	0.85	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.41	"	"	"	"	"	"	
Benzene	**0.32**	0.16	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.64	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	0.85	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.47	"	"	"	"	"	"	
Bromodichloromethane	ND	0.68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	0.83	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
Toluene	**1.9**	0.76	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	0.83	"	"	"	"	"	"	
Dibromochloromethane	ND	1.7	"	"	"	"	"	"	
Tetrachloroethene	ND	0.69	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.78	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	
Chlorobenzene	ND	0.47	"	"	"	"	"	"	
Ethylbenzene	**0.48**	0.44	"	"	"	"	"	"	
m,p-Xylene	**1.9**	0.44	"	"	"	"	"	"	
Styrene	**0.65**	0.43	"	"	"	"	"	"	
o-Xylene	**0.84**	0.44	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	
4-Ethyltoluene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**0.50**	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
Naphthalene	ND	0.53	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.9	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.7	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Barber IA-3 (E108011-02) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
Surrogate: 1,2-Dichloroethane-d4		*94.1 %*		*76-134*	*EH10416*	*04-Aug-21*	*05-Aug-21*	*EPA TO-15*	
Surrogate: Toluene-d8		*102 %*		*78-125*	*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*95.8 %*		*77-127*	*"*	*"*	*"*	*"*	
Restaurant IA-3B (E108011-03) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
Dichlorodifluoromethane (F12)	**16**	1.0	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Chloromethane	**1.3**	0.21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	0.71	"	"	"	"	"	"	
Vinyl chloride	ND	0.13	"	"	"	"	"	"	
Bromomethane	ND	0.39	"	"	"	"	"	"	
Chloroethane	ND	0.27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	**100**	0.56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	**1.6**	1.5	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	**0.35**	0.35	"	"	"	"	"	"	
Carbon disulfide	ND	0.32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	**0.40**	0.40	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.91	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
2-Butanone (MEK)	**3.6**	0.60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	0.85	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	0.85	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.41	"	"	"	"	"	"	
Benzene	**0.58**	0.16	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.64	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	0.85	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
1,2-Dichloropropane	**0.61**	0.47	"	"	"	"	"	"	
Bromodichloromethane	ND	0.68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	0.83	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
Toluene	**2.7**	0.76	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.55	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Restaurant IA-3B (E108011-03) Vapor	**Sampled: 28-Jul-21**	**Received: 03-Aug-21**							
2-Hexanone (MBK)	ND	0.83	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Dibromochloromethane	ND	1.7	"	"	"	"	"	"	
Tetrachloroethene	**1.5**	0.69	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.78	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	
Chlorobenzene	ND	0.47	"	"	"	"	"	"	
Ethylbenzene	**0.62**	0.44	"	"	"	"	"	"	
m,p-Xylene	**2.3**	0.44	"	"	"	"	"	"	
Styrene	**49**	0.43	"	"	"	"	"	"	
o-Xylene	**1.4**	0.44	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	
4-Ethyltoluene	**1.2**	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**0.90**	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**3.4**	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
Naphthalene	ND	0.53	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.9	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.7	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95.2 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*101 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*104 %*		*77-127*	"	"	"	"	

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Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Video IA-3 (E108011-04) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
Dichlorodifluoromethane (F12)	**1.4**	1.0	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Chloromethane	**1.3**	0.21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	0.71	"	"	"	"	"	"	
Vinyl chloride	ND	0.13	"	"	"	"	"	"	
Bromomethane	ND	0.39	"	"	"	"	"	"	
Chloroethane	ND	0.27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	**0.96**	0.56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	**2.4**	1.5	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	**0.46**	0.35	"	"	"	"	"	"	
Carbon disulfide	ND	0.32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.91	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
2-Butanone (MEK)	**3.6**	0.60	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Diisopropyl ether (DIPE)	ND	0.85	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	0.85	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.41	"	"	"	"	"	"	
Benzene	**0.32**	0.16	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.64	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	0.85	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.47	"	"	"	"	"	"	
Bromodichloromethane	ND	0.68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	**1.2**	0.83	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
Toluene	**2.7**	0.76	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	0.83	"	"	"	"	"	"	
Dibromochloromethane	ND	1.7	"	"	"	"	"	"	
Tetrachloroethene	ND	0.69	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.78	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Video IA-3 (E108011-04) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
Chlorobenzene	ND	0.47	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Ethylbenzene	**0.48**	0.44	"	"	"	"	"	"	
m,p-Xylene	**2.3**	0.44	"	"	"	"	"	"	
Styrene	**0.47**	0.43	"	"	"	"	"	"	
o-Xylene	**1.2**	0.44	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	
4-Ethyltoluene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
Naphthalene	ND	0.53	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.9	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.7	"	"	"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*95.7 %*		*76-134*	"	"	"	"	
Surrogate: Toluene-d8		*94.9 %*		*78-125*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*91.4 %*		*77-127*	"	"	"	"	
UPG Outdoor - 2 (E108011-05) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
Dichlorodifluoromethane (F12)	**1.4**	1.0	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Chloromethane	**1.1**	0.21	"	"	"	"	"	"	
Dichlorotetrafluoroethane (F114)	ND	0.71	"	"	"	"	"	"	
Vinyl chloride	ND	0.13	"	"	"	"	"	"	
Bromomethane	ND	0.39	"	"	"	"	"	"	
Chloroethane	ND	0.27	"	"	"	"	"	"	
Trichlorofluoromethane (F11)	**1.0**	0.56	"	"	"	"	"	"	
1,1-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Tertiary-butyl alcohol (TBA)	ND	1.5	"	"	"	"	"	"	
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"	"	"	"	"	"	
Methylene chloride (Dichloromethane)	**0.39**	0.35	"	"	"	"	"	"	
Carbon disulfide	ND	0.32	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	0.40	"	"	"	"	"	"	
Methyl tertiary-butyl ether (MTBE)	ND	0.91	"	"	"	"	"	"	
1,1-Dichloroethane	ND	0.41	"	"	"	"	"	"	
2-Butanone (MEK)	**1.2**	0.60	"	"	"	"	"	"	

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Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
UPG Outdoor - 2 (E108011-05) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
cis-1,2-Dichloroethene	ND	0.40	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Diisopropyl ether (DIPE)	ND	0.85	"	"	"	"	"	"	
Chloroform	ND	0.25	"	"	"	"	"	"	
Ethyl tert-butyl ether (ETBE)	ND	0.85	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	0.55	"	"	"	"	"	"	
1,2-Dichloroethane (EDC)	ND	0.41	"	"	"	"	"	"	
Benzene	**0.65**	0.16	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.64	"	"	"	"	"	"	
Tertiary-amyl methyl ether (TAME)	ND	0.85	"	"	"	"	"	"	
Trichloroethene	ND	0.55	"	"	"	"	"	"	
1,2-Dichloropropane	ND	0.47	"	"	"	"	"	"	
Bromodichloromethane	ND	0.68	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
4-Methyl-2-pentanone (MIBK)	ND	0.83	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	0.46	"	"	"	"	"	"	
Toluene	**2.6**	0.76	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	0.55	"	"	"	"	"	"	
2-Hexanone (MBK)	ND	0.83	"	"	"	"	"	"	
Dibromochloromethane	ND	1.7	"	"	"	"	"	"	
Tetrachloroethene	ND	0.69	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	0.78	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	
Chlorobenzene	ND	0.47	"	"	"	"	"	"	
Ethylbenzene	**0.48**	0.44	"	"	"	"	"	"	
m,p-Xylene	**1.8**	0.44	"	"	"	"	"	"	
Styrene	ND	0.43	"	"	"	"	"	"	
o-Xylene	**0.75**	0.44	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	0.70	"	"	"	"	"	"	
4-Ethyltoluene	ND	0.50	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	0.50	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**0.60**	0.50	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	0.61	"	"	"	"	"	"	
Naphthalene	ND	0.53	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.9	"	"	"	"	"	"	
Hexachlorobutadiene	ND	2.7	"	"	"	"	"	"	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
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Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
UPG Outdoor - 2 (E108011-05) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
Surrogate: 1,2-Dichloroethane-d4		*92.1 %*		*76-134*	*EH10416*	*04-Aug-21*	*05-Aug-21*	*EPA TO-15*	
Surrogate: Toluene-d8		*103 %*		*78-125*	*"*	*"*	*"*	*"*	
Surrogate: 4-Bromofluorobenzene		*98.5 %*		*77-127*	*"*	*"*	*"*	*"*	

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2470 Impala Drive
Carlsbad, CA 92010
760-804-9678 Phone
760-804-9159 Fax

Maul Foster & Alongi, Inc.	Project: MFA080421-11	
2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Petroleum Hydrocarbon Analysis by EPA TO-15

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Dilution Factor	Batch	Prepared	Analyzed	Method	Notes
Restaurant IA-3A (E108011-01) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
TPHv (C5 - C12)	**130**	100	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Barber IA-3 (E108011-02) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
TPHv (C5 - C12)	**130**	100	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Restaurant IA-3B (E108011-03) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
TPHv (C5 - C12)	**170**	100	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
Video IA-3 (E108011-04) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
TPHv (C5 - C12)	**630**	100	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	
UPG Outdoor - 2 (E108011-05) Vapor Sampled: 28-Jul-21 Received: 03-Aug-21									
TPHv (C5 - C12)	ND	100	ug/m3	1	EH10416	04-Aug-21	05-Aug-21	EPA TO-15	

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2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH10416 - TO-15										
Blank (EH10416-BLK1)				Prepared & Analyzed: 04-Aug-21						
Dichlorodifluoromethane (F12)	ND	1.0	ug/m3							
Chloromethane	ND	0.21	"							
Dichlorotetrafluoroethane (F114)	ND	0.71	"							
Vinyl chloride	ND	0.13	"							
Bromomethane	ND	0.39	"							
Chloroethane	ND	0.27	"							
Trichlorofluoromethane (F11)	ND	0.56	"							
1,1-Dichloroethene	ND	0.40	"							
Tertiary-butyl alcohol (TBA)	ND	1.5	"							
1,1,2-Trichlorotrifluoroethane (F113)	ND	0.77	"							
Methylene chloride (Dichloromethane)	ND	0.35	"							
Carbon disulfide	ND	0.32	"							
trans-1,2-Dichloroethene	ND	0.40	"							
Methyl tertiary-butyl ether (MTBE)	ND	0.91	"							
1,1-Dichloroethane	ND	0.41	"							
2-Butanone (MEK)	ND	0.60	"							
cis-1,2-Dichloroethene	ND	0.40	"							
Diisopropyl ether (DIPE)	ND	0.85	"							
Chloroform	ND	0.25	"							
Ethyl tert-butyl ether (ETBE)	ND	0.85	"							
1,1,1-Trichloroethane	ND	0.55	"							
1,2-Dichloroethane (EDC)	ND	0.41	"							
Benzene	ND	0.16	"							
Carbon tetrachloride	ND	0.64	"							
Tertiary-amyl methyl ether (TAME)	ND	0.85	"							
Trichloroethene	ND	0.55	"							
1,2-Dichloropropane	ND	0.47	"							
Bromodichloromethane	ND	0.68	"							
cis-1,3-Dichloropropene	ND	0.46	"							
4-Methyl-2-pentanone (MIBK)	ND	0.83	"							
trans-1,3-Dichloropropene	ND	0.46	"							
Toluene	ND	0.76	"							
1,1,2-Trichloroethane	ND	0.55	"							
2-Hexanone (MBK)	ND	0.83	"							

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2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH10416 - TO-15										
Blank (EH10416-BLK1)				Prepared & Analyzed: 04-Aug-21						
Dibromochloromethane	ND	1.7	ug/m3							
Tetrachloroethene	ND	0.69	"							
1,2-Dibromoethane (EDB)	ND	0.78	"							
1,1,1,2-Tetrachloroethane	ND	0.70	"							
Chlorobenzene	ND	0.47	"							
Ethylbenzene	ND	0.44	"							
m,p-Xylene	ND	0.44	"							
Styrene	ND	0.43	"							
o-Xylene	ND	0.44	"							
Bromoform	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	0.70	"							
4-Ethyltoluene	ND	0.50	"							
1,3,5-Trimethylbenzene	ND	0.50	"							
1,2,4-Trimethylbenzene	ND	0.50	"							
1,3-Dichlorobenzene	ND	0.61	"							
1,4-Dichlorobenzene	ND	0.61	"							
1,2-Dichlorobenzene	ND	0.61	"							
Naphthalene	ND	0.53	"							
1,2,4-Trichlorobenzene	ND	1.9	"							
Hexachlorobutadiene	ND	2.7	"							
Surrogate: 1,2-Dichloroethane-d4	*199*		"	*214*		*93.1*	*76-134*			
Surrogate: Toluene-d8	*202*		"	*208*		*97.2*	*78-125*			
Surrogate: 4-Bromofluorobenzene	*328*		"	*363*		*90.3*	*77-127*			
LCS (EH10416-BS1)				Prepared: 04-Aug-21 Analyzed: 05-Aug-21						
Dichlorodifluoromethane (F12)	90.5	1.0	ug/m3	101		89.8	59-128			
Vinyl chloride	51.1	0.13	"	52.0		98.4	64-127			
Chloroethane	51.0	0.27	"	53.6		95.2	63-127			
Trichlorofluoromethane (F11)	95.5	0.56	"	113		84.4	62-126			
1,1-Dichloroethene	73.9	0.40	"	80.8		91.5	61-133			
1,1,2-Trichlorotrifluoroethane (F113)	144	0.77	"	155		92.6	66-126			
Methylene chloride (Dichloromethane)	68.3	0.35	"	70.8		96.5	62-115			
trans-1,2-Dichloroethene	72.1	0.40	"	80.8		89.2	67-124			

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2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH10416 - TO-15										
LCS (EH10416-BS1)				Prepared: 04-Aug-21 Analyzed: 05-Aug-21						
1,1-Dichloroethane	76.4	0.41	ug/m3	82.4		92.7	68-126			
cis-1,2-Dichloroethene	71.4	0.40	"	80.0		89.3	70-121			
Chloroform	91.1	0.25	"	99.2		91.8	68-123			
1,1,1-Trichloroethane	100	0.55	"	111		90.2	68-125			
1,2-Dichloroethane (EDC)	71.4	0.41	"	82.4		86.7	65-128			
Benzene	59.4	0.16	"	64.8		91.7	69-119			
Carbon tetrachloride	118	0.64	"	128		92.4	68-132			
Trichloroethene	104	0.55	"	110		94.6	71-123			
Toluene	71.3	0.76	"	76.8		92.8	66-119			
1,1,2-Trichloroethane	107	0.55	"	111		96.6	73-119			
Tetrachloroethene	125	0.69	"	138		90.7	66-124			
1,1,1,2-Tetrachloroethane	160	0.70	"	140		114	67-129			
Ethylbenzene	89.7	0.44	"	88.4		102	70-124			
m,p-Xylene	89.4	0.44	"	88.4		101	61-134			
o-Xylene	86.4	0.44	"	88.4		97.8	67-125			
1,1,2,2-Tetrachloroethane	151	0.70	"	140		108	65-127			
Surrogate: 1,2-Dichloroethane-d4	*204*		"	*214*		*95.5*	*76-134*			
Surrogate: Toluene-d8	*208*		"	*208*		*100*	*78-125*			
Surrogate: 4-Bromofluorobenzene	*376*		"	*363*		*104*	*77-127*			
LCS Dup (EH10416-BSD1)				Prepared: 04-Aug-21 Analyzed: 05-Aug-21						
Dichlorodifluoromethane (F12)	89.7	1.0	ug/m3	101		89.0	59-128	0.947	25	
Vinyl chloride	50.4	0.13	"	52.0		96.9	64-127	1.48	25	
Chloroethane	49.2	0.27	"	53.6		91.8	63-127	3.63	25	
Trichlorofluoromethane (F11)	96.9	0.56	"	113		85.6	62-126	1.41	25	
1,1-Dichloroethene	73.2	0.40	"	80.8		90.6	61-133	0.984	25	
1,1,2-Trichlorotrifluoroethane (F113)	144	0.77	"	155		92.8	66-126	0.215	25	
Methylene chloride (Dichloromethane)	68.2	0.35	"	70.8		96.3	62-115	0.207	25	
trans-1,2-Dichloroethene	70.8	0.40	"	80.8		87.6	67-124	1.80	25	
1,1-Dichloroethane	75.9	0.41	"	82.4		92.1	68-126	0.593	25	
cis-1,2-Dichloroethene	69.7	0.40	"	80.0		87.2	70-121	2.39	25	
Chloroform	90.8	0.25	"	99.2		91.5	68-123	0.380	25	
1,1,1-Trichloroethane	100	0.55	"	111		90.0	68-125	0.220	25	

H&P Mobile
Geochemistry Inc.

2470 Impala Drive
Carlsbad, CA 92010
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2815 2nd Avenue, Suite 540	Project Number: Former Tiger Oil / 0818.02.01-27	Reported:
Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Volatile Organic Compounds by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH10416 - TO-15										
LCS Dup (EH10416-BSD1)				Prepared: 04-Aug-21 Analyzed: 05-Aug-21						
1,2-Dichloroethane (EDC)	70.5	0.41	ug/m3	82.4		85.6	65-128	1.27	25	
Benzene	58.5	0.16	"	64.8		90.3	69-119	1.59	25	
Carbon tetrachloride	118	0.64	"	128		92.3	68-132	0.108	25	
Trichloroethene	107	0.55	"	110		97.3	71-123	2.80	25	
Toluene	70.9	0.76	"	76.8		92.3	66-119	0.537	25	
1,1,2-Trichloroethane	108	0.55	"	111		97.4	73-119	0.869	25	
Tetrachloroethene	128	0.69	"	138		92.9	66-124	2.45	25	
1,1,1,2-Tetrachloroethane	161	0.70	"	140		115	67-129	1.04	25	
Ethylbenzene	88.5	0.44	"	88.4		100	70-124	1.33	25	
m,p-Xylene	87.5	0.44	"	88.4		99.0	61-134	2.19	25	
o-Xylene	86.7	0.44	"	88.4		98.0	67-125	0.254	25	
1,1,2,2-Tetrachloroethane	147	0.70	"	140		105	65-127	2.20	25	
Surrogate: 1,2-Dichloroethane-d4	*203*		"	*214*		*95.1*	*76-134*			
Surrogate: Toluene-d8	*208*		"	*208*		*99.9*	*78-125*			
Surrogate: 4-Bromofluorobenzene	*380*		"	*363*		*105*	*77-127*			

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Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Petroleum Hydrocarbon Analysis by EPA TO-15 - Quality Control

H&P Mobile Geochemistry, Inc.

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EH10416 - TO-15										
Blank (EH10416-BLK1)				Prepared & Analyzed: 04-Aug-21						
TPHv (C5 - C12)	ND	100	ug/m3							

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Seattle, WA 98121	Project Manager: Yen-Vy Van	12-Aug-21 13:43

Notes and Definitions

LCC	Leak Check Compound
ND	Analyte NOT DETECTED at or above the reporting limit
MDL	Method Detection Limit
%REC	Percent Recovery
RPD	Relative Percent Difference

All soil results are reported in wet weight.

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs through PJLA, accreditation number 69070 for EPA Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743 & 2745.

H&P is approved by the State of Louisiana Department of Environmental Quality under the National Environmental Laboratory Accreditation Conference (NELAC) certification number 04138

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

Mobile Geochemistry, Inc.
2470 Impala Drive, Carlsbad, CA 92010
& Field Office - Signal Hill, CA
W handpmg.com E info@handpmg.com
P 760.804.9678 F 760.804.9159

VAPOR / AIR Chain of Custody

DATE: 7/28/21
Page 1 of 1

Lab Client and Project Information

Lab Client/Consultant: HAUL FOSTER & ALONGI, INC.
Lab Client Project Manager: Y. VAN
Lab Client Address: 2815 2ND AVE, SUITE 540
Lab Client City, State, Zip: SEATTLE, WA 98121
Phone Number: 253-320-5378

Project Name / #: FORMER TIGER OIL 08.18.02.01 - 27
Project Location: 2312 W. NOB HILL BLVD YAKIMA, WA
Report E-Mail(s): [redacted] YVAN@HAULFOSTER.COM

Reporting Requirements

☒ Standard Report ☐ Level III ☐ Level IV
☒ Excel EDD ☐ Other EDD: _____
☐ CA Geotracker Global ID: _____

Turnaround Time

☒ **Standard** (7 days for preliminary report, 10 days for final report)
☐ **Rush** (specify): _____

Sampler Information

Sampler(s): Y. VAN
Signature: [signature]
Date: 7/28/21

Sample Receipt (Lab Use Only)

Date Rec'd: 8/3 Control #: 210490.02
H&P Project # MFA080421-11
Lab Work Order # E108011
Sample Intact: ☒ Yes ☐ No ☐ See Notes Below
Receipt Gauge ID: 60206 Temp: RT
Outside Lab:
Receipt Notes/Tracking #:
1Z93TT6190499 50684
1Z93TT6190 5067 8173
1Z93TT6190 4985 4789
Lab PM Initials: MA

Additional Instructions to Laboratory:

* **Preferred VOC units (please choose one):**
☐ µg/L ☒ µg/m³ ☐ ppbv ☐ ppmv

SAMPLE NAME	FIELD POINT NAME (if applicable)	DATE mm/dd/yy	TIME 24hr clock	SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV)	CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc.	CONTAINER ID (###)	Lab use only: Receipt Vac	VOCs Standard Full List ☐ 8260SV ☒ TO-15	VOCs Short List / Project List ☐ 8260SV ☐ TO-15	Oxygenates ☐ 8260SV ☒ TO-15	Naphthalene ☐ 8260SV ☒ TO-15	TPHv as Gas ☐ 8260SVm ☒ TO-15m	Aromatic/Aliphatic Fractions ☐ 8260SVm ☐ TO-15m	Leak Check Compound ☐ DFA ☐ IPA ☐ He	Methane by EPA 8015m	Fixed Gases by ASTM D1945 ☐ CO2 ☐ O2 ☐ N2
RESTAURANT IA-3A		07/28/21	1628	IA	6L SUMMA	881	-3.07	X		X	X	X				
BARBER IA-3			1700	IA		892	-2.75	X		X	X	X				
RESTAURANT IA-3B			1631	IA		897	-2.91	X		X	X	X				
VIDEO IA-3			1719	IA		894	-3.93	X		X	X	X				
UPG OUTDOOR-2			1333	AA		896	-3.27	X		X	X	X				

	Company	Date	Time
Approved/Relinquished by: [signature]	MFA	7/29/21	1020
Approved/Relinquished by:			
Approved/Relinquished by:			

	Company	Date	Time
Received by: [signature]	H&P	8/3/21	15:30
Received by:			
Received by:			

*Approval constitutes as authorization to proceed with analysis and acceptance of conditions on back

ATTACHMENT D

DATA VALIDATION MEMORANDUM

DATA QUALITY ASSURANCE/QUALITY CONTROL REVIEW

PROJECT NO. 0818.02.01 | AUGUST 17, 2021 | CITY OF YAKIMA

Maul Foster & Alongi, Inc., conducted an independent review of the quality of analytical results for indoor and outdoor air samples collected at the former Tiger Oil site, located at 2312 West Nob Hill Boulevard in Yakima, Washington. The samples were collected on July 28, 2021.

H&P Mobile Geochemistry, Inc. (HP) performed the analyses. HP report MFA080421-11 was reviewed. The analyses performed and the samples analyzed are listed below.

Analysis	Reference
Gasoline-Range Hydrocarbons (C5-C12)[a]	EPA TO-15
Volatile Organic Compounds	EPA TO-15

NOTES:
EPA = U.S. Environmental Protection Agency.
TO = toxic organics.
[a]Reported by H&P Mobile Geochemistry, Inc., as volatile total petroleum hydrocarbons (C5-C12).

Samples Analyzed
Report MFA080421-11
Restaurant IA-3A
Barber IA-3
Restaurant IA-3B
Video IA-3
UPG Outdoor - 2

DATA QUALIFICATIONS

Analytical results were evaluated according to applicable sections of U.S. Environmental Protection Agency (EPA) procedures (EPA, 2017) and appropriate laboratory and method-specific guidelines (EPA, 1986, 1999; HP, 2021).

Data validation procedures were modified, as appropriate, to accommodate quality-control requirements for methods not specifically addressed by the EPA procedures (e.g., TO-15).

The data are considered acceptable for their intended use, with the appropriate data qualifiers assigned.

HOLDING TIMES, PRESERVATION, AND SAMPLE STORAGE

Holding Times

Extractions and analyses were performed within the recommended holding time criteria.

Preservation and Sample Storage

The samples were collected and stored appropriately.

BLANKS

Method Blanks

Laboratory method blank analyses were performed at the required frequencies. All laboratory method blanks were non-detect at laboratory reporting limits.

SURROGATE RECOVERY RESULTS

The samples were spiked with surrogate compounds to evaluate laboratory performance on individual samples, with the exception of samples analyzed for gasoline-range hydrocarbons by EPA Method TO-15. All surrogate results were within percent recovery acceptance limits.

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

Matrix spike/matrix spike duplicate (MS/MSD) results are used to evaluate laboratory precision and accuracy. As MSs/MSDs are not required for soil vapor methods, they were not analyzed for this report.

LABORATORY DUPLICATE RESULTS

Duplicate results are used to evaluate laboratory precision. No laboratory duplicates were reported.

LABORATORY CONTROL SAMPLE/LABORATORY CONTROL SAMPLE DUPLICATE RESULTS

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) is spiked with target analytes to provide information on laboratory precision and accuracy. The LCS/LCSD samples were extracted and analyzed at the required frequency. The reviewer confirmed that LCS/LCSD batch quality control samples were not reported for gasoline-range hydrocarbons analyzed by EPA Method TO-15. All LCS/LCSD results were within acceptance limits for percent recovery and relative percent difference.

FIELD DUPLICATE RESULTS

Field duplicate samples measure both field and laboratory precision. No field duplicates were submitted for analysis.

REPORTING LIMITS

HP used routine reporting limits for non-detect results.

DATA PACKAGE

The data packages were reviewed for transcription errors, omissions, and anomalies.

According to report MFA080421-11, sample names were recorded on the chain of custody as RESTAURANT IA-3A, BARBER IA-3, RESTAURANT IA-3B, VIDEO IA-3, and UPG OUTDOOR-2, and were reported by HP as Restaurant IA-3A, Barber IA-3, Restaurant IA-3B, Video IA-3, and UPG Outdoor - 2. No action by the reviewer was required.

No additional issues were found.

REFERENCES

EPA. 1986. Test methods for evaluating solid waste, physical/chemical methods. EPA publication SW-846. 3d ed. U.S. Environmental Protection Agency. Final updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), V (2015), VI phase I (2017), and VI phase II (2018), VI phase III (2019).

EPA. 1999. Compendium method TO-15. Determination of volatile organic compounds (VOCs) in air collected in specially-prepared canisters and analyzed by gas chromatography/mass spectrometry (GC/MS). U.S. Environmental Protection Agency, Office of Research and Development. January.

EPA. 2017. EPA contract laboratory program, national functional guidelines for Superfund organic methods data review. EPA 540-R-2017-002. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation. January.

HP. 2021. Quality systems manual. Vers. 20. H&P Mobile Geochemistry, Inc., Carlsbad, California. July 11.