Surface Methane Monitoring Annual Report 2021

SUBMITTED TO:

DTG Recycling Group

41 Rocky Top Road, Yakima, WA, 98908

SUBMITTED BY:

FREESTONE
ENVIRONMENTAL SERVICES

1100 Jadwin Avenue, Ste. 250, Richland, WA, 99352

January 10, 2022

INTRODUCTION

This report summarizes field activities and analytical results associated with the five quarterly surface methane monitoring events conducted December 9, 2020, through December 3, 2021, at the DTG Recycling Group landfill, located at 41 Rocky Top Road, in Yakima, Washington. Methane monitoring activities were conducted by Freestone Environmental Services (Freestone) on the following dates:

- December 9, 2020
- March 15, 2021
- June 11, 2021
- October 8, 2021
- December 3, 2021

Quarterly methane monitoring was conducted using a Landtec GEM™ 5000 (GEM5000) instrument for the December 9, 2020 monitoring event and a SEM™ 5000 (SEM5000) instrument for the four 2021 monitoring events. After the first quarterly monitoring event on December 9, 2020, Freestone switched from the GEM5000 to the SEM5000 instrument to achieve increased methane concentration sensitivity.

SUMMARY OF FIELD AND MONITORING ACTIVITIES

Prior to each quarterly surface monitoring event, a field check of the monitoring instrument was performed with a 1,250-ppm methane calibration gas. In addition, one fresh air reading was collected upwind of the landfill to determine the background methane concentration. The location of the background monitoring location is shown on Figure 1. The field check and background monitoring results for each quarterly methane monitoring event can be found in Table 1.

In accordance with the DTG Operations Plan, five (5) pre-determined locations within the perimeter of the landfill property boundary were monitored on December 9, 2020 and March 15, 2021 (Figure 1). Prior to the 2021 second quarter monitoring event, an additional ten (10) monitoring locations were added at the request of the Yakima Health district for a total of fifteen (15) monitoring locations within the perimeter of the landfill property boundary (Figure 1). The 15 locations were monitored during the June 11, 2021, October 8, 2021, and December 3, 2021, quarterly monitoring events. Results of the five monitoring events are presented in Table 1.

Monitoring was conducted by doing a surface sweep over the ground surface with the GEM5000 or SEM5000 instrument. The inlet of the instrument was positioned between 2 and 4 inches above ground surface.

A methane action level of 1,250 ppm has been established for the DTG site. According to the Operations Plan, locations with methane readings of 1,250 ppm will be marked and recorded on

the map. As shown in Table 1, the action level was not exceeded during any of the quarterly monitoring events.

Figure 1. Quarterly Surface Monitoring Locations

Table 1. Methane Monitoring Results

Date	Instrument	Time	Test/Location	Methane (ppm)
12/09/2020	GEM5000	0805	Background	0
		0806	1250 ppm calibration gas	1000
		0848	#1	0
		0812	#2	0
		0819	#3	0
		0825	#4	0
		0836	#5	0
3/15/2021	SEM5000	0813	Background	2.1
		0815	1250 ppm calibration gas	1250.3
		0820	#1	2.0
		0825	#2	2.0
		0829	#3	2.0
		0833	#4	2.1
		0839	#5	2.1
6/11/2021	SEM5000	0809	1250 ppm calibration gas	1255.0
		0810	Background	2.4
		0822	#1	2.2
		0834	#2	2.2
		0838	#3	2.2
		0842	#4	2.3
		0845	#5	2.2
		0850	#6	2.2
		0855	#7	2.2
		0904	#8	2.6
		0910	#9	2.6
		0915	#10	2.6
		0923	#11	2.4
		0928	#12	2.4
		0945	#13	2.2
		0935	#14	2.2
		0940	#15	2.2
10/8/2021	SEM5000	0810	Background	2.3
		0815	1250 ppm calibration gas	1030.0
		0825	#1	2.4
		0855	#2	2.2
		0900	#3	2.3
		0905	#4	2.3
		0910	#5	2.4
		0915	#6	2.1
		0920	#7	2.3
		0850	#8	2.3
		0930	#9	2.5
		0935	#10	2.5

HWA GeoSciences Inc.
DBE/MWBE

December 9, 2021
HWA Project No. 2005-120 Task 2000

DTG Recycling Group
16504 9th Ave SE Suite 201
Mill Creek, WA 98012

Attention: Mr. John Martin

Subject: **FIELD SAMPLING AND LABORATORY TESTING REPORT**
ROAD AND WORK AREA SURFACE DUST SAMPLING AND TESTING
DTG/Yakima Limited Purpose Landfill
Yakima, Washington

Dear Mr. Martin.

In accordance with your request, HWA GeoSciences Inc. (HWA) performed field sampling and laboratory testing for the above referenced project. Herein we present a summary of our field activities and the results of our laboratory analyses. HWA conducted this sampling and testing program in accordance our scope based on procedures outlined in AP 42, Appendix C.1 and C.2, proposed and approved by DTG on November 18, 2021. The laboratory testing program was performed in general accordance with the guidelines in AP 42, Appendix C.2 and the appropriate ASTM Standards.

FIELD SAMPLING: Field samples were obtained at the Yakima Limited Purpose Landfill on November 30, 2021, by a geologist from HWA GeoSciences, Inc. Samples were obtained at five locations comprised of; three roadway locations (RS), and two work area surface (WAS) locations as shown on Figure A-1 in Appendix A. Each laboratory test sample consisted of a composite of 2 to 4 field samples obtained at each proposed test location. A field report describing activities during sampling at each location is presented in Appendix A along with photographs of selected site conditions during sampling. HWA conducted the field sampling under the observation of a representative of Yakima County Clean Air Agency.

SAMPLE INFORMATION: fifteen field samples were obtained to represent conditions at five locations consisting of either road surface or work area dust materials. Field samples were combined into five laboratory test samples representing surface dust material from each road surface(RS) and work area(WAS) and then split to test mass using a riffle-splitter in general accordance with ASTM D2013.

Based on manual-visual methods, the soils descriptions for the test samples are as follows:

RS-1	Brown, well-graded SAND with silt and gravel (SW-SM)
RS-2	Brown, well-graded SAND with gravel (SW)
RS-3	Light yellowish brown, well-graded SAND with silt and gravel (SW-SM)
WAS-1	Light yellowish brown, well-graded SAND with gravel (SW)
WAS-2	Brown, well-graded SAND with gravel (SW)

Testing Methodology

MOISTURE CONTENT OF SOIL: The moisture content of the sample was determined in general accordance with ASTM D 2216.The indicated moisture content of the material is percentage by dry weight of soil. The results are shown on the Sieve Analysis of Aggregate Plots, Figures 1 through 5 and Table 1 below.

SIEVE ANALYSIS OF AGGREGATE: The particle size distribution of each sample was determined by dry sieving, in general accordance with ASTM C-136 as modified in Appendix C.2 which requires sieve shaking for 10-minute intervals until the difference between two successive pan weights is less than 3%. All the samples evaluated were shaken for 4 intervals of 10 minutes (40 minutes total) which is the maximum allowed per Appendix C.2, Section C.2.3, procedural step 7. The results are reported on the attached Figures 2 to 6 and Table 1 below.

Table 1 Summary of Laboratory Testing

Sample Designation	Unified Soil Classification	Moisture Content % by dry weight	Percent Passing the US. No. 200 Sieve
RS-1	**SW-SM**	**4.4**	**5.3**
RS-2	**SW**	**3.2**	**4.5**
RS-3	**SW-SM**	**3.8**	**6.8**
WAS-1	**SW**	**5.7**	**2.4**
WAS-2	**SW**	**10.4**	**3.6**

CLOSURE: Experience has shown that test values on soil and other natural materials vary with each representative sample. As such, HWA has no knowledge as to the extent and quantity of material the tested samples may represent. HWA obtained samples in general accordance with the procedures outlined in AP 42 Appendix C.1, in an attempt to obtain samples representative of specific areas. However, HWA makes no warranty as to how representative either the samples evaluated, or the test results obtained are to field conditions outside of the specified sample areas.

No copy should be made of this report except in its entirety.

We appreciate the opportunity to provide laboratory testing services on this project. Should you have any questions or comments, or if we may be of further service, please call.

HWA GEOSCIENCES INC.

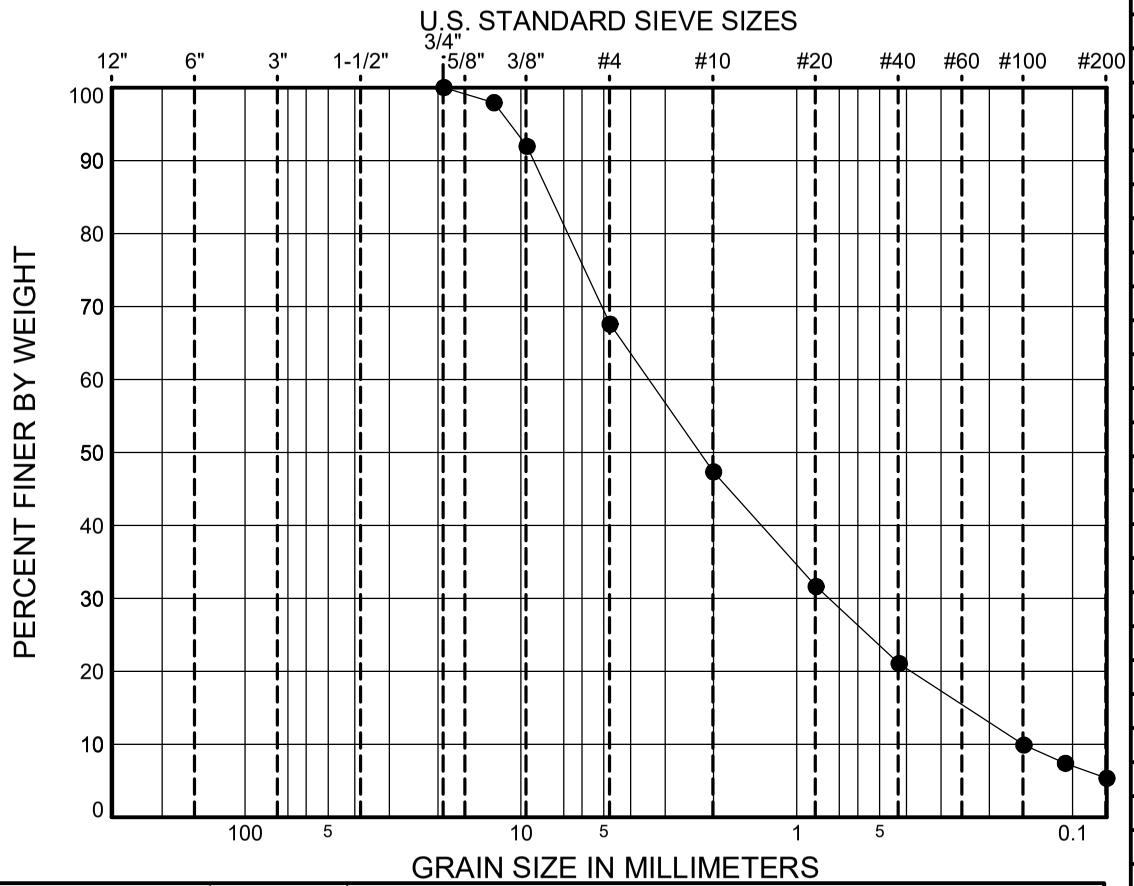
Steven E. Greene, L.G., L.E.G.
Principal Engineering Geologist

Rick Mueller, G.I.T.
Geologist

Attachments:

Figures 1 through 5	Sieve Analysis of Aggregate
Appendix A	Field Sampling Report

COBBLES	GRAVEL		SAND		
	Coarse	Fine	Coarse	Medium	Fine



Sieve Size	Percent Passing	Specification Limits
8 Inch		
7 Inch		
6 Inch		
5 Inch		
4 Inch		
3 Inch		
2 1/2 Inch		
2 Inch		
1 1/2 Inch		
1 1/4 Inch		
1 Inch		
3/4 Inch	100%	
5/8 Inch		
1/2 Inch	98%	
3/8 Inch	92%	
1/4 Inch		
No. 4	68%	
No. 8		
No. 10	47%	
No. 16		
No. 20	32%	
No. 30		
No. 40	21%	
No. 50		
No. 60		
No. 80		
No. 100	10%	
No. 200	5.3%	

SAMPLE ID	DATE SAMPLED	SAMPLED FROM
RS-1	11/30/2021	ROAD SEGMENT 1-SOUTHEAST OF WOOD WASTE AREA.

MATERIAL CLASSIFICATION / DESCRIPTION	Moisture %	Sand Equiv't	L.A. Abras'n	Degra-dation	Dust Ratio	MGS04 Sound	Plastic Index	Fracture %
(SW-SM) Brown, Well-graded SAND with silt and gravel	4.4							

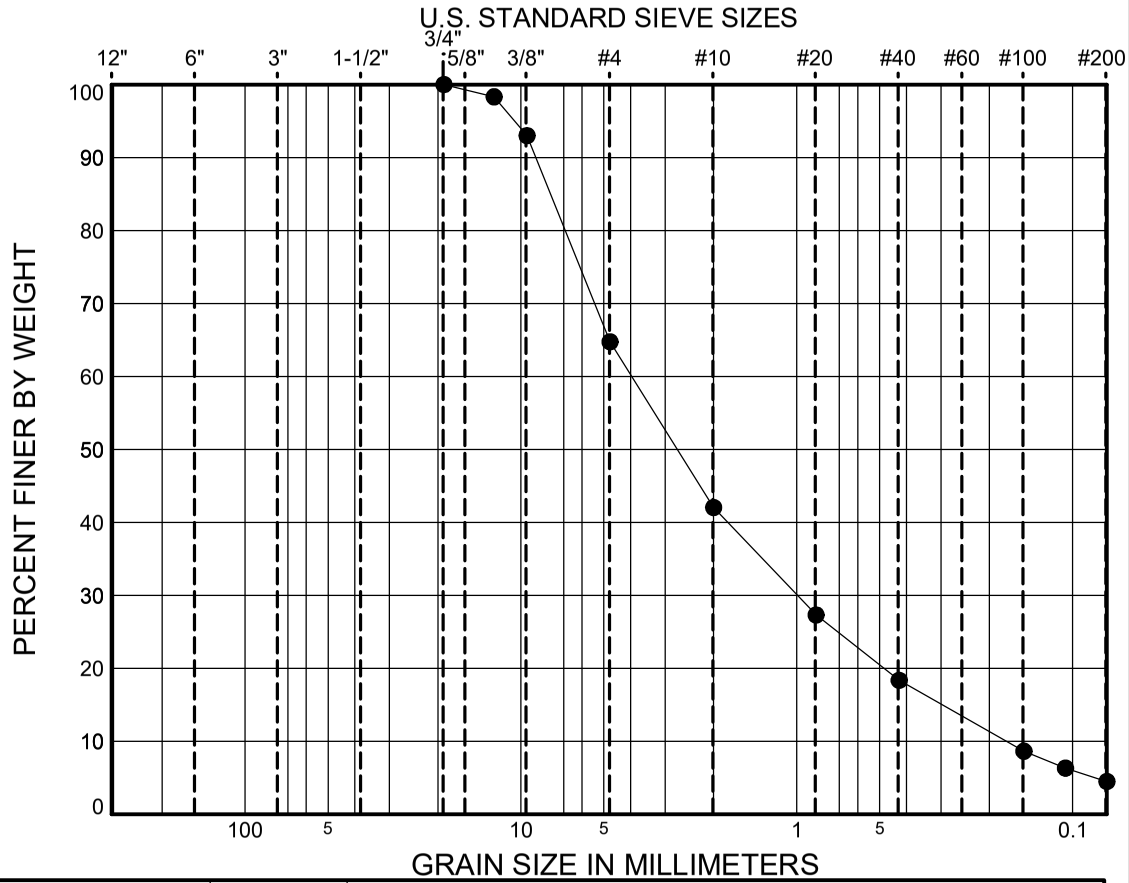
HWA GeoSciences Inc.

ROAD AND WORK AREA SURFACE DUST SAMPLING AND TESTING
DTG/YAKIMA LIMITED PURPOSE LANDFILL
YAKIMA, WASHINGTON

SIEVE ANALYSIS
OF AGGREGATE
METHOD ASTM C136

PROJECT NO.: 2005-120 T2000 FIGURE: 1

COBBLES	GRAVEL		SAND		
	Coarse	Fine	Coarse	Medium	Fine



Sieve Size	Percent Passing	Specification Limits
8 Inch		
7 Inch		
6 Inch		
5 Inch		
4 Inch		
3 Inch		
2 1/2 Inch		
2 Inch		
1 1/2 Inch		
1 1/4 Inch		
1 Inch		
3/4 Inch	100%	
5/8 Inch		
1/2 Inch	98%	
3/8 Inch	93%	
1/4 Inch		
No. 4	65%	
No. 8		
No. 10	42%	
No. 16		
No. 20	27%	
No. 30		
No. 40	18%	
No. 50		
No. 60		
No. 80		
No. 100	9%	
No. 200	4.5%	

SAMPLE ID	DATE SAMPLED	SAMPLED FROM
RS-2	11/30/2021	ROAD SEGMENT 2-EAST OF ROCK QUARRY

MATERIAL CLASSIFICATION / DESCRIPTION	Moisture %	Sand Equiv't	L.A. Abras'n	Degra-dation	Dust Ratio	MGS04 Sound	Plastic Index	Fracture %
(SW) Brown, Well-graded SAND with gravel	3.2							

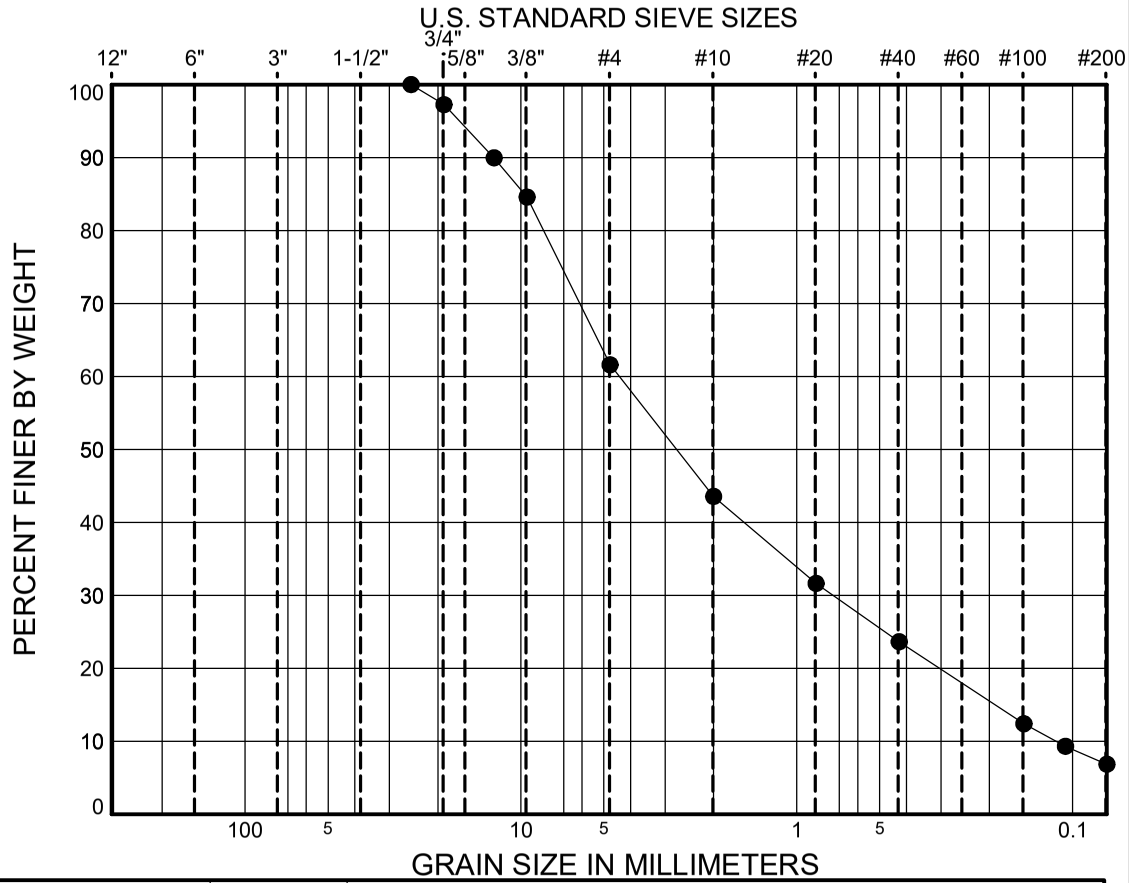
HWA GeoSciences Inc.

ROAD AND WORK AREA SURFACE DUST SAMPLING AND TESTING
DTG/YAKIMA LIMITED PURPOSE LANDFILL
YAKIMA, WASHINGTON

SIEVE ANALYSIS
OF AGGREGATE
METHOD ASTM C136

PROJECT NO.: 2005-120 T2000 FIGURE: 2

COBBLES	GRAVEL		SAND		
	Coarse	Fine	Coarse	Medium	Fine



Sieve Size	Percent Passing	Specification Limits
8 Inch		
7 Inch		
6 Inch		
5 Inch		
4 Inch		
3 Inch		
2 1/2 Inch		
2 Inch		
1 1/2 Inch		
1 1/4 Inch		
1 Inch	100%	
3/4 Inch	97%	
5/8 Inch		
1/2 Inch	90%	
3/8 Inch	85%	
1/4 Inch		
No. 4	62%	
No. 8		
No. 10	44%	
No. 16		
No. 20	32%	
No. 30		
No. 40	24%	
No. 50		
No. 60		
No. 80		
No. 100	12%	
No. 200	6.8%	

SAMPLE ID	DATE SAMPLED	SAMPLED FROM
RS-3	11/30/2021	ROAD SEGMENT 3- ENTRY INTO WORK AREA 2.

MATERIAL CLASSIFICATION / DESCRIPTION	Moisture %	Sand Equiv't	L.A. Abras'n	Degra-dation	Dust Ratio	MGS04 Sound	Plastic Index	Fracture %
(SW-SM) Light yellowish brown, Well-graded SAND with silt and gravel	3.8							

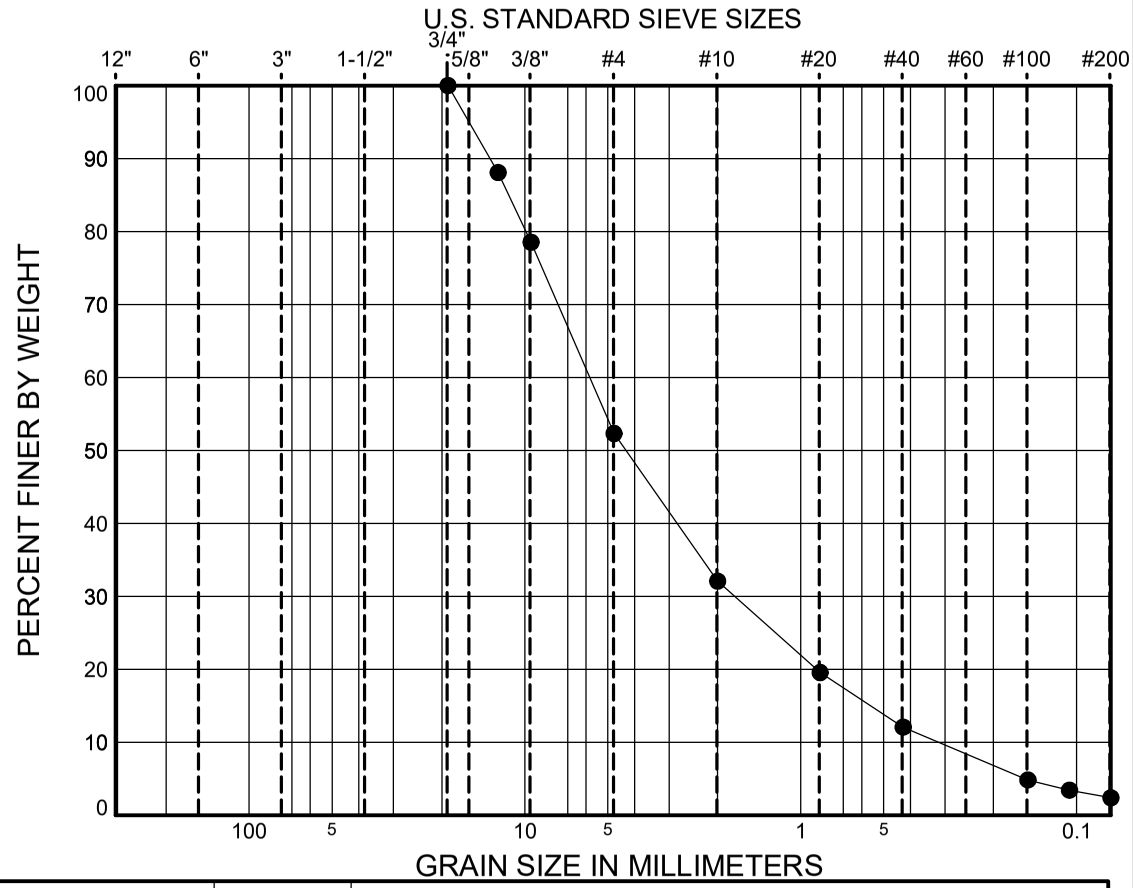
HWA GeoSciences Inc.

ROAD AND WORK AREA SURFACE DUST SAMPLING AND TESTING
DTG/YAKIMA LIMITED PURPOSE LANDFILL
YAKIMA, WASHINGTON

SIEVE ANALYSIS
OF AGGREGATE
METHOD ASTM C136

PROJECT NO.: 2005-120 T2000 FIGURE: 3

COBBLES	GRAVEL		SAND		
	Coarse	Fine	Coarse	Medium	Fine



Sieve Size	Percent Passing	Specification Limits
8 Inch		
7 Inch		
6 Inch		
5 Inch		
4 Inch		
3 Inch		
2 1/2 Inch		
2 Inch		
1 1/2 Inch		
1 1/4 Inch		
1 Inch		
3/4 Inch	100%	
5/8 Inch		
1/2 Inch	88%	
3/8 Inch	79%	
1/4 Inch		
No. 4	52%	
No. 8		
No. 10	32%	
No. 16		
No. 20	20%	
No. 30		
No. 40	12%	
No. 50		
No. 60		
No. 80		
No. 100	5%	
No. 200	2.4%	

SAMPLE ID	DATE SAMPLED	SAMPLED FROM
WAS-1	11/30/2021	WORK AREA 1-CONSTRUCTION DEMOLITION DEBRIS AREA

MATERIAL CLASSIFICATION / DESCRIPTION	Moisture %	Sand Equiv't	L.A. Abras'n	Degra-dation	Dust Ratio	MGS04 Sound	Plastic Index	Fracture %
(SW) Light yellowish brown, Well-graded SAND with gravel	5.7							

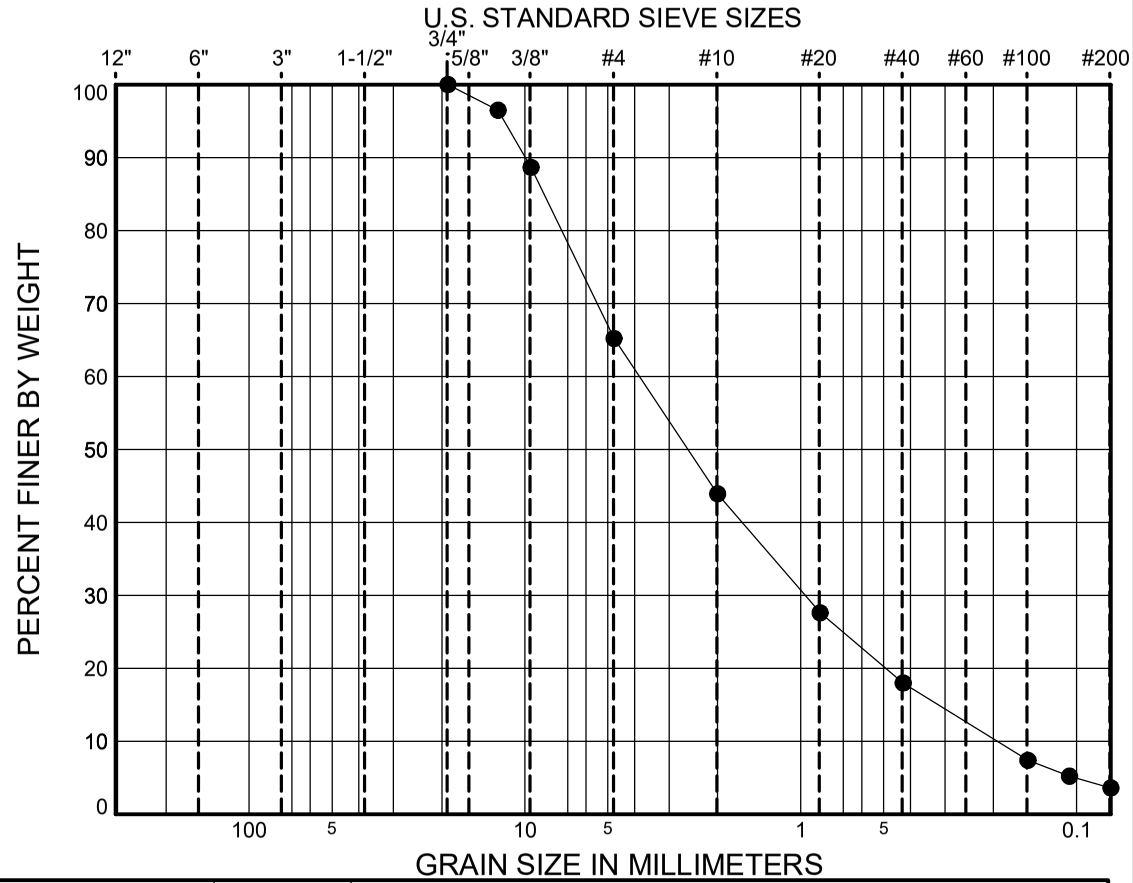
HWA GeoSciences Inc.

ROAD AND WORK AREA SURFACE DUST SAMPLING AND TESTING
DTG/YAKIMA LIMITED PURPOSE LANDFILL
YAKIMA, WASHINGTON

SIEVE ANALYSIS
OF AGGREGATE
METHOD ASTM C136

PROJECT NO.: 2005-120 T2000 FIGURE: 4

COBBLES	GRAVEL		SAND		
	Coarse	Fine	Coarse	Medium	Fine



Sieve Size	Percent Passing	Specification Limits
8 Inch		
7 Inch		
6 Inch		
5 Inch		
4 Inch		
3 Inch		
2 1/2 Inch		
2 Inch		
1 1/2 Inch		
1 1/4 Inch		
1 Inch		
3/4 Inch	100%	
5/8 Inch		
1/2 Inch	96%	
3/8 Inch	89%	
1/4 Inch		
No. 4	65%	
No. 8		
No. 10	44%	
No. 16		
No. 20	28%	
No. 30		
No. 40	18%	
No. 50		
No. 60		
No. 80		
No. 100	7%	
No. 200	3.6%	

SAMPLE ID	DATE SAMPLED	SAMPLED FROM
WAS-2	11/30/2021	WORK AREA 2-WOOD WASTE RECYCLING

MATERIAL CLASSIFICATION / DESCRIPTION	Moisture %	Sand Equiv't	L.A. Abras'n	Degra-dation	Dust Ratio	MGS04 Sound	Plastic Index	Fracture %
(SW) Brown, Well-graded SAND with gravel	10.4							

HWA GeoSciences Inc.

ROAD AND WORK AREA SURFACE DUST SAMPLING AND TESTING
DTG/YAKIMA LIMITED PURPOSE LANDFILL
YAKIMA, WASHINGTON

SIEVE ANALYSIS
OF AGGREGATE
METHOD ASTM C136

PROJECT NO.: 2005-120 T2000 FIGURE: 5

APPENDIX A

Field Sampling Report

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Upon my arrival to DTG Anderson Rock and Demolition pit, just northwest of Yakima, WA, I met with Brooks Taylor of DTG and Wade Porter of Yakima Regional Clean Air Agency. Brooks Taylor familiarized me with the operations within the pit and directed me to sampling locations proposed by HWA. Wade Porter was on site to observe HWA's sample collection methodology and assure that samples were taken in representative areas.

Work Area 1 (WAS 1.1 through 1.3)

The first location that samples were acquired was an area that DTG uses to bury miscellaneous construction demolition waste such as plastics and insulation. For the working area samples (WAS), a 15'x15' square was marked out and split into four equal quadrants of 7.5'x7.5'. From each quadrant, a 1-foot-wide area was swept from one end of the quadrant to the other. Material was collected using a broom and an enclosed dustpan. The material was transported from the dustpan and into a Ziploc storage bag. Three locations were chosen within the first working area. Samples collected were WAS 1.1, WAS 1.2 and WAS 1.3. These samples will be combined in HWA's lab prior to testing. Material collected appeared to consist of imported crushed gravel and possibly some native soils. While sampling, trucks coming in from outside of the site were dumping construction waste and a haul truck, excavator and dozer from within the site were tracking around the areas sampled.

Work Area 2 (WAS 2.1 through 2.4)

The second location was a working area where wood debris is stored. Three more 15'x15' squares were marked out and split into quadrants, with a 1-foot-wide swath swept from each quadrant. Wade Porter with YRCAA requested an additional sample be taken from an area that appeared to differ from the rest within the working area, possibly underlain with imported gravel while the majority of the working area surface was covered in wood debris and possibly native soils. Samples were collected using the same methods as WAS 1, and labelled WAS 2.1, WAS 2.2, WAS 2.3 and WAS 2.4. The samples will be combined in HWA's lab prior to testing. There was limited traffic through the working area during HWA's time on site, though it appeared trucks hauling wood debris travelled through the area to dump and haul trucks from within the DTG site travelled through the area.

Road Sample 1 (RS 1.1 through RS 1.3)

The third location sampled was a unpaved compacted soil and gravel road used to transport material between different locations on site. For roadway samples (RS) two grade stakes were measured 1-foot apart on each side of the road with a string around each stake, crossing the road to mark out a 1-foot-wide section across the entire width of the road. Samples were collected using the same methods as WAS 1 and WAS 2. Three of these areas were sampled, resulting in samples RS 1.1, RS 1.2 and RS 1.3. These samples will be combined in HWA's lab prior to testing. Haul trucks made frequent trips through the area, hauling soil and gravel to the first working area.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Road Sample 2 (RS 2.1 through 2.3)

The fourth location sampled was a compacted soil and gravel road used to transport material between different locations on site. For roadway samples (RS) two grade stakes were measured 1-foot apart on each side of the road with a string around each stake, crossing the road to mark out a 1-foot-wide section across the entire width of the road. Samples were collected using the same methods as described above. Three of these areas were sampled, resulting in field samples RS 2.1, RS 2.2 and RS 2.3. These samples will be combined in HWA's lab prior to testing. Haul trucks made frequent trips through the area, transporting soil and gravel to the first working area.

Road Sample 3 (RS 3.1 and 3.2)

The fifth and final location sampled was a compacted soil and gravel road used to transport material between different locations on site. For roadway samples (RS) two grade stakes were measured 1-foot apart on each side of the road with a string around each stake, crossing the road to mark out a 1-foot-wide section across the entire width of the road. Samples were collected using the same methods as described above. Two of these areas were sampled (RS 3.1 and RS 3.2) rather than 3, as suggested by Wade Porter, due to safety concerns in order to minimize time spent within the roadway, which supported heavy traffic. These samples will be combined in HWA's lab prior to testing. Trucks bringing construction waste in from outside of site were travelling through the area as well as haul trucks transporting dirt and gravel from within the site.

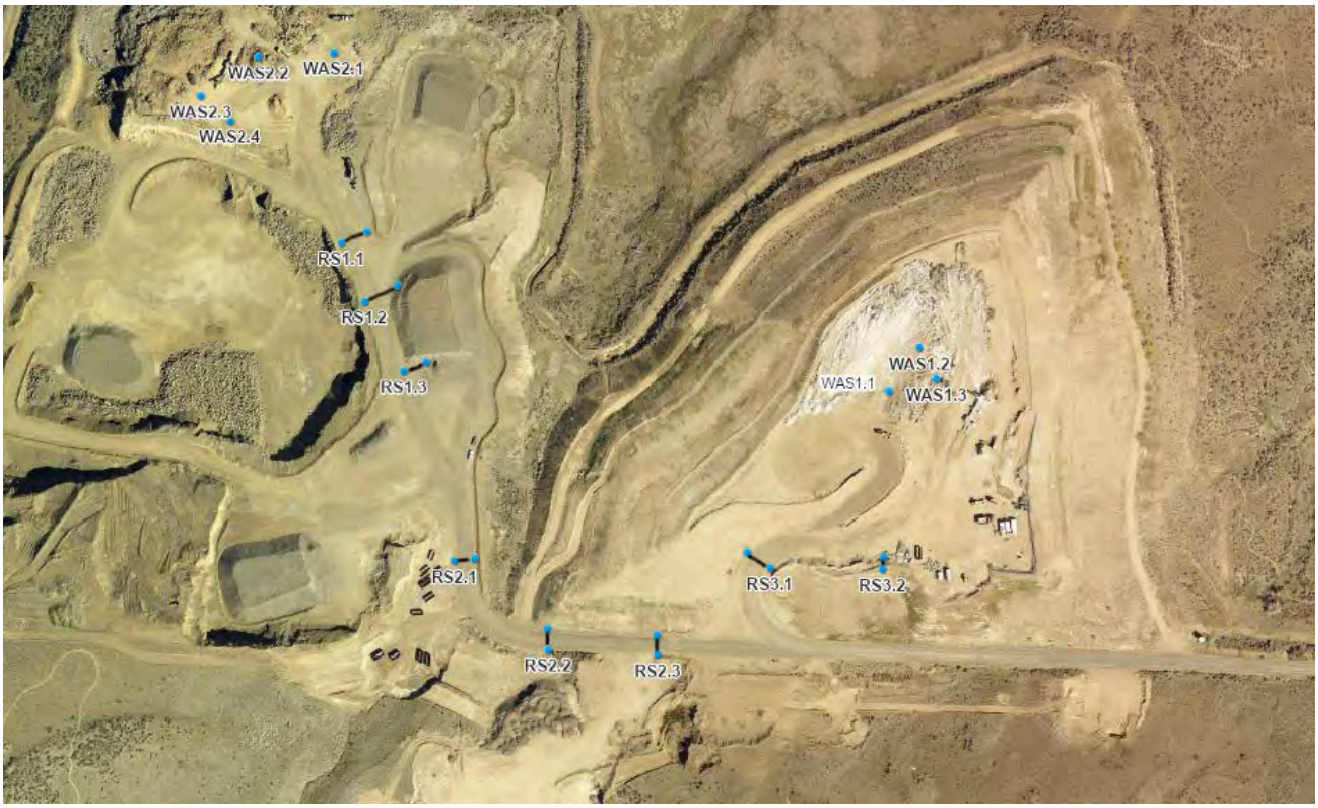


Figure A-1. Sample Location Aerial Map, sample locations recorded via GPS.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-2. Location of WAS1.1 after sampling. Each quadrant is 7.5'x7.5'. A one-foot-wide swath was swept across each quadrant. Facing Southeast.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-3. WAS1.3, facing west.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-4. WAS2.1. Note woody debris on ground within sample area. Facing northwest.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-5. WAS2.2. Facing west.

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Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-6. WAS2.3

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-7. RS1.1 marked out, prior to sample collection. Facing East.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-8. RS1.1 Marked out, after sample collection. Facing East.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-9. Location of RS1.2 prior to collection. Facing west.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

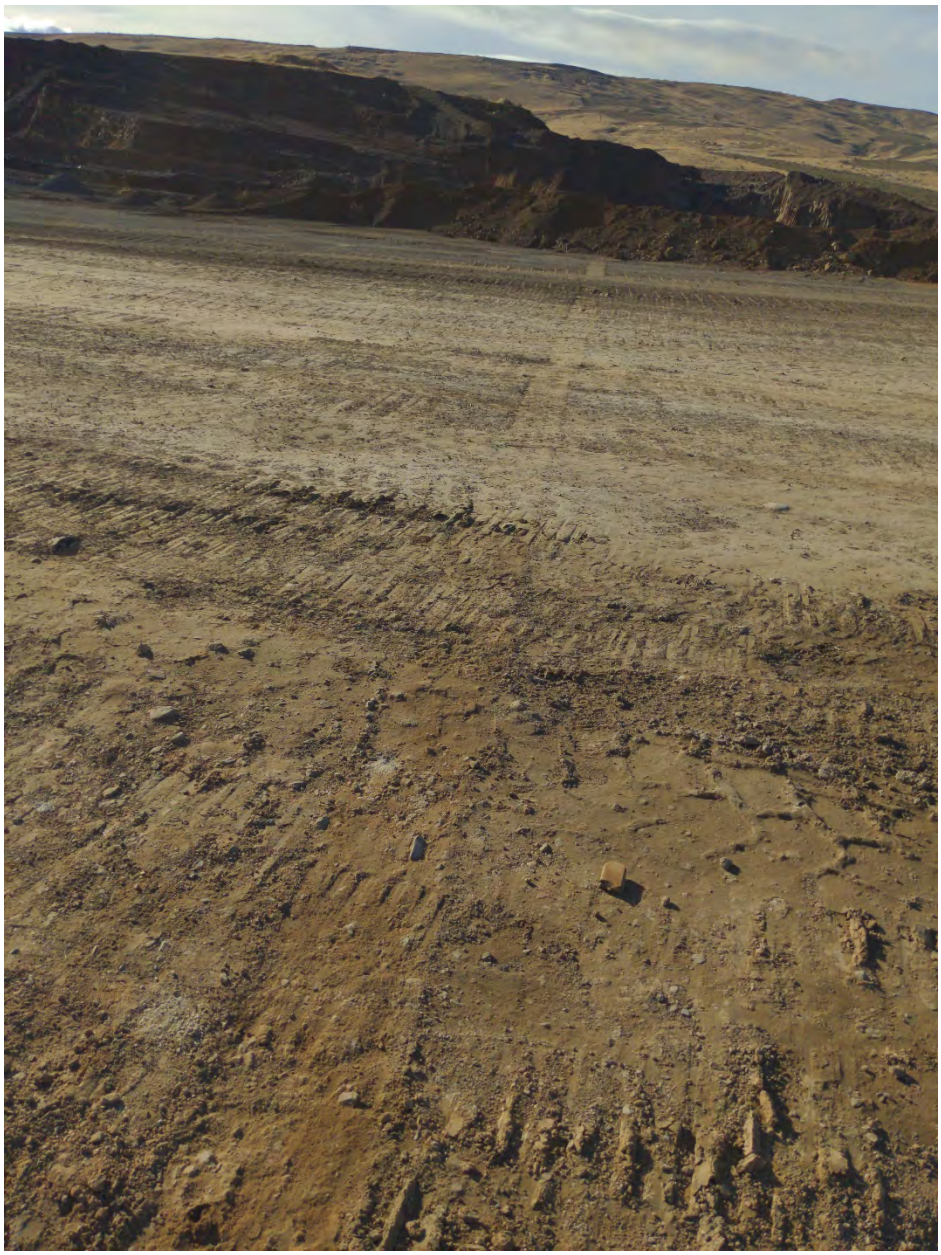

Figure A-10. Location of RS1.3 after collection. Facing west.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

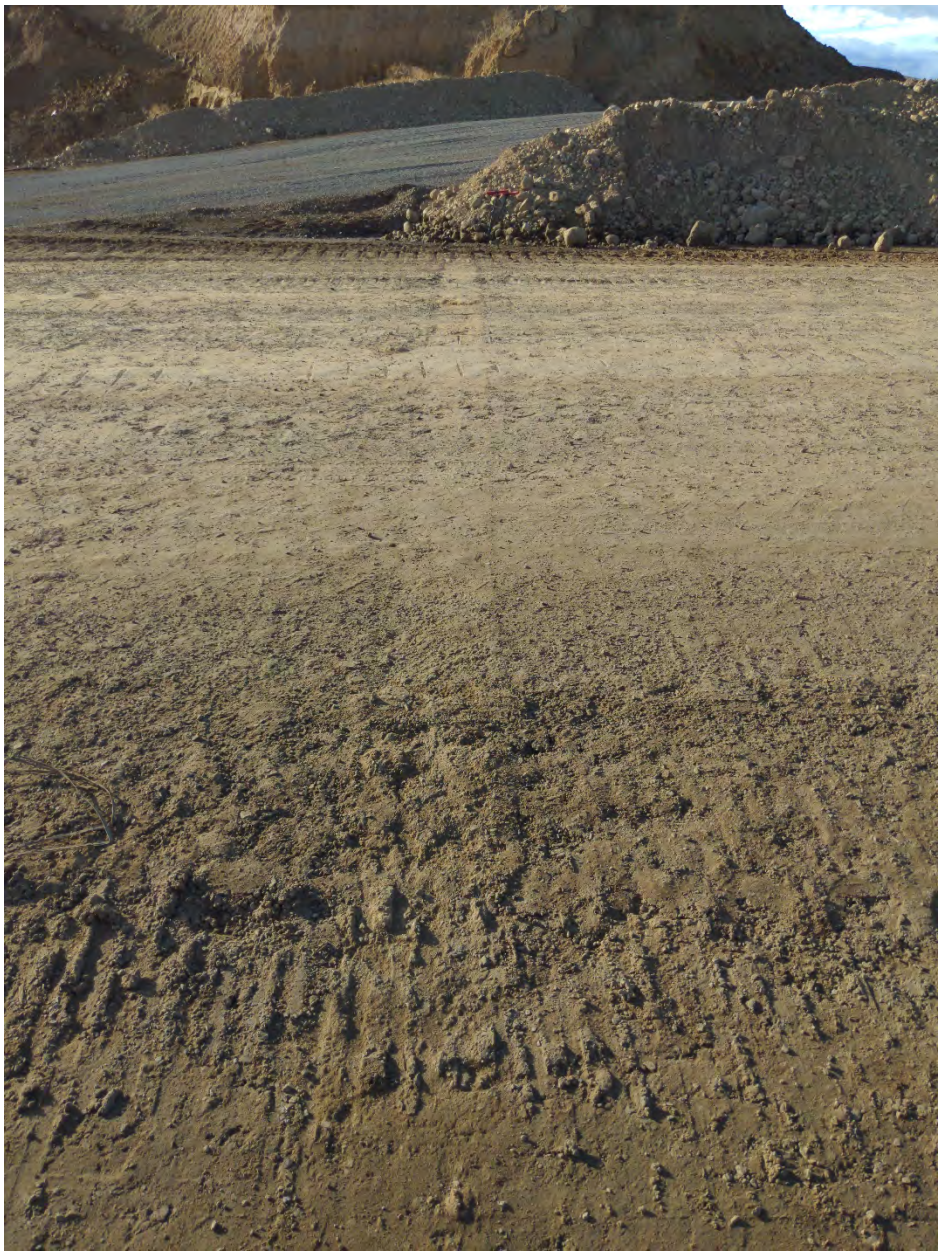

Figure A-11. Location of RS2.1 after collection. Facing west.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

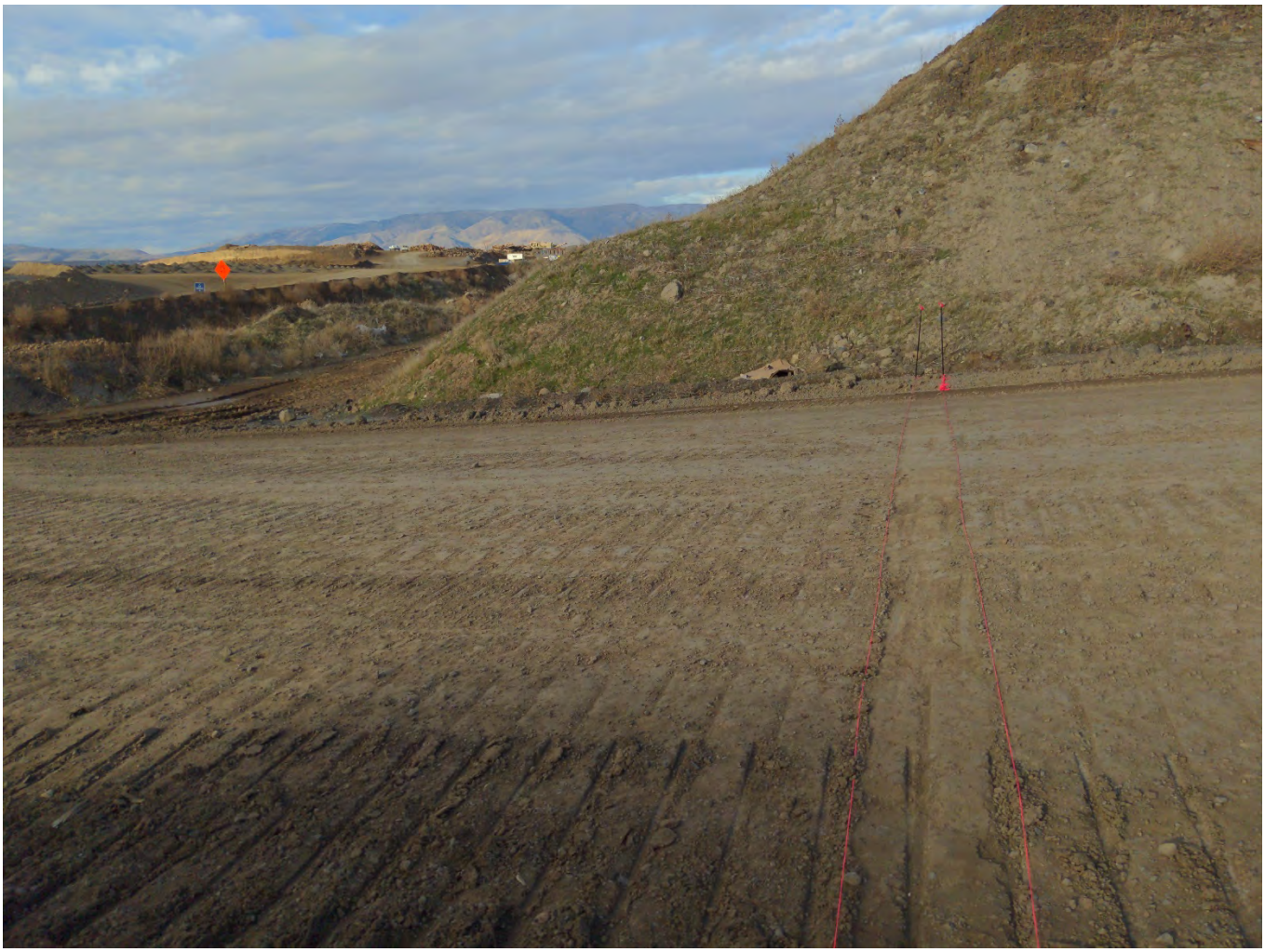

Figure A-12. Location of RS2.2 after collection. Facing north

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-13. Location of RS2.3 after collection. Facing Northeast.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-14. Photo showing collection of a road sample courtesy of Wade Porter.

DTG Anderson Road and Working Area Dust Collection
Conducted: 11-30-2021 by Rick Mueller/HWA GeoSciences, Inc.

Figure A-15. Photo showing sample storage procedure, courtesy of Wade Porter.

		0940	#11	2.2
		0945	#12	2.3
		0950	#13	2.3
		0953	#14	2.3
		0958	#15	2.3
12/3/2021	SEM5000	0810	Background	2.3
		0815	1250 ppm calibration gas	1030.0
		0825	#1	2.4
		0855	#2	2.2
		0900	#3	2.3
		0905	#4	2.3
		0910	#5	2.4
		0915	#6	2.1
		0920	#7	2.3
		0850	#8	2.3
		0930	#9	2.5
		0935	#10	2.5
		0940	#11	2.2
		0945	#12	2.3
		0950	#13	2.3
		0953	#14	2.3
		0958	#15	2.3

REPORTING

Following each monitoring event, Freestone prepared and submitted a quarterly report to DTG. For the five quarterly events included in this annual report, quarterly reports were submitted on December 21, 2020, March 18, 2021, June 15, 2021, October 12, 2021, and December 7, 2021.

CONCLUSION

Landfill gas monitoring and quarterly report preparation and submittal was performed for five monitoring events during the period of December 9, 2020 through December 3, 2021. Methane concentrations measured at each of the predetermined monitoring locations were below the DTG Operations Plan methane action level of 1250 ppm for all monitoring events. As such, no action or follow-up monitoring was necessary.

Pamela Herman

From: Ian Sutton <ISutton@parametrix.com>
Sent: Thursday, December 23, 2021 3:54 PM
To: Hasan Tahat
Subject: Automatic reply: DTG Recycle - Yakima field sampling and lab test report

I will have limited access to phone and email through Friday, December 24, but will be checking messages as available. If immediate assistance in needed, please contact Dwight Miller at dmiller@parametrix.com, or 206.394.3644.

Regards,
Ian

Pamela Herman

From: John Martin <john@dtgrecycle.com>
Sent: Tuesday, December 14, 2021 1:08 PM
To: Hasan Tahat
Cc: Wade Porter; Ian Sutton; Alan Butler
Subject: DTG Recycle - Yakima field sampling and lab test report
Attachments: 2021.12.09 - Field Sampling and Lab Testing Report.pdf

Hasan,

Please find attached the field sampling and lab test report for the silt sampling at the DTG Recycle – Yakima facility. Please let me know if you have any questions, and we can set up a call with Parametrix.

Thanks,

John

DTG Recycle
Customer Focused | Planet Obsessed

John Martin
Associate General Counsel

Desk 425.523.8385 | **Cell** 425.408.2186
john@dtgrecycle.com
P.O. Box 14203 Mill Creek, WA 98082

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Pamela Herman

From: Hasan Tahat
Sent: Tuesday, March 1, 2022 3:56 PM
To: Wade Porter
Subject: FW: DTG Recycle - Yakima soil gas and ambient air sampling report - February 2022
Attachments: Sampling Summary_Jan2022.pdf

Take a look at his and let's discuss. Thanks.

From: Rivard, James (ECY) [mailto:JRIV461@ECY.WA.GOV]
Sent: Tuesday, March 1, 2022 3:28 PM
To: Hasan Tahat
Cc: Park, Sage (ECY); Davies, Laurie (ECY); Ted Silvestri (YHD); Shawn Magee
Subject: FW: DTG Recycle - Yakima soil gas and ambient air sampling report - February 2022

Hello Hasan,

We received the attached today.

Our engineering and technical staff will be reviewing. But, we'd appreciate any review / advisement by YRCAA as the regional clean air agency as well. A couple of things jump out right away and raise questions. 1) Temperature readings of 149 F just below the surface and 2) VOCs.

Perhaps your staff, our staff, and YHD can speak via a telephone conference call here in a week or so after we have had time to read through the information.

Thanks,
James

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To: Rivard, James (ECY) <JRIV461@ECY.WA.GOV>; Shawn Magee <shawn.magee@co.yakima.wa.us>
Cc: Ted Silvestri (YHD) <ted.silvestri@co.yakima.wa.us>; Brandon Comfort (YHD) <brandon.comfort@co.yakima.wa.us>; Grieves, Kimberly <ksar461@ECY.WA.GOV>; LeMond, Luke (ECY) <llem461@ECY.WA.GOV>; Rounds, Megan (ECY) <MROU461@ECY.WA.GOV>; Ian Sutton <isutton@parametrix.com>; Arnie Sugar <asugar@hwageo.com>; Dwight Miller <DMiller@parametrix.com>; Dan Guimont <dguimont@dtgrecycle.com>; Tom Vaughn <TVaughn@dtgrecycle.com>
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As we have previously mentioned, we would like to begin applying final cover to further reduce odors. We are prepared to begin this and plan to start immediately.

On another note, Arnie at HWA and Scott Cave, who has been acting as the neighbors' representative, are collaborating closely, and so far we have mutually identified and agreed on up to twenty wells to measure. Measurements are tentatively scheduled for 3/11 – 3/16.

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Whidbey Island ● Woodinville ● Yakima

Pamela Herman

From: Hasan Tahat
Sent: Tuesday, December 14, 2021 3:28 PM
To: 'John Martin'
Cc: Wade Porter; Ian Sutton; Alan Butler
Subject: RE: DTG Recycle - Yakima field sampling and lab test report

Thank you John! After reviewing the report, if we have any question we will let you know.
Best regards,
Hasan

Hasan M. Tahat, Ph.D.
Interim Executive Director
Compliance, Engineering and Planning Division Supervisor
Yakima Regional Clean Air Agency
186 Iron Horse Ct. Suite 101. Yakima, WA. 98901
Tel: (509) 834-2050 ext. 105
Fax: (509) 834-2060
E-mail: hasan@yrcaa.org

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Pamela Herman

From: Rivard, James (ECY) <JRIV461@ECY.WA.GOV>
Sent: Wednesday, March 9, 2022 9:51 AM
To: Hasan Tahat; Ted Silvestri (YHD); Shawn Magee; Brandon Comfort; Grieves, Kimberly; LeMond, Luke (ECY); Rounds, Megan (ECY); Wade Porter
Subject: RE: DTG Recycle - Yakima soil gas and ambient air sampling report - February 2022

Ok I got someone to set up a doodle poll for me. Let's see if we can get together to discuss emissions @ DTG.

If you can fill out the Doodle Poll that will help us schedule a meeting. Thanks.

https://doodle.com/meeting/participate/id/Le3vyjOd

From: Rivard, James (ECY)
Sent: Monday, March 7, 2022 4:40 PM
To: 'Hasan Tahat' <hasan@yrcaa.org>; Ted Silvestri (YHD) <ted.silvestri@co.yakima.wa.us>; Shawn Magee <shawn.magee@co.yakima.wa.us>; Brandon Comfort <brandon.comfort@co.yakima.wa.us>; Grieves, Kimberly <ksar461@ECY.WA.GOV>; LeMond, Luke (ECY) <llem461@ECY.WA.GOV>; Rounds, Megan (ECY) <MROU461@ECY.WA.GOV>
Cc: Wade Porter <wade@yrcaa.org>
Subject: RE: DTG Recycle - Yakima soil gas and ambient air sampling report - February 2022

Thanks Hasan,

Kimberly/Megan/Luke can you forward YRCAA any previous methane readings by the neighbor group and DTG, having YRCAA look at those might be helpful as well.

At the moment I'm having problems with the Doodle Poll website, if someone else can set up a poll and send out a link that would be good. If not I'll try again tomorrow.

Thanks,

From: Hasan Tahat <hasan@yrcaa.org>
Sent: Tuesday, March 1, 2022 4:01 PM
To: Rivard, James (ECY) <JRIV461@ECY.WA.GOV>
Cc: Wade Porter <wade@yrcaa.org>
Subject: RE: DTG Recycle - Yakima soil gas and ambient air sampling report - February 2022

Hi James,
Yes sure. We really need to talk. Just looking at the report without reading, I can say interesting! Let me read it please and let us talk. Thank you for sharing.
Best regards,
Hasan

Hasan M. Tahat, Ph.D.

Interim Executive Director
Compliance, Engineering and Planning Division Supervisor
Yakima Regional Clean Air Agency
186 Iron Horse Ct. Suite 101. Yakima, WA. 98901
Tel: (509) 834-2050 ext. 105
Fax: (509) 834-2060
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John

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Pamela Herman

From: Scott Cave <sccomm@sosmail.us>
Sent: Monday, January 18, 2021 10:24 PM
To: Rivard, James (ECY); Grieves, Kimberly; 'Ted Silvestri'; brandon.comfort@co.yakima.wa.us; Shanley, Patricia (ECY); Harris, William (ECY); Miller, Coleman (ECY); Matthews, David C. (ECY)
Subject: RE: Landfill Emissions Detection Discussion
Attachments: Pergam DTG Yakima LPL Perimeter Methane Field Inspection Report Aug 2020.pdf; Pergam LMC Gas Inspection Report for CCC Nov 2020.pdf

James and all

For the ZOOM meeting, attached for your review are the two methane surveys conducted in 2020 by Pergam of DTG's LPL.

Scott

-----Original Appointment-----
From: Rivard, James (ECY)
Sent: Tuesday, January 12, 2021 1:15 PM
To: Grieves, Kimberly; Ted Silvestri; brandon.comfort@co.yakima.wa.us; Scott A Cave; Shanley, Patricia (ECY); Harris, William (ECY); Miller, Coleman (ECY); Matthews, David C. (ECY)
Subject: Landfill Emissions Detection Discussion
When: Tuesday, January 19, 2021 1:00 PM-2:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Skype Meeting

Here is a date and time that looks like it might work for most to have a discussion about landfill emissions detection, which stems from our November discussion.

Join Skype Meeting

Trouble Joining? Try Skype Web App

Help

GeoEngineers

Memorandum

8019 West Quinault Avenue, Suite 201, Kennewick, Washington 99336 www.geoengineers.com

To:	James Carmody, Meyer, Fluegge and Tenney, PS; Scott Cave, SC Communications
From:	Kevin Lindsey, LHG
Date:	April 6, 2022
File:	24904-001-00
Subject:	DTG/Anderson Pit Limited Purpose Landfill Review Comments on the HWA GeoSciences, Inc. Letter Report, dated March 25, 2022

INTRODUCTION

GeoEngineers, Inc. was asked to review and comment on the HWA Geosciences, Inc. letter report, Groundwater Gradient Study DTG/Anderson Pit Limited Purpose Landfill, Yakima, Washington dated March 25, 2022. The letter report described water level measurements collected by HWA GeoSciences, Inc. (HWA) in early March 2022 from two monitoring wells at the DTG Landfill Site and from 18 private residential and orchard water wells in the surrounding area (primarily north and northeast of the DTG Landfill Site), presented two potentiometric maps compiled from this data, and provided some explanation for the data reported in the letter report.

The objective of this memorandum from GeoEngineers is to provide you with comments we have pertaining to that letter report. Our comments center on methodology used to collect the water level data, the occurrence of water in Well MW-2, irrigation pumping effects, and groundwater gradient and flow direction.

METHODOLOGY

The HWA letter report notes that water level data was collected using an acoustic well sounder, and it rightly points out the challenges associated with using that type of instrument. Of note, with respect to those challenges, is the potential for multiple reflections and the need for the operator to select the most reasonable one for use in determining depth to water in the well. The potential variability related to multiple reflectors is not delineated or described in the water level data presented in the letter report. We request that the operator's fieldnotes and any subsequent data analysis notes, including any QA/QC review notes, be provided for our evaluation and review.

WATER ENCOUNTERED IN WELL MW-2

As we had commented in previous correspondence with you we had found reference to water being encountered in Well MW-2 much shallower than the depth at which the well was constructed to monitor. This shallower water-bearing zone was sealed off from and is not monitored by the well. Subsequent monitoring reports do not reference the occurrence of this shallower water. However, the HWA letter, in the Results section on page 2, now acknowledges the presence of this water while at the same time offering an explanation for why MW-2 was not constructed to monitor that interval. We find that explanation to be problematic.

The letter states that the shallower water-bearing interval was only marginally water bearing, and that it is unknown if it would yield enough water from which to collect samples. With respect to these claims:

- The Implementation Guidance for the Ground Water Quality Standards (Ecology Publication #96-02, revised 2005) states that, "All groundwater is classified as a potential source of drinking water for the purposes of this guidance. It is not necessary for groundwater to be defined as an 'aquifer' (groundwater which produces significant yield) for it to be protected. Likewise, the standards do not distinguish groundwater, which is perched, seasonal or artificial." The guidance document also notes that Chapter 90.48 Revised Code of Washington mandates that all groundwater be protected.
- Publication #96-02 further states that monitoring wells should be designed to sample the uppermost zone potentially affected by the activity plus any other aquifer where contaminants may impact groundwater quality.
- The publication also states that the well needs to be completed within the "zone of interest."

There does not appear to be a provision in the guidance that cites applicable WAC or RCW's that stipulates that a marginally productive water-bearing zone can be ignored for the purpose of groundwater monitoring. However, the WAC guidance does allow for Ecology to approve of different monitoring targets on a case-by-case basis.

With respect to the ability of the zone hosting first, or shallowest, groundwater in Well MW-2 to yield enough water to be sampled, what is the origin of that statement? The well logs for MW-2 and MW-3 refer to the upper zone in question producing 2 to 3 gpm in MW-2 and 5 gpm in MW-3. In other words, the production rates are similar for the zone that was deemed to be low producing and sealed off in MW-2 and the zone in which MW-3 is open to.

Additional correspondence or justification explaining why first groundwater at the MW-2 location does not need to be monitored appears to be warranted. This seems especially important because of the significantly different water levels and water quality results reported in Wells MW-2 and MW-3 that we had previously described to you.

IRRIGATION PUMPING EFFECTS

The HWA letter (HWA 2022) does offer an explanation for the water level differences and attempts to show that the gradient is steep to the north and whether MW-2 is included in the interpretation of overall monitoring program or not. The letter attributes depressed water levels in MW-2 to reflect, at least in part, irrigation pumping in the nearby Herke well. We disagree with this interpretation for the following reasons:

- Multiple quarterly water level data collected from Well MW-2 over the span of many years does not show irrigation season (summer) declines followed by off-season (winter) rebound. Irrigation season water level decline followed by off-season rebound is ubiquitous across the basalt aquifers of the Columbia Basin. The absence of a hydraulic signal in MW-2 that would be expected in a seasonal irrigation setting needs further explanation.
- The water level reported in the HWA letter for MW-2 is lower than the level reported in the Herke well. Typically, one would expect the opposite relationship, water level in the pumped/pumping well will be

lower in the distal, or observation well. Again, to imply otherwise requires further explanation and data.

As we have hypothesized in our earlier correspondence, we interpret the deeper water level and cation/anion chemistry in MW-2 relative to MW-3 to indicate that they are in two different water-bearing zones with limited hydraulic continuity between the two. The water levels reported in the 2022 HWA letter do not change our current hypothesis and interpretation (GeoEngineers 2021a, b).

GRADIENT AND FLOW DIRECTION

We had previously described to you our concerns about groundwater gradient and flow direction interpretations. The data in the letter has not alleviated those for the following reasons:

- **First**, as noted in the previous section we think the preponderance of data still shows that MW-2 is monitoring a deeper water-bearing interval than MW-3. Nothing presented in the HWA 2022 letter alters that conclusion. In fact, the data seems to continue to support our previous hypothesis.
- **Second**, the proposed monitoring well location provided on Figures 1 and 2 of the HWA 2022 letter lies very close to a very nearly straight line between MW-2 and MW-3. A straight line of wells does not provide an optimal solution for defining the planar surface from which groundwater flow direction and gradient can be interpreted.
- **Third**, no information as to the water-bearing zone targeted in a new well is provided. Would this well target first water regardless of production characteristics or only first water that is deemed to be productive enough? In either case justification for potentially not monitoring the first water-bearing zone encountered during drilling is warranted.
- **Finally**, the origin and characteristics of the shallowest groundwater in the vicinity of the Site warrant further investigation. As we have noted in earlier work, the presence of nitrate concentrations above 3 mg/L in MW-3 is suggestive of surface sources. The contention that there is no upgradient groundwater at the DTG Site necessitates, therefore, that the elevated nitrate in MW-3 comes from the Site. Given the shape of the potentiometric surface contours shown in Figures 1 and 2 in the HWA letter, the slope of the ridge not only to the north but also to the east, suggests that additional well monitoring to the east and potentially southeast should be considered.

CONCLUSION

GeoEngineers appreciates the effort to coordinate and collect water levels to the north of the landfill over a period of two days; however, some concerns and questions remain after reviewing the letter from HWA. They are as follows:

- The data presented is based on instrumentation “limited in its accuracy.” We acknowledge the necessity and limitations of the acoustic sounder, but we request that any fieldnotes and additional methods so that the variability and confidence in the data and maps provided can be assessed.
- Water level data for MW-2 still suggests that it is in a different water-bearing interval than MW-3. Our hypothesis with respect to that has not changed. In addition:

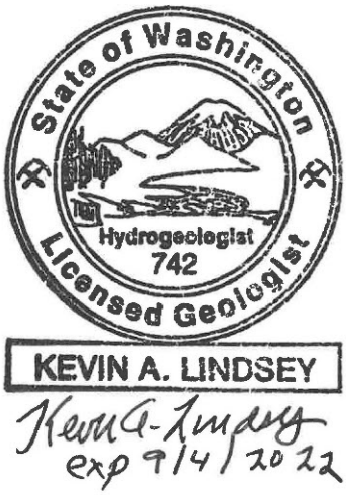
- The justification offered in the letter for not monitoring first water at MW-2 seems to ignore Ecology guidance.
- The explanation offered for the lower water levels in MW-2 resulting from irrigation pumping at Herke well is not corroborated by MW-2 water level data which lacks evidence of seasonal fluctuation attributable to irrigation pumping season and ignores the fact that water level in the Herke well (hypothesized to be the pumping well) is higher than in MW-2 (a non-pumping well).
- The HWA letter also does not offer a reason for the differing water quality observed in MW-2 versus MW-3, another line of evidence we based our initial hypothesis on.
- Additional justification for the conclusions reached in the HWA letter seem warranted.

- With respect to groundwater flow direction and gradient:
  - Justification for placing the proposed new monitoring well location in a line between MW-2 and MW-3 is not provided.
  - In addition, there is no discussion as to the target depth of the proposed monitoring well.
  - Consistent with previous interpretations offered for the DTG site, the potentiometric surface maps (Figures 1 and 2 in the letter) do not show upgradient water entering the area and they show what groundwater is moving downslope to the north. In the absence of upgradient groundwater this leads to the question of what is happening with groundwater to the east and southeast, which is also down slope.
  - Additional justification for new monitoring well placement is warranted.

Based on the information presented in the letter and absence of supporting documents we stand by the interpretations and findings we have previously presented.

LIMITATIONS

The conclusions, recommendations, and opinions presented in this report are based on our professional knowledge, judgment and experience. GeoEngineers reserves the right to change the opinions expressed herein if, at a future time, new or additional information is presented to us.



Soil Gas and Ambient Air Sampling Report

Summary of December 8, 2021 & January 21, 2022 Sampling Events

SUBMITTED TO:

DTG Recycling Group

41 Rocky Top Road, Yakima, WA, 98908

SUBMITTED BY:

FREESTONE ENVIRONMENTAL SERVICES
A DEEP ISOLATION COMPANY

1100 Jadwin Avenue, Ste. 250, Richland, WA, 99352

February 25, 2022

INTRODUCTION

This report summarizes field activities and analytical results associated with soil gas sampling conducted December 8, 2021 and follow-up ambient air sampling conducted January 21, 2022, at the DTG Recycling Group landfill, located at 41 Rocky Top Road, in Yakima, Washington. Sampling activities were conducted by Freestone Environmental Services (Freestone). Freestone's field activity reports are included in Appendix A.

Soil gas and ambient air sampling were performed to supplement recent investigations made by DTG Staff and Department of Health representatives. The northeastern toe and western slope of the landfill (where sloughing of the landfill face has opened stress fractures in the upper soil horizon) indicates a possible source of fugitive odors emanating from the landfill operations. The occurrence of the odors, which are described as typical landfill odors, is variable and most noticeable in stable to stagnant atmospheric conditions. The intensity of the odors is greatest in areas where fractures in the earth are visibly venting or in once open-fractured areas that have then been purposely covered. DTG has initiated efforts to fill/cap the fractures to mitigate the release of odor-causing gases. Initial soil gas sampling was conducted on December 8, 2021, to characterize the odor-causing gasses. Based on the initial sampling results, DTG requested additional ambient air sampling at the landfill boundary, near surface fractures, and at specified intervals from a surface fracture. This ambient air sampling was conducted on January 21, 2022. Analytical results for both sampling events are summarized in this report.

DECEMBER 2021 FIELD SAMPLING ACTIVITIES

Freestone and DTG Staff measured surface temperature readings using an infrared temperature gauge and marked three sample locations with field marker flags near the supposed source of the odors during routine quarterly methane monitoring on December 3, 2021. The three proposed sample locations are in different locations than the routine quarterly methane monitoring. Surface and subsurface temperatures were recorded on December 8, 2021, at each sampling location using an infrared temperature gauge and digital thermometer, respectively. These measurements are provided in Table 1.

Soil gas samples were collected from the three previously marked locations on December 8, 2021. The weather conditions were partly cloudy, windy, and 46˚F at the time of sampling. All soil gas samples were collected using a hand-pump

attached to a vacuum air sample box equipped with a 1.0-liter (L) Tedlar bag. Prior to sample collection, a minimum of 2 liters were evacuated from the tubing to ensure a representative sample. For the sample collection, the soil gas was drawn into the Tedlar bag, which was filled to the consistency of a 'soft pillow'. Two (2) samples were collected at each sampling location. The second sample was a backup sample in the event of a leak from the first sample. Only one (1) soil gas sample was tested by the laboratory from each location. Field activity photos are included in Appendix A.

After soil gas sample collection, each Tedlar bag was labeled with a sample identification number (Ex. A-1). The bags were placed in a cooler. Sample information and requested analyses were recorded on a signed chain of custody form and placed into the shipping container (the chain of custody can be found in Appendix B and C). The samples were shipped next day early air via UPS to Atmospheric Analysis & Consulting, Inc. located in Ventura, California.

The three sample locations are depicted in Figure 1 below. Samples A-1 and A-2 were collected on the upper slope of the upper road on the landfill surface. Sample A-3 was collected on the upper slope of the lower road on the landfill, below where samples A-1 and A-2 were taken.

For sample locations A-1 and A-2, there were visible vapors being released from fractures in the surface. Such fractures extended roughly 8 inches below the slope surface and were about two inches in width. Given such exposure, the ¼-inch Teflon tubing was inserted directly into the crevice of sample locations A-1 and A-2 until refusal was met. An infrared temperature gauge was aimed down each fracture to measure the surface temperature in addition to a 12-inch digital thermometer to measure the subsurface.

Sample A-3 was collected on the upper slope of the lower road with no fracture present. For this sample, a soil probe was utilized to insert the Teflon tubing approximately 8 inches below ground surface (bgs). The annulus around the tubing was sealed using granular bentonite to mitigate infiltration and sampling of surface ambient air (i.e., short circuiting).

Table 1. Surface and subsurface temperatures at each sample location

Sample	Subsurface Digital Thermometer (°F)	Surface Infrared Gauge (°F)
A-1	145	149
A-2	62	61
A-3	57.4	57

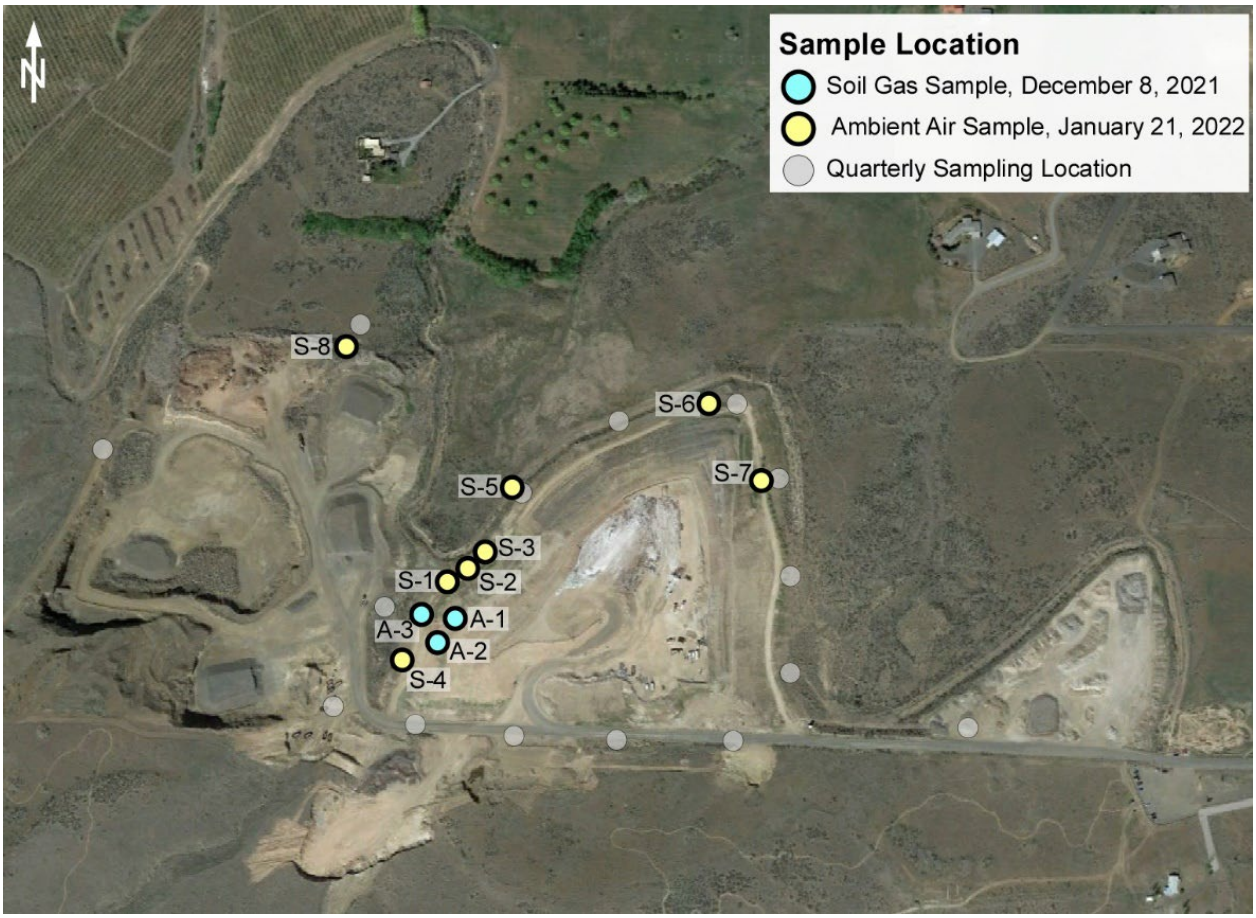


Figure 1. Soil gas sample, air sample, and quarterly methane monitoring locations at DTG Recycle

ANALYTICAL RESULTS FOR DECEMBER 2021 SAMPLING

Samples A-1, A-2, and A-3 were analyzed on December 9th for speciated sulfur compounds and December 13, 2021 for Volatile Organic Compounds (VOCs). The laboratory analytical packages for the December sampling event are included in Appendix B and C.

The soil gas samples were tested for VOCs (Table 2) and tentatively identified compounds (TICs; Table 3) using EPA Method TO-15 and for speciated sulfur compounds (Table 4) using method ASTM D5504. Tables 2 through 4 provide analytical results for detected analytes during the December 2021 soil gas sampling.

Table 2. VOC Concentrations (ppbv)

Analyte	Soil Gas Sample Concentrations		
	A-1	A-2	A-3
1,2,4-Trimethylbenzene	2,010	754	176
1,3,5-Trimethylbenzene	2,120	696	158
1,4-Dioxane	5,570	1,620	438
2-Butanone (MEK)	14,400	2,390	U
2-Hexanone (MBK)	474	U	U
2-Propanol (IPA)	39,900	4,120	556
4-Ethyltoluene	1,830	606	130
4-Methyl-2-pentanone (MiBK)	380	U	U
Acetone	44,600	4,850	U
Benzene	116,000	25,300	1,470
Carbon Disulfide	U	586	424
Chlorobenzene	218	U	U
Chloroethane	1,110	316	U
Chloromethane	76,700	4,090	U
Cyclohexane	992	434	U
Ethanol	4,570	982	U
Ethylbenzene	13,600	9,400	2,040
Heptane	12,500	5,240	194
Hexane	19,500	8,470	150
m & p-Xylene	9,410	3,050	528
Methanol	125,000	11,900	1,290
o-Xylene	6,090	2,130	388
Propene	149,000	25,100	U
Styrene	2,320	510	114
Tetrahydrofuran	18,300	3,100	216
Toluene	17,900	11,800	1,540

U = Analyte not detected above the Sample Reporting Limit

Table 3. Tentatively Identified Compound Concentrations (ppbv)

Analyte	Soil Gas Sample Concentrations		
	A-1	A-2	A-3
Isobutane	4770	--	--
2-Methyl-1-propene	12700	5660	--
Butane	8790	4320	--
2-Butene	5090	2140	--
Pentane	12300	6220	--
2-Methyl-2-butene	8760	--	--
2-Methylpentane	6940	3120	--
3-Methylfuran	14400	--	--
2-Methylfuran	--	4980	--
Octane	4300	--	--
4,4,5-Trimethyl-2-hexane	4320	--	--
3-Methylcyclopentene	--	3370	--
Methylcyclopentane	--	2410	--
5-Methyl-1,3-cyclopentadiene	--	2500	--
3-Methyl-1,3-pentadiene	--	16600	--
Decane	--	--	268
2-Ethyl-1-hexanol	--	--	322
2,4-Dimethyl-2-decene	--	--	212
4-Undecene	--	--	228
Undecane	--	--	518
1-Ethyly-4-ethylbenzene	--	--	222
2,3-Dihydro-4-methyl-1H-indene	--	--	228
Dodecane	--	--	378
2,4-diethyl-1-methylbenzene	--	--	222

"--" = Not identified for this sample

Table 4. Speciated Sulfur Concentrations (ppmv)

Analyte	Soil Gas Sample Concentrations		
	A-1	A-2	A-3
Hydrogen Sulfide	12.4	0.49	U
COS/SO2	0.472	0.055	0.137
Methyl Mercaptan	11.9	1.75	U
Ethyl Mercaptan	0.091		U
Dimethyl Sulfide	18.3	6.34	U
Carbon Disulfide	0.141	U	U
sec-Butyl Mercaptan / Thiophene	1.08	0.329	U
Dimethyl Disulfide	0.386	0.319	U
2-Methylthiophene	0.606	0.211	U
3-Methylthiophene	0.355	0.112	U
Tetrahydrothiophene	0.406	0.109	U
Total Unidentified Sulfur	1.54	0.435	U
Total Reduced Sulfurs	47.2	10.1	U

U = Analyte not detected above the Sample Reporting Limit

JANUARY 2022 FIELD SAMPLING ACTIVITIES

Based on results from the December 2021 field sampling, DTG requested further interrogation of the ambient air concentrations at locations near existing fractures and at multiple locations along the landfill boundary. Summa cannisters equipped with a regulator were used for sampling to allow for the collection of the air sample over a 2-hr time interval to account for variable ambient conditions (i.e., wind, barometric pressures, temperature, source fluctuations). This time interval approach is a better assessment of variable ambient outdoor conditions compared to an instantaneous sample. Additionally, summa cannisters were chosen over Tedlar bags to allow for a greater sample hold time, more accurate ppbv-level analysis, and the cannisters ability to capture samples in the relative breathing zone of workers. On January 21, 2022, Freestone and DTG staff walked down the proposed boundary sample locations and the landfill surface sample locations. It was anticipated that surface fractures similar to the December sampling would be evident in January, however, ongoing landfill cover activities resulted in no actively venting fractures at the landfill surface. A non-venting fracture was identified at location S-1 and ambient air samples were collected from the immediate area surrounding the fracture. As depicted in Figure 1, four (4) samples were collected from the landfill boundary. Three (3) surface samples were collected

from the vicinity of a fracture at intervals: within 1 ft, 5 ft, and 15 ft from the fracture, and one (1) upwind sample was collected for background comparison.

After sample collection the summa cannisters were packaged for shipping. Sample information and requested analyses were recorded on a signed chain of custody form (Appendix D) and placed into the shipping container. The samples were shipped ground via UPS to Atmospheric Analysis & Consulting, Inc. located in Ventura, California.

The weather conditions were partly cloudy and 37˚F at the time of sampling. Wind conditions were variable between 0-3 mph and from a south-westerly direction. Prior to sample collection, all summa cannisters were placed in the sampling locations and positioned approximately 3-ft above ground surface. Surface temperatures were recorded at each sampling location using an infrared temperature gauge. For the sample collection, the flow regulator on the summa cannister was opened and time-on was recorded. The summa cannisters were monitored during the sampling period and the intake valve was closed leaving some vacuum pressure in the canister per the laboratory protocol. Sampling information is summarized in Table 5.

Table 5. Ambient Air Sample Collection Information

Sample	Sample Location	Surface Temperature at Sample Location (°F)	Time On	Time Off
S-1	Fracture	54	1249	1456
S-2	5-ft downwind	44	1250	1443
S-3	15-ft downwind	49	1250	1445
S-4	Upwind	34	1246	1440
S-5	Boundary	31	1300	1455
S-6	Boundary	44	1257	1446
S-7	Boundary	31	1253	1448
S-8	Boundary	45	1233	1415

ANALYTICAL RESULTS FOR JANUARY 2022 SAMPLING

Samples S-1, S-2, S-3, S-4, S-5, S-6, S-7, and S-8 were analyzed for VOCs and TICs using EPA Method TO-15 on January 27, 2022. Speciated sulfur compounds were not analyzed for this sampling event given that the primary objective was to identify the ambient distribution of the higher-risk organic compounds measured during the December 2021 sampling event. The laboratory analytical packages for the January sampling event are included in Appendix D. Tables 6 through 8 provide analytical results for detected analytes identified using EPA Method TO-15. Table 6 provides the VOC analytical results in ppbv and Table 7 provides a conversion to $\mu g/m^3$ so that the results can be compared to Model Toxics Control Act (MTCA) Method B and C cleanup levels. MTCA Method B and C cleanup levels are provided for reference only. MTCA regulations apply to the cleanup and prevention of contaminated sites and therefore may not be applicable for decision making at this location. The TIC compounds provided in Table 8, are for information only since they were provided in the laboratory analytical report.

Table 6. VOC Concentrations (ppbv)

Analyte	Ambient Air Sample Concentrations							
	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U
1,4-Dioxane	U	U	U	U	U	U	U	U
2-Butanone (MEK)	U	U	1.95	U	U	U	U	U
2-Hexanone (MBK)	U	U	U	U	U	U	U	U
2-Propanol (IPA)	U	U	U	U	U	U	U	U
4-Ethyltoluene	U	U	U	U	U	U	U	U
4-Methyl-2-pentanone (MiBK)	U	U	U	U	U	U	U	U
Acetone	3.64	3.76	10.9	U	U	3.57	U	U
Benzene	13.3	13.0	26.8	U	U	U	U	U
Carbon Disulfide	U	U	U	U	U	U	U	U
Chlorobenzene	U	U	U	U	U	U	U	U
Chloroethane	U	U	U	U	U	U	U	U
Chloromethane	12.7	10.1	17.7	U	U	U	U	U
Cyclohexane	U	U	U	U	U	U	U	U
Ethanol	U	U	7.46	U	U	U	U	U
Ethyl Acetate	U	U	2.69	U	U	U	U	U
Ethylbenzene	1.85	1.99	5.82	U	U	U	U	U
Heptane	1.16	U	3.05	U	U	U	U	U
Hexane	1.96	1.84	4.02	U	U	U	U	U
m & p-Xylene	U	U	1.91	U	U	U	U	U
Methanol	U	U	28.8	U	U	U	9.46	U
o-Xylene	U	U	U	U	U	U	U	U
Propene	23.6	18.0	35.6	U	U	U	U	U
Styrene	U	U	U	U	U	U	U	U
Tetrahydrofuran	U	U	U	U	U	U	U	U
Toluene	4.49	3.98	23.8	U	U	U	U	U

U = Analyte not detected above the Sample Reporting Limit

Table 7. VOC Concentrations Compared to MTCA Cleanup Levels (µg/m^3)

Analyte	Ambient Air Sample Concentrations								MTCA CULs*	
	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8	Method B Noncancer	Method C Noncancer
1,2,4-Trimethylbenzene	U	U	U	U	U	U	U	U	27	60
1,3,5-Trimethylbenzene	U	U	U	U	U	U	U	U	27	60
1,4-Dioxane	U	U	U	U	U	U	U	U	14	30
2-Butanone (MEK)	U	U	5.7	U	U	U	U	U	2,300	5,000
2-Hexanone (MBK)	U	U	U	U	U	U	U	U	NA	NA
2-Propanol (IPA)	U	U	U	U	U	U	U	U	91	200
4-Ethyltoluene	U	U	U	U	U	U	U	U	NA	NA
4-Methyl-2-pentanone (MiBK)	U	U	U	U	U	U	U	U	1,400	3,000
Acetone	8.6	8.9	25.9	U	U	8.5	U	U	14,000	31,000
Benzene	42.5	41.5	85.6	U	U	U	U	U	14	30
Carbon Disulfide	U	U	U	U	U	U	U	U	320	700
Chlorobenzene	U	U	U	U	U	U	U	U	23	50
Chloroethane	U	U	U	U	U	U	U	U	NA	NA
Chloromethane	26.2	20.9	36.6	U	U	U	U	U	41	90
Cyclohexane	U	U	U	U	U	U	U	U	2,700	6,000
Ethanol	U	U	14.1	U	U	U	U	U	NA	NA
Ethylbenzene	8.0	8.6	25.3	U	U	U	U	U	460	1,000
Heptane	4.8	U	12.5	U	U	U	U	U	180	400
Hexane	6.9	6.5	14.2	U	U	U	U	U	320	700
m & p-Xylene	U	U	U	U	U	U	U	U	46	100
Methanol	U	U	37.7	U	U	U	12.4	U	9,100	20,000
o-Xylene	U	U	U	U	U	U	U	U	46	100
Propene	40.6	31.0	61.3	U	U	U	U	U	NA	NA
Styrene	U	U	U	U	U	U	U	U	460	1,000
Tetrahydrofuran	U	U	U	U	U	U	U	U	910	2,000
Toluene	16.9	15.0	89.7	U	U	U	U	U	2,300	5,000

*MTCA CULs derived from Cleanup Levels and Risk Calculations (CLARC) tables
NA = Analyte does not have a cleanup level in the CLARC tables
U = Analyte not detected above the Sample Reporting Limit

Table 8. Tentatively Identified Compound Concentrations (ppbv)

Analyte	Ambient Air Sample Concentrations							
	S-1	S-2	S-3	S-4	S-5	S-6	S-7	S-8
Isobutane	--	--	--	--	--	--	--	--
2-Methyl-1-propene	4.86	4.88	7.37	--	--	--	--	--
2-Methylbutane	--	--	--	--	4.37	--	--	--
Butane	3.54	3.86	6.81	--	--	--	--	--
2-Butene	--	--	--	--	--	--	--	--
Pentane	--	3.96	9.07	--	--	--	--	--
2-Methyl-2-butene	4.65	1.89	3.12	--	--	--	--	--
2-Methylpentane	--	--	--	--	--	--	--	--
3-Methylfuran	--	--	--	--	--	--	--	--
2-Methylfuran	--	--	2.51	--	--	--	--	--
Octane	--	--	1.73	--	--	--	--	--
Hexamethylcyclotrisiloxane	--	--	5.04	--	--	--	--	--
2,2,6-Trimethyloctane	--	--	4.07	--	--	--	--	--
4,4,5-Trimethyl-2-hexane	--	--	--	--	--	--	--	--
3-Methylcyclopentene	--	--	--	--	--	--	--	--
Methylcyclopentane	--	--	--	--	--	--	--	--
5-Methyl-1,3-cyclopentadiene	--	--	--	--	--	--	--	--
3-Methyl-1,3-pentadiene	--	--	--	--	--	--	--	--
Decane	--	--	1.70	--	--	--	--	--
1-Methyl-4-(1-methylethyl)-benzene	--	--	8.02	--	--	--	--	--
2-Ethyl-1-hexanol	--	--	--	--	--	--	--	--
2,4-Dimethyl-2-decene	--	--	--	--	--	--	--	--
4-Undecene	--	--	--	--	--	--	--	--
Undecane	--	--	--	--	--	--	--	--
1-Ethyly-4-ethylbenzene	--	--	--	--	--	--	--	--
2,3-Dihydro-4-methyl-1H-indene	--	--	--	--	--	--	--	--
Dodecane	--	--	--	--	--	--	--	--
2,4-diethyl-1-methylbenzene	--	--	--	--	--	--	--	--
Propane	--	--	--	--	--	1.74	--	--

"--" = Not identified for this sample

OBSERVATIONS

The following observations are made based on the sampling results:

- Soil gas concentrations from samples collected December 2021, were highest (as expected) at the actively venting fracture locations A-1 and A-2. Elevated concentrations, particularly of VOC compounds correlated with heavy odors during the sample collection event.
- Soil gas concentrations were significantly lower at the A-3 location where venting was not occurring.
- The detected VOC compounds were similar at all three soil gas sampling locations A-1, A-2, and A-3 suggesting similar sources.
- Compared to the December 2021 analytical results, January 2022 were significantly lower or not detected, even in the three samples collected from the shallow fracture (samples S-1, S-2, and S-3). This was expected given that the January 2022 samples were collected from the ambient air and therefore subject to greater natural diffusion and dilution.
- VOC concentrations from the landfill boundary sample locations are largely non-detect except for occasional detections of acetone and methanol which are common laboratory contaminants.
- Because of the uncertainty of the identification of the TICs, the interpretation of the results and their meaning to this project is difficult.
- The detected analytes evident at the landfill surface locations in December 2021 and January 2022 are associated with a variety of sources including plastics, fuels, solvents, lubricants, and other decaying organic compounds. The benzene, toluene, ethylbenzene, and xylene (BTEX) compounds are typically associated with gasoline and diesel-range organics (i.e., fuels).
- The nature and concentration of detected analytes warrant increased consideration of PPE and IH monitoring while working proximate to the actively vented fracture locations. Ambient concentrations appear to dissipate quickly along the working surface of the landfill and particularly at the further reaches of the landfill boundary.

APPENDIX A

FIELD SUMMARY REPORTS AND PHOTOS

FREESTONE ENVIRONMENTAL SERVICES, INC.

Freestone Environmental Services, Inc.
1100 Jadwin Ave, Suite 250
Richland, Washington 99352
509-943-5222

Field Report

Date: 12/8/2021	Client: DTG Recycle		
Location: DTG Landfill	Project: DTG		
Field Personnel: Tracy & Brooke	Weather: Partly Cloudy, Windy	Temperature: 46°F	

Time (24 Hours):	Activities:	
1000	Meet with DTG, check in at office & obtain a 4-gas meter (GasAlertMax XTII), date 2/5/20 SN# MA216-034636	
1030	Find out UPS drop off time for sample ~4pm	
1200	Locate sample locations & discuss sample strategy in wind. O_2 = 20.9% at sample locations.	
1220	Setting up sampling equipment	
1336	Collecting Sample A-1 from a vent	
1342	Collecting sample A-1 backup	A-1
1336	Surface Temp = 149°F aimed down vent	
1336	Ground Temp = 145°F w/ probe	
1355	Collecting sample A-2 from a vent	
1358	Collecting Sample A-2 backup	A-2
1354	Surface Temp = 61 °F	
1354	Ground Temp = 60.2 °F w/ probe	
1425	Collect sample A-3 from hillside	
1428	Collect sample A-3 backup	A-3
1417	Surface Temp = 57 °F	
1417	Ground Temp = 57.4 °F w/ probe	
1445	Check out at office & head to UPS to ship samples.	
1515	Ship samples via UPS Next day air early.	
1520	Head back to Freestone	
	Not Used 12/8/2021	

Signature: [signature] Date: 12/8/2021

Reviewed By: Date:

FREESTONE ENVIRONMENTAL SERVICES, INC.

Freestone Environmental Services, Inc.
1100 Jadwin Ave, Suite 250
Richland, Washington 99352
509-943-5222

Field Report

Date: 1/21/2022	**Client:** DTG Recycle		
Location: DTG Landfill	**Project:** DTG		
Field Personnel: Brooke, Tracy	**Weather:** Clear, Partly Cloudy	**Temperature:** 37°F	

Time (24 Hours):	Activities:
0915	Freestone on site + signed in at main office. Met Brooke to picked up 4-Gas Monitor
0930	FES + DTG looking for actively venting crack - no venting found.
1030	Discussion with DTG - John, still collect samples at a crack + boundary - OK if not venting.
1115	1st canister placed on 1"1" crack, 54°F
1123	2nd canister placed 5' downwind, 44°F
1130	3rd canister placed 15' downwind of crack, 49°F
1135	4th canister placed, Upwind canister, 34°F
1154	5th canister placed 1st boundary, 31°F
1157	6th canister placed 2nd boundary, 44°F
1203	7th canister placed 3rd boundary, 31°F
1250	8th canister placed, 4th boundary, 45°F
1233	Time on 8th canister (S-8)
1246	Time on 4th canister (S-4)
1249	Time on 1st canister (S-1)
1250	Time on 2nd canister (S-2)
1250	Time on 3rd canister (S-3)
1253	Time on 7th canister (S-7)
1257	Time on 6th canister (S-6)
1300	Time on 5th canister (S-5)
1415	Turn off S-8 canister, 9in Hg remain
1440	Turn off S-4 canister, 12 Hg remaining
1443	Turn off S-2 canister 5Hg
1445	Turn off S-3 canister 4 Hg
1446	Turn off S-7 canister 6 Hg

OFF
0 S-6 1446
14 S-1 1456

Signature:	Date: 1/21/22
Reviewed By: N/A	Date: N/A

FREESTONE
ENVIRONMENTAL SERVICES, INC.

Freestone Environmental Services, Inc.
1100 Jadwin Ave, Suite 250
Richland, Washington 99352
509-943-5222

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Field Report

Date: 1/21/2022	Client: DTG Recycle		
Location: DTG Land.	Project: DTG		
Field Personnel: Trey Mallgren/Brock Dykstra	Weather: Clear	Temperature:	

Time (24 Hours):	Activities:
1446	Turn off S-6 canister 0 in-Hg
1455	Turn off S-5 canister, 9 in Hg
1456	Turn off S-1 canister, 14 in Hg
1515	Sign out of office + close out canisters for return

Signature: [signature] Date: 1/21/22

Reviewed By: N/A Date: N/A

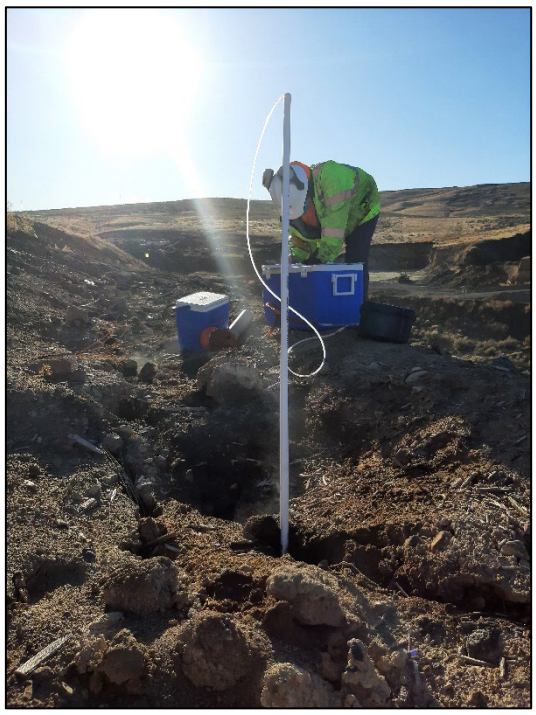

Photo 1: Sampling at location A-1. December 8, 2021

Photo 2: View of sampling down the vent at location A-1. December 8, 2021

Photo 3: Sampling at location A-3. December 8, 2021

Photo 4: Bentonite seal used during sampling at location A-3. December 8, 2021

Photo 5: Sampling at location S-1. January 21, 2022

Photo 6: View of air sampling at S-1, S-2 and S-3. January 21, 2022

Photo 7: Sampling at location S-4. January 21, 2022

Photo 8: Air sampling at location S-6. January 21, 2022

APPENDIX B

DECEMBER SOIL GAS SAMPLING ANALYTICAL LABORATORY REPORT FOR EPA METHOD TO-15 – VOLATILE ORGANIC COMPOUNDS AND TENTATIVELY IDENTIFIED COMPOUNDS

Atmospheric Analysis & Consulting, Inc.

CLIENT	: Freestone Environmental
PROJECT NAME	: DTG Recycle
AAC PROJECT NO.	: 212309
REPORT DATE	: 12/21/2021

On December 9, 2020, Atmospheric Analysis & Consulting, Inc. received three (3) Tedlar bags for Volatile Organic Compounds and Tentatively Identified Compounds (TICs) analysis by EPA Method TO-15. Upon receipt, the samples were assigned unique Laboratory ID numbers as follows:

Client ID	Lab ID
Sample A-1	212309-26290
Sample A-2	212309-26292
Sample A-3	212309-26294

This analysis is accredited under the laboratory's ISO/IEC 17025:2017 accreditation issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation AT-1908. Test results apply to the sample(s) as received. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. These samples were received in Tedlar Bags, which are considered inappropriate containers by EPA Method TO-15. Per NELAC requirements the analytical results should be considered estimated for these samples. AAC originally received six (6) samples, but per client request the analysis of samples "Sample A-1 backup", "Sample A-2 backup" & "Sample A-3 backup" were placed on hold. No other problems were encountered during receiving, preparation, and/or analysis of these samples.

The Technical Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy report.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha Parmar, Ph.D.
Technical Director

This report consists of 13 pages.

2225 Sperry Ave., Ventura, CA 93003 www.aaclab.com • (805) 650-1642

Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 212309
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/09/2021
DATE REPORTED : 12/21/2021
ANALYST : MB

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Sample A-1			Sample Reporting Limit (SRL) (MRLxDF's)	Sample A-2			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	212309-26290				212309-26291				
Date Sampled	12/08/2021				12/08/2021				
Date Analyzed	12/13/2021				12/13/2021				
Can Dilution Factor	1.00				1.00				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Propene	149000		2000	2000	25100		2000	2000	1.00
Dichlorodifluoromethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Chloromethane	76700		2000	1000	4090		200	100	0.50
Dichlorotetrafluoroethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Vinyl Chloride	<SRL	U	200	100	<SRL	U	200	100	0.50
Methanol	125000		2000	10000	11900		200	1000	5.00
1,3-Butadiene	<SRL	U	200	100	<SRL	U	200	100	0.50
Bromomethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Chloroethane	1110		200	100	316		200	100	0.50
Dichlorofluoromethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Ethanol	4570		200	400	982		200	400	2.00
Vinyl Bromide	<SRL	U	200	100	<SRL	U	200	100	0.50
Acetone	44600		2000	4000	4850		200	400	2.00
Trichlorofluoromethane	<SRL	U	200	100	<SRL	U	200	100	0.50
2-Propanol (IPA)	39900		2000	4000	4120		200	400	2.00
Acrylonitrile	<SRL	U	200	400	<SRL	U	200	400	2.00
1,1-Dichloroethene	<SRL	U	200	100	<SRL	U	200	100	0.50
Methylene Chloride (DCM)	<SRL	U	200	200	<SRL	U	200	200	1.00
Allyl Chloride	<SRL	U	200	200	<SRL	U	200	200	1.00
Carbon Disulfide	<SRL	U	200	400	586		200	400	2.00
Trichlorotrifluoroethane	<SRL	U	200	100	<SRL	U	200	100	0.50
trans-1,2-Dichloroethene	<SRL	U	200	100	<SRL	U	200	100	0.50
1,1-Dichloroethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Methyl Tert Butyl Ether (MTBE)	<SRL	U	200	100	<SRL	U	200	100	0.50
Vinyl Acetate	<SRL	U	200	200	<SRL	U	200	200	1.00
2-Butanone (MEK)	14400		2000	2000	2390		200	200	1.00
cis-1,2-Dichloroethene	<SRL	U	200	100	<SRL	U	200	100	0.50
Hexane	19500		200	100	8470		200	100	0.50
Chloroform	<SRL	U	200	100	<SRL	U	200	100	0.50
Ethyl Acetate	<SRL	U	200	100	<SRL	U	200	100	0.50
Tetrahydrofuran	18300		200	100	3100		200	100	0.50
1,2-Dichloroethane	<SRL	U	200	100	<SRL	U	200	100	0.50
1,1,1-Trichloroethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Benzene	116000		2000	1000	25300		2000	1000	0.50

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Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 212309
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/09/2021
DATE REPORTED : 12/21/2021
ANALYST : MB

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Sample A-1			Sample Reporting Limit (SRL) (MRLxDF's)	Sample A-2			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	212309-26290				212309-26291				
Date Sampled	12/08/2021				12/08/2021				
Date Analyzed	12/13/2021				12/13/2021				
Can Dilution Factor	1.00				1.00				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Carbon Tetrachloride	<SRL	U	200	100	<SRL	U	200	100	0.50
Cyclohexane	992		200	100	434		200	100	0.50
1,2-Dichloropropane	<SRL	U	200	100	<SRL	U	200	100	0.50
Bromodichloromethane	<SRL	U	200	100	<SRL	U	200	100	0.50
1,4-Dioxane	5570		200	200	1620		200	200	1.00
Trichloroethene (TCE)	<SRL	U	200	100	<SRL	U	200	100	0.50
2,2,4-Trimethylpentane	<SRL	U	200	100	<SRL	U	200	100	0.50
Heptane	12500		200	100	5240		200	100	0.50
cis-1,3-Dichloropropene	<SRL	U	200	100	<SRL	U	200	100	0.50
4-Methyl-2-pentanone (MiBK)	380		200	100	<SRL	U	200	100	0.50
trans-1,3-Dichloropropene	<SRL	U	200	100	<SRL	U	200	100	0.50
1,1,2-Trichloroethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Toluene	17900		200	100	11800		200	100	0.50
2-Hexanone (MBK)	474		200	200	<SRL	U	200	200	1.00
Dibromochloromethane	<SRL	U	200	100	<SRL	U	200	100	0.50
1,2-Dibromoethane	<SRL	U	200	100	<SRL	U	200	100	0.50
Tetrachloroethene (PCE)	<SRL	U	200	100	<SRL	U	200	100	0.50
Chlorobenzene	218		200	100	<SRL	U	200	100	0.50
Ethylbenzene	13600		200	100	9400		200	100	0.50
m & p-Xylene	9410		200	200	3050		200	200	1.00
Bromoform	<SRL	U	200	100	<SRL	U	200	100	0.50
Styrene	2320		200	100	510		200	100	0.50
1,1,2,2-Tetrachloroethane	<SRL	U	200	100	<SRL	U	200	100	0.50
o-Xylene	6090		200	100	2130		200	100	0.50
4-Ethyltoluene	1830		200	100	606		200	100	0.50
1,3,5-Trimethylbenzene	2120		200	100	696		200	100	0.50
1,2,4-Trimethylbenzene	2010		200	100	754		200	100	0.50
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	200	200	<SRL	U	200	200	1.00
1,3-Dichlorobenzene	<SRL	U	200	100	<SRL	U	200	100	0.50
1,4-Dichlorobenzene	<SRL	U	200	100	<SRL	U	200	100	0.50
1,2-Dichlorobenzene	<SRL	U	200	100	<SRL	U	200	100	0.50
1,2,4-Trichlorobenzene	<SRL	U	200	400	<SRL	U	200	400	2.00
Hexachlorobutadiene	<SRL	U	200	100	<SRL	U	200	100	0.50
BFB-Surrogate Std. % Recovery		114%				116%			70-130%

U - Compound was not detected at or above the SRL.

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Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 212309
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/09/2021
DATE REPORTED : 12/21/2021
ANALYST : MB

TENTATIVELY IDENTIFIED COMPOUNDS (TICs) BY EPA TO-15

Client ID	Sample A-1		
AAC ID	212309-26290		
Date Sampled	12/08/2021		
Date Analyzed	12/13/2021		
Can Dilution Factor	1.00		
Compound	Result*	Analysis DF	ID Quality§
Isobutane	4770	200	86
2-Methyl-1-propene	12700	200	90
Butane	8790	200	72
2-Butene	5090	200	81
Pentane	12300	200	91
2-Methyl-2-butene	8760	200	70
2-Methylpentane	6940	200	91
3-Methylfuran	14400	200	91
Octane	4300	200	91
4,4,5-Trimethyl-2-hexene	4320	200	64
BFB-Surrogate Std. % Recovery	114%		

Client ID	Sample A-2		
AAC ID	212309-26291		
Date Sampled	12/08/2021		
Date Analyzed	12/13/2021		
Can Dilution Factor	1.00		
Compound	Result*	Analysis DF	ID Quality§
2-Methyl-1-propene	5660	200	90
Butane	4320	200	72
2-Butene	2140	200	81
Pentane	6220	200	90
2-Methylpentane	3120	200	91
2-Methylfuran	4980	200	94
3-Methylcyclopentene	3370	200	90
Methylcyclopentane	2410	200	91
5-Methyl-1,3-cyclopentadiene	2500	200	76
3-Methyl-1,3-pentadiene	16600	200	74
BFB-Surrogate Std. % Recovery	116%		

* Results obtained via TICs analysis are estimated.
§ Spectral Library match quality ranges from 1-100.

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Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 212309
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/09/2021
DATE REPORTED : 12/21/2021
ANALYST : MB

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Sample A-3			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	212309-26292				
Date Sampled	12/08/2021				
Date Analyzed	12/13/2021				
Can Dilution Factor	1.00				
Compound	Result	Qualifier	Analysis DF		
Chlorodifluoromethane	<SRL	U	200	100	0.50
Propene	<SRL	U	200	200	1.00
Dichlorodifluoromethane	<SRL	U	200	100	0.50
Chloromethane	<SRL	U	200	100	0.50
Dichlorotetrafluoroethane	<SRL	U	200	100	0.50
Vinyl Chloride	<SRL	U	200	100	0.50
Methanol	1290		200	1000	5.00
1,3-Butadiene	<SRL	U	200	100	0.50
Bromomethane	<SRL	U	200	100	0.50
Chloroethane	<SRL	U	200	100	0.50
Dichlorofluoromethane	<SRL	U	200	100	0.50
Ethanol	<SRL	U	200	400	2.00
Vinyl Bromide	<SRL	U	200	100	0.50
Acetone	<SRL	U	200	400	2.00
Trichlorofluoromethane	<SRL	U	200	100	0.50
2-Propanol (IPA)	556		200	400	2.00
Acrylonitrile	<SRL	U	200	400	2.00
1,1-Dichloroethene	<SRL	U	200	100	0.50
Methylene Chloride (DCM)	<SRL	U	200	200	1.00
Allyl Chloride	<SRL	U	200	200	1.00
Carbon Disulfide	424		200	400	2.00
Trichlorotrifluoroethane	<SRL	U	200	100	0.50
trans-1,2-Dichloroethene	<SRL	U	200	100	0.50
1,1-Dichloroethane	<SRL	U	200	100	0.50
Methyl Tert Butyl Ether (MTBE)	<SRL	U	200	100	0.50
Vinyl Acetate	<SRL	U	200	200	1.00
2-Butanone (MEK)	<SRL	U	200	200	1.00
cis-1,2-Dichloroethene	<SRL	U	200	100	0.50
Hexane	150		200	100	0.50
Chloroform	<SRL	U	200	100	0.50
Ethyl Acetate	<SRL	U	200	100	0.50
Tetrahydrofuran	216		200	100	0.50
1,2-Dichloroethane	<SRL	U	200	100	0.50
1,1,1-Trichloroethane	<SRL	U	200	100	0.50
Benzene	1470		200	100	0.50

Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 212309
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 12/09/2021
DATE REPORTED : 12/21/2021
ANALYST : MB

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	Sample A-3			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	212309-26292				
Date Sampled	12/08/2021				
Date Analyzed	12/13/2021				
Can Dilution Factor	1.00				
Compound	Result	Qualifier	Analysis DF		
Carbon Tetrachloride	<SRL	U	200	100	0.50
Cyclohexane	<SRL	U	200	100	0.50
1,2-Dichloropropane	<SRL	U	200	100	0.50
Bromodichloromethane	<SRL	U	200	100	0.50
1,4-Dioxane	438		200	200	1.00
Trichloroethene (TCE)	<SRL	U	200	100	0.50
2,2,4-Trimethylpentane	<SRL	U	200	100	0.50
Heptane	194		200	100	0.50
cis-1,3-Dichloropropene	<SRL	U	200	100	0.50
4-Methyl-2-pentanone (MiBK)	<SRL	U	200	100	0.50
trans-1,3-Dichloropropene	<SRL	U	200	100	0.50
1,1,2-Trichloroethane	<SRL	U	200	100	0.50
Toluene	1540		200	100	0.50
2-Hexanone (MBK)	<SRL	U	200	200	1.00
Dibromochloromethane	<SRL	U	200	100	0.50
1,2-Dibromoethane	<SRL	U	200	100	0.50
Tetrachloroethene (PCE)	<SRL	U	200	100	0.50
Chlorobenzene	<SRL	U	200	100	0.50
Ethylbenzene	2040		200	100	0.50
m & p-Xylene	528		200	200	1.00
Bromoform	<SRL	U	200	100	0.50
Styrene	114		200	100	0.50
1,1,2,2-Tetrachloroethane	<SRL	U	200	100	0.50
o-Xylene	388		200	100	0.50
4-Ethyltoluene	130		200	100	0.50
1,3,5-Trimethylbenzene	158		200	100	0.50
1,2,4-Trimethylbenzene	176		200	100	0.50
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	200	200	1.00
1,3-Dichlorobenzene	<SRL	U	200	100	0.50
1,4-Dichlorobenzene	<SRL	U	200	100	0.50
1,2-Dichlorobenzene	<SRL	U	200	100	0.50
1,2,4-Trichlorobenzene	<SRL	U	200	400	2.00
Hexachlorobutadiene	<SRL	U	200	100	0.50
BFB-Surrogate Std. % Recovery		102%			70-130%

U - Compound was not detected at or above the SRL.

Laboratory Analysis Report

CLIENT : **Freestone Environmental**
PROJECT NO : **212309**
MATRIX : **AIR**
UNITS : **PPB (v/v)**

DATE RECEIVED : **12/09/2021**
DATE REPORTED : **12/21/2021**
ANALYST : **MB**

TENTATIVELY IDENTIFIED COMPOUNDS (TICs) BY EPA TO-15

Client ID	Sample A-3		
AAC ID	212309-26292		
Date Sampled	12/08/2021		
Date Analyzed	12/13/2021		
Can Dilution Factor	1.00		
Compound	Result*	Analysis DF	ID Quality§
Decane	268	200	95
2-Ethyl-1-hexanol	322	200	90
2,4-Dimethyl-2-decene	212	200	64
4-Undecene	228	200	93
Undecane	518	200	94
1-Ethenyl-4-ethylbenzene	222	200	76
2,3-Dihydro-4-methyl-1H-indene	228	200	83
Dodecane	378	200	93
2,4-Diethyl-1-methylbenzene	222	200	30
BFB-Surrogate Std. % Recovery	102%		

* Results obtained via TICs analysis are estimated.
§ Spectral Library match quality ranges from 1-100.

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QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 12/13/2021
MATRIX : High Purity N_2
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-04
CALIBRATION STD ID : PS101121-02
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 12/10/2021 Calibration

Analyte Compounds	*Source*[1]	*CCV*[2]	*% Recovery*[3]
4-BFB (surrogate standard)	10.00	10.50	105
Chlorodifluoromethane	10.70	10.70	100
Propene	10.90	11.11	102
Dichlorodifluoromethane	10.30	11.42	111
Dimethyl Ether	10.70	10.15	95
Chloromethane	10.30	11.12	108
Dichlorotetrafluoroethane	9.80	11.43	117
Vinyl Chloride	10.10	12.20	121
Acetaldehyde	20.50	21.50	105
Methanol	16.20	17.94	111
1,3-Butadiene	10.70	13.08	122
Bromomethane	10.30	12.54	122
Chloroethane	9.90	11.39	115
Dichlorofluoromethane	10.40	12.22	118
Ethanol	10.50	12.62	120
Vinyl Bromide	10.60	12.41	117
Acrolein	10.90	12.79	117
Acetone	10.40	11.01	106
Trichlorofluoromethane	10.20	11.22	110
2-Propanol (IPA) HR	10.90	14.76	135
Acrylonitrile	11.30	11.45	101
1,1-Dichloroethene	10.70	12.05	113
Methylene Chloride (DCM)	10.90	11.56	106
TertButanol (TBA) HR	10.80	14.74	136
Allyl Chloride	10.90	10.05	92
Carbon Disulfide	10.50	11.58	110
Trichlorotrifluoroethane	10.90	11.45	105
trans-1,2-Dichloroethene	10.40	11.54	111
1,1-Dichloroethane	10.30	11.01	107
Methyl Tert Butyl Ether (MTBE)	10.80	12.75	118
Vinyl Acetate	11.00	12.01	109
2-Butanone (MEK)	10.50	10.86	103
cis-1,2-Dichloroethene	10.50	11.82	113
Hexane	10.70	11.96	112
Chloroform	10.60	11.25	106
Ethyl Acetate	10.60	11.19	106
Tetrahydrofuran	10.60	12.29	116
1,2-Dichloroethane	10.60	11.30	107
1,1,1-Trichloroethane	10.50	10.92	104
Benzene	10.60	11.74	111
Carbon Tetrachloride	10.70	11.18	104
Cyclohexane	10.50	11.64	111

Analyte Compounds (Continued)	*Source*[1]	*CCV*[2]	*% Recovery*[3]
1,2-Dichloropropane	10.60	11.40	108
Bromodichloromethane	10.50	10.93	104
1,4-Dioxane	10.50	12.35	118
Trichloroethene (TCE)	10.50	11.16	106
2,2,4-Trimethylpentane	10.60	11.63	110
Methyl Methacrylate	10.60	11.58	109
Heptane	10.60	11.33	107
cis-1,3-Dichloropropene	10.20	11.20	110
4-Methyl-2-pentanone (MiBK)	10.20	11.04	108
trans-1,3-Dichloropropene	10.10	11.48	114
1,1,2-Trichloroethane	10.80	11.32	105
Toluene	10.80	11.97	111
2-Hexanone (MBK)	10.70	11.85	111
Dibromochloromethane	10.60	11.30	107
1,2-Dibromoethane	10.90	11.85	109
Tetrachloroethene (PCE)	10.50	10.95	104
Chlorobenzene	10.90	11.63	107
Ethylbenzene	10.90	12.81	118
m & p-Xylene	21.60	27.18	126
Bromoform	10.80	12.06	112
Styrene	10.70	13.20	123
1,1,2,2-Tetrachloroethane	10.70	12.03	112
o-Xylene	10.70	12.47	117
1,2,3-Trichloropropane	10.80	11.92	110
Isopropylbenzene (Cumene)	10.80	12.55	116
α-Pinene	11.60	13.65	118
2-Chlorotoluene	10.90	12.20	112
n-Propylbenzene	10.20	11.84	116
4-Ethyltoluene	10.60	12.53	118
1,3,5-Trimethylbenzene	10.50	12.33	117
β-Pinene	9.30	11.20	120
1,2,4-Trimethylbenzene	10.50	12.36	118
Benzyl Chloride (a-Chlorotoluene)	10.60	12.11	114
1,3-Dichlorobenzene	10.60	13.01	123
1,4-Dichlorobenzene	10.40	12.75	123
Sec-ButylBenzene	10.80	13.32	123
1,2-Dichlorobenzene	10.30	12.24	119
n-ButylBenzene	10.60	13.00	123
1,2-Dibromo-3-Chloropropane	10.70	12.72	119
1,2,4-Trichlorobenzene	10.50	11.43	109
Naphthalene	10.50	12.34	118
Hexachlorobutadiene	10.70	12.19	114

[1] Concentration of analyte compound in certified source standard.

[2] Measured result from daily Continuing Calibration Verification (CCV).

[3] The acceptable range for analyte recovery is 100±30%.

HR - Recovery for this compound was high. Results should be considered biased high.

QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 12/13/2021
MATRIX : High Purity N_2
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-04
CALIBRATION STD ID : PS101121-02
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Laboratory Control Spike Analysis

System Monitoring Compounds	*Sample Concentration*	*Spike Added*	*LCS[1] Recovery*	*LCSD[1] Recovery*	*LCS[1] % Recovery[2]*	*LCSD[1] % Recovery[2]*	*RPD[3]*
4-BFB (surrogate standard)	0.0	10.00	10.50	10.44	105	104.4	0.6
1,1-Dichloroethene	0.0	10.70	12.05	11.87	113	111	1.5
Methylene Chloride (DCM)	0.0	10.90	11.56	11.34	106	104	1.9
Benzene	0.0	10.60	11.74	11.62	111	110	1.0
Trichloroethene (TCE)	0.0	10.50	11.16	11.15	106	106	0.1
Toluene	0.0	10.80	11.97	11.90	111	110	0.6
Tetrachloroethene (PCE)	0.0	10.50	10.95	10.95	104	104	0.0
Chlorobenzene	0.0	10.90	11.63	11.46	107	105	1.5
Ethylbenzene	0.0	10.90	12.81	12.83	118	118	0.2
m & p-Xylene	0.0	21.60	27.18	26.92	126	125	1.0
o-Xylene	0.0	10.70	12.47	12.33	117	115	1.1

[1] Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD)

[2] The acceptable range for analyte recovery is 100±30%.

[3] Relative Percent Difference (RPD) between LCS recovery and LCSD recovery (acceptable range is <25%).

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QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 12/13/2021 | **INSTRUMENT ID : GC/MS-04**
MATRIX : High Purity He or N_2 | **ANALYST : MB/RC**
UNITS : PPB (v/v)

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Method Blank Analysis

Analyte Compounds	*MB 121321*	*Reporting Limit (RL)*
4-BFB (surrogate standard)	97%	100±30%
Chlorodifluoromethane	<RL	0.5
Propene	<RL	1.0
Dichlorodifluoromethane	<RL	0.5
Dimethyl Ether	<RL	0.5
Chloromethane	<RL	0.5
Dichlorotetrafluoroethane	<RL	0.5
Vinyl Chloride	<RL	0.5
Acetaldehyde	<RL	5.0
Methanol	<RL	5.0
1,3-Butadiene	<RL	0.5
Bromomethane	<RL	0.5
Chloroethane	<RL	0.5
Dichlorofluoromethane	<RL	0.5
Ethanol	<RL	2.0
Vinyl Bromide	<RL	0.5
Acrolein	<RL	1.0
Acetone	<RL	2.0
Trichlorofluoromethane	<RL	0.5
2-Propanol (IPA)	<RL	2.0
Acrylonitrile	<RL	2.0
1,1-Dichloroethene	<RL	0.5
Methylene Chloride (DCM)	<RL	1.0
TertButanol (TBA)	<RL	0.5
Allyl Chloride	<RL	1.0
Carbon Disulfide	<RL	2.0
Trichlorotrifluoroethane	<RL	0.5
trans-1,2-Dichloroethene	<RL	0.5
1,1-Dichloroethane	<RL	0.5
Methyl Tert Butyl Ether (MTBE)	<RL	0.5
Vinyl Acetate	<RL	1.0
2-Butanone (MEK)	<RL	1.0
cis-1,2-Dichloroethene	<RL	0.5
Hexane	<RL	0.5
Chloroform	<RL	0.5
Ethyl Acetate	<RL	0.5
Tetrahydrofuran	<RL	0.5
1,2-Dichloroethane	<RL	0.5
1,1,1-Trichloroethane	<RL	0.5
Benzene	<RL	0.5
Carbon Tetrachloride	<RL	0.5
Cyclohexane	<RL	0.5

Analyte Compounds (Continued)	*MB 121321*	*Reporting Limit (RL)*
1,2-Dichloropropane	<RL	0.5
Bromodichloromethane	<RL	0.5
1,4-Dioxane	<RL	1.0
Trichloroethene (TCE)	<RL	0.5
2,2,4-Trimethylpentane	<RL	0.5
Methyl Methacrylate	<RL	0.5
Heptane	<RL	0.5
cis-1,3-Dichloropropene	<RL	0.5
4-Methyl-2-pentanone (MiBK)	<RL	0.5
trans-1,3-Dichloropropene	<RL	0.5
1,1,2-Trichloroethane	<RL	0.5
Toluene	<RL	0.5
2-Hexanone (MBK)	<RL	1.0
Dibromochloromethane	<RL	0.5
1,2-Dibromoethane	<RL	0.5
Tetrachloroethene (PCE)	<RL	0.5
Chlorobenzene	<RL	0.5
Ethylbenzene	<RL	0.5
m & p-Xylene	<RL	1.0
Bromoform	<RL	0.5
Styrene	<RL	0.5
1,1,2,2-Tetrachloroethane	<RL	0.5
o-Xylene	<RL	0.5
1,2,3-Trichloropropane	<RL	0.5
Isopropylbenzene (Cumene)	<RL	0.5
α-Pinene	<RL	0.5
2-Chlorotoluene	<RL	0.5
n-Propylbenzene	<RL	0.5
4-Ethyltoluene	<RL	0.5
1,3,5-Trimethylbenzene	<RL	0.5
β-Pinene	<RL	0.5
1,2,4-Trimethylbenzene	<RL	0.5
Benzyl Chloride (a-Chlorotoluene)	<RL	1.0
1,3-Dichlorobenzene	<RL	0.5
1,4-Dichlorobenzene	<RL	0.5
Sec-ButylBenzene	<RL	0.5
1,2-Dichlorobenzene	<RL	0.5
n-ButylBenzene	<RL	0.5
1,2-Dibromo-3-Chloropropane	<RL	0.5
1,2,4-Trichlorobenzene	<RL	2.0
Naphthalene	<RL	1.0
Hexachlorobutadiene	<RL	0.5

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QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 12/13/2021
MATRIX : Air
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-04
ANALYST : MB/RC
DILUTION FACTOR[1] : x19.94

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Duplicate Analysis of AAC Sample ID: 212241-25954

Analyte Compounds	*Sample*	*Duplicate*	*RPD*[2]
4-BFB (surrogate standard)	9.55	9.57	0.2
Chlorodifluoromethane	<SRL	<SRL	*NA*
Propene	<SRL	<SRL	*NA*
Dichlorodifluoromethane	<SRL	<SRL	*NA*
Dimethyl Ether	<SRL	<SRL	*NA*
Chloromethane	<SRL	<SRL	*NA*
Dichlorotetrafluoroethane	<SRL	<SRL	*NA*
Vinyl Chloride	<SRL	<SRL	*NA*
Acetaldehyde	<SRL	<SRL	*NA*
Methanol	<SRL	<SRL	*NA*
1,3-Butadiene	<SRL	<SRL	*NA*
Bromomethane	<SRL	<SRL	*NA*
Chloroethane	<SRL	<SRL	*NA*
Dichlorofluoromethane	<SRL	<SRL	*NA*
Ethanol	<SRL	<SRL	*NA*
Vinyl Bromide	<SRL	<SRL	*NA*
Acrolein	<SRL	<SRL	*NA*
Acetone	250	253	1.1
Trichlorofluoromethane	<SRL	<SRL	*NA*
2-Propanol (IPA)	<SRL	<SRL	*NA*
Acrylonitrile	<SRL	<SRL	*NA*
1,1-Dichloroethene	<SRL	<SRL	*NA*
Methylene Chloride (DCM)	<SRL	<SRL	*NA*
TertButanol (TBA)	<SRL	<SRL	*NA*
Allyl Chloride	<SRL	<SRL	*NA*
Carbon Disulfide	<SRL	<SRL	*NA*
Trichlorotrifluoroethane	<SRL	<SRL	*NA*
trans-1,2-Dichloroethene	<SRL	<SRL	*NA*
1,1-Dichloroethane	<SRL	<SRL	*NA*
Methyl Tert Butyl Ether (MTBE)	<SRL	<SRL	*NA*
Vinyl Acetate	<SRL	<SRL	*NA*
2-Butanone (MEK)	<SRL	<SRL	*NA*
cis-1,2-Dichloroethene	<SRL	<SRL	*NA*
Hexane	<SRL	<SRL	*NA*
Chloroform	<SRL	<SRL	*NA*
Ethyl Acetate	<SRL	<SRL	*NA*
Tetrahydrofuran	<SRL	<SRL	*NA*
1,2-Dichloroethane	<SRL	<SRL	*NA*
1,1,1-Trichloroethane	<SRL	<SRL	*NA*
Benzene	<SRL	<SRL	*NA*
Carbon Tetrachloride	<SRL	<SRL	*NA*
Cyclohexane	<SRL	<SRL	*NA*

Analyte Compounds (Continued)	*Sample*	*Duplicate*	*RPD*[2]
1,2-Dichloropropane	<SRL	<SRL	*NA*
Bromodichloromethane	<SRL	<SRL	*NA*
1,4-Dioxane	<SRL	<SRL	*NA*
Trichloroethene (TCE)	<SRL	<SRL	*NA*
2,2,4-Trimethylpentane	<SRL	<SRL	*NA*
Methyl Methacrylate	<SRL	<SRL	*NA*
Heptane	<SRL	<SRL	*NA*
cis-1,3-Dichloropropene	<SRL	<SRL	*NA*
4-Methyl-2-pentanone (MiBK)	<SRL	<SRL	*NA*
trans-1,3-Dichloropropene	<SRL	<SRL	*NA*
1,1,2-Trichloroethane	<SRL	<SRL	*NA*
Toluene	<SRL	<SRL	*NA*
2-Hexanone (MBK)	<SRL	<SRL	*NA*
Dibromochloromethane	<SRL	<SRL	*NA*
1,2-Dibromoethane	<SRL	<SRL	*NA*
Tetrachloroethene (PCE)	<SRL	<SRL	*NA*
Chlorobenzene	<SRL	<SRL	*NA*
Ethylbenzene	<SRL	<SRL	*NA*
m & p-Xylene	<SRL	<SRL	*NA*
Bromoform	<SRL	<SRL	*NA*
Styrene	<SRL	<SRL	*NA*
1,1,2,2-Tetrachloroethane	<SRL	<SRL	*NA*
o-Xylene	<SRL	<SRL	*NA*
1,2,3-Trichloropropane	<SRL	<SRL	*NA*
Isopropylbenzene (Cumene)	<SRL	<SRL	*NA*
α-Pinene	<SRL	<SRL	*NA*
2-Chlorotoluene	<SRL	<SRL	*NA*
n-Propylbenzene	<SRL	<SRL	*NA*
4-Ethyltoluene	<SRL	<SRL	*NA*
1,3,5-Trimethylbenzene	<SRL	<SRL	*NA*
β-Pinene	<SRL	<SRL	*NA*
1,2,4-Trimethylbenzene	<SRL	<SRL	*NA*
Benzyl Chloride (a-Chlorotoluene)	<SRL	<SRL	*NA*
1,3-Dichlorobenzene	<SRL	<SRL	*NA*
1,4-Dichlorobenzene	<SRL	<SRL	*NA*
Sec-ButylBenzene	<SRL	<SRL	*NA*
1,2-Dichlorobenzene	<SRL	<SRL	*NA*
n-ButylBenzene	<SRL	<SRL	*NA*
1,2-Dibromo-3-Chloropropane	<SRL	<SRL	*NA*
1,2,4-Trichlorobenzene	<SRL	<SRL	*NA*
Naphthalene	<SRL	<SRL	*NA*
Hexachlorobutadiene	<SRL	<SRL	*NA*

[1] Dilution factor is the product of the Canister Dilution Factor and the Analysis Dilution Factor.

[2] Relative Percent Difference (RPD) between Sample analysis and Duplicate analysis (acceptable range is <25%).

SRL - Sample Reporting Limit (minimum)

212309

CHAIN OF CUSTODY AND ANALYSIS REQUEST – Chain of Custody is a LEGAL DOCUMENT. Complete all relevant fields.

Atmospheric Analysis and Consulting · Phone: 805-650-1642 · Email: info@aaclab.com · 1534 Eastman Ave Suite A, Ventura, CA 93003

AAC Project No.:

Client/Company Name: Freestone Environmental

Project Name: DTG Recycle

Project Manager Name: Kira Murray

Project Number:

Turnaround Time
- ☐ Rush 24 h ☐ Same Day
- ☐ Rush 48 h ☐ 5 Days
- ☐ Rush 72 h ☒ Normal

Sampler Name
Print: Tracy Mallgren
Signature: Tracy Mallgren

Send Report To (Name/Email/Address)
Kira Murray
kiramurray@gofreestone.com
1100 Jadwin Ave, Suite 250 Richland WA

Send Invoice To (Name/Email/Address)
kiramurray@gofreestone.com
1100 Jadwin Ave, Suite 250
PO Number Richland, WA

Analysis Requested

Client Sample Name	Sample ID	Sampling Date	Sampling Time	Container Type/Qty	Speciated Soil for Compounds	VOCs + TICs				Lab ID
Sample A-1	A-1	12/8/21	1336	Tedlar 1	X	X	26290			
Sample A-1 backup	A-1 backup	12/8/21	1342	Tedlar 1	X	X	26291			
Sample A-2	A-2	12/8/21	1355	Tedlar 1	X	X	26292			
Sample A-2 backup	A-2 backup	12/8/21	1358	Tedlar 1	X	X	26293			
Sample A-3	A-3	12/8/21	1425	Tedlar 1	X	X	26294			
Sample A-3 backup	A-3 backup	12/8/21	1428	Tedlar 1	X	X	26295			
	Not Used TM 12/8/21						Not Used TM 12/8/21			

LAB USE ONLY

Sample Received via:
- ☐ FedEx
- ☐ UPS
- ☐ Courier
- ☐ Other _____

Temperature _____ °C

Thermometer ID _____

Initials _____

Returned Eqmt

Total cans: _____

Unused cans: _____

Flow Controllers: _____

Client Notes/Special Instructions:
Only run backup samples if there is a leak/problem with orginal sample

EDD?
- ☐ Yes
- ☒ No

LAB USE ONLY
Notes:

Relinquished By Print: Tracy Mallgren Signature: Tracy Mallgren	Date 12/8/21 Time 1500	**Received By** Print: Signature:	Date Time	
Relinquished By Print: Signature:	Date Time	**Received By** Print: Signature: Chantel Nunes	Date 12/9/21 Time 0722	

Ups

212309

CHAIN OF CUSTODY AND ANALYSIS REQUEST – Chain of Custody is a LEGAL DOCUMENT. Complete all relevant fields.

Atmospheric Analysis and Consulting · Phone: 805-650-1642 · Email: info@aaclab.com · 1534 Eastman Ave Suite A, Ventura, CA 93003

AAC Project No.:

Client/Company Name: Freestone Environmental
Project Manager Name: Kira Murray
Project Name: DTG Recycle
Project Number:

Turnaround Time
☐ Rush 24 h ☐ Same Day
☐ Rush 48 h ☐ 5 Days
☐ Rush 72 h ☒ Normal

Sampler Name
Print: Tracy Mallgren
Signature:

Send Report To (Name/Email/Address)
Kira Murray
kiramurray@gofreestone.com
1100 Jadwin Ave, Suite 250 Richland WA

Send Invoice To (Name/Email/Address)
kiramurray@gofreestone.com
1100 Jadwin Ave, Suite 250
PO Number Richland, WA

LAB USE ONLY

Client Sample Name	Sample ID	Sampling Date	Sampling Time	Container Type/Qty	Speciated Soil for Compounds	VOCs + TICs				Lab ID
Sample A-1	A-1	12/8/21	1336	Tedlar 1	X	X	26290			
Sample A-1 backup	A-1 backup	12/8/21	1342	Tedlar 1	X	X	26291			
Sample A-2	A-2	12/8/21	1355	Tedlar 1	X	X	26292			
Sample A-2 backup	A-2 backup	12/8/21	1358	Tedlar 1	X	X	26293			
Sample A-3	A-3	12/8/21	1425	Tedlar 1	X	X	26294			
Sample A3 backup	A-3 backup	12/8/21	1428	Tedlar 1	X	X	26295			

Not Used TM 12/8/21

Not Used TM 12/8/21

Sample Received via:
☐FedEx ☐UPS ☐Courier ☐Other_____

Temperature _____°C
Thermometer ID _____
Initials _____

Returned Eqmt
Total cans: _____
Unused cans: _____
Flow Controllers: _____

Client Notes/Special Instructions:
Only run backup samples if there is a leak/problem with orginal sample

EDD? ☐Yes ☒No

LAB USE ONLY
Notes:

Relinquished By	Date	Received By	Date
Print: Tracy Mallgren	12/8/21	Print:	
Signature:	Time 1500	Signature:	Time
Relinquished By	Date	Received By	Date 12/9/21
Print:		Print:	
Signature:	Time	Signature: Gabriel Nuños	Time 0722

Ups

APPENDIX C

DECEMBER SOIL GAS SAMPLING

ANALYTICAL LABORATORY REPORT FOR METHOD ASTM D5504 - TOTAL REDUCED SULFUR

Atmospheric Analysis & Consulting, Inc.

CLIENT : Freestone Environmental
PROJECT NAME : DTG Recycle
AAC PROJECT NO. : 212309
REPORT DATE : 12/20/2021

On December 9, 2021, Atmospheric Analysis & Consulting, Inc. received six (6) Tedlar Bags for Total Reduced Sulfur analysis by ASTM D-5504. Upon receipt, the samples were assigned unique Laboratory ID numbers as follows:

Client ID	Lab No.
Sample A-1	212309-26290
Sample A-1 backup	212309-26291
Sample A-2	212309-26292
Sample A-2 backup	212309-26293
Sample A-3	212309-26294
Sample A-3 backup	212309-26295

This analysis is performed in accordance with AAC's Quality Manual. Test results apply to the sample(s) as received. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. Per client request, the samples labeled "backup" (26291, 26293, 26295) were placed on hold and not analyzed. No problems were encountered during receiving, preparation, and/or analysis of these samples. The Technical Director or his/her designee, as verified by the following signature, has authorized release of the data.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha Parmar, Ph.D.
Technical Director

This report consists of 4 pages.

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LABORATORY ANALYSIS REPORT

CLIENT : Freestone Environmental
PROJECT NO. : 212309
MATRIX : AIR
UNITS : ppmV

SAMPLING DATE : 12/08/2021
RECEIVING DATE : 12/09/2021
ANALYSIS DATE : 12/09/2021
REPORT DATE : 12/20/2021

Total Reduced Sulfur Compounds Analysis by ASTM D-5504

Client ID	Sample A-1	Sample A-2	Sample A-3
AAC ID	212309-26290	212309-26292	212309-26294
Analyte	Result	Result	Result
Hydrogen Sulfide	**12.4**	**0.490**	< 0.050
COS / SO2	**0.472**	**0.055**	**0.137**
Methyl Mercaptan	**11.9**	**1.75**	< 0.050
Ethyl Mercaptan	**0.091**	< 0.050	< 0.050
Dimethyl Sulfide	**18.3**	**6.34**	< 0.050
Carbon Disulfide	**0.141**	< 0.050	< 0.050
Isopropyl Mercaptan	< 0.050	< 0.050	< 0.050
tert-Butyl Mercaptan	< 0.050	< 0.050	< 0.050
n-Propyl Mercaptan	< 0.050	< 0.050	< 0.050
Methylethylsulfide	< 0.050	< 0.050	< 0.050
sec-Butyl Mercaptan / Thiophene	**1.08**	**0.329**	< 0.050
iso-Butyl Mercaptan	< 0.050	< 0.050	< 0.050
Diethyl Sulfide	< 0.050	< 0.050	< 0.050
n-Butyl Mercaptan	< 0.050	< 0.050	< 0.050
Dimethyl Disulfide	**0.386**	**0.319**	< 0.050
2-Methylthiophene	**0.606**	**0.211**	< 0.050
3-Methylthiophene	**0.355**	**0.112**	< 0.050
Tetrahydrothiophene	**0.406**	**0.109**	< 0.050
Bromothiophene	< 0.050	< 0.050	< 0.050
Thiophenol	< 0.050	< 0.050	< 0.050
Diethyl Disulfide	< 0.050	< 0.050	< 0.050
Total Unidentified Sulfur	**1.54**	**0.435**	< 0.050
Total Reduced Sulfurs	**47.2**	**10.1**	< 0.050

All unidentified compound's concentrations expressed in terms of H_2S (TRS does not include COS and SO_2)
Sample Reporting Limit (SRL) is equal to Reporting Limit x Canister Dil. Fac. x Analysis Dil. Fac.

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Quality Control/Quality Assurance Report
ASTM D-5504

Date Analyzed: 12/9/2021
Analyst: DL
Units: ppbV

Instrument ID: SCD#10
Calb. Date: 12/8/2021

Opening Calibration Verification Standard

519.8 ppbV H2S (SS1289)

H_2S	Resp. (area)	Result	% Rec *	% RPD ****
Initial	2963	520	100.0	0.5
Duplicate	3006	527	101.4	1.9
Triplicate	2880	505	97.2	2.4

527.0 ppbV H2S (SS1289)

MeSH	Resp. (area)	Result	% Rec *	% RPD ****
Initial	3519	532	101.0	0.3
Duplicate	3542	536	101.7	1.0
Triplicate	3462	524	99.4	1.3

522.0 ppbV H2S (SS1289)

DMS	Resp. (area)	Result	% Rec *	% RPD ****
Initial	3958	525	100.6	1.3
Duplicate	3887	516	98.8	0.5
Triplicate	3877	514	98.5	0.8

Method Blank

Analyte	Result
H_2S	<PQL
MeSH	<PQL
DMS	<PQL

Duplicate Analysis **Sample ID** 212124-25443

Analyte	Sample Result	Duplicate Result	Mean	% RPD ***
H_2S	<PQL	<PQL	0.0	0.0
MeSH	<PQL	<PQL	0.0	0.0
DMS	<PQL	<PQL	0.0	0.0

Matrix Spike & Duplicate **Sample ID** 212124-25443 x10

Analyte	Sample Conc.	Spike Added	MS Result	MSD Result	MS % Rec **	MSD % Rec **	% RPD ***
H_2S	<PQL	259.9	261.9	263.0	100.8	101.2	0.4
MeSH	<PQL	263.5	261.2	264.5	99.1	100.4	1.3
DMS	<PQL	261.0	265.1	264.9	101.6	101.5	0.1

Closing Calibration Verification Standard

Analyte	Std. Conc.	Result	% Rec **
H_2S	519.8	500.2	96.2
MeSH	527.0	516.5	98.0
DMS	522.0	520.1	99.6

** Must be 95-105%, ** Must be 90-110%, *** Must be < 10%, **** Must be < 5% RPD from Mean result.*

H2S: PQL = 10.5 ppbV, MDL = 1.12 ppbV
MeSH: PQL = 10.5 ppbV, MDL = 1.12 ppbV
DMS: PQL = 11.0 ppbV, MDL = 1.12 ppbV

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Atmospheric Analysis and Consulting · Phone: 805-650-1642 · Email: info@aaclab.com · 1534 Eastman Ave Suite A, Ventura, CA 93003

Client/Company Name: Freestone Environmental
Project Manager Name: Kira Murray
Project Name: DTG Recycle
Project Number:
Turnaround Time: ☐ Rush 24 h ☐ Same Day ☐ Rush 48 h ☐ 5 Days ☐ Rush 72 h ☒ Normal
Sampler Name Print: Tracy Mallgren Signature:

AAC Project No.:
Send Report To (Name/Email/Address): Kira Murray kiramurray@gofreestone.com 1100 Jadwin Ave, Suite 250 Richland WA
Send Invoice To (Name/Email/Address): kiramurray@gofreestone.com 1100 Jadwin Ave, Suite 250 Richland, WA
PO Number

Client Sample Name	Sample ID	Sampling Date	Sampling Time	Container Type/Qty	Analysis Requested: Speciated Soil for Compounds	Analysis Requested: VOCs + TICs	Lab ID
Sample A-1	A-1	12/8/21	1336	Tedlar 1	X	X	26290
Sample A-1 backup	A-1 backup	12/8/21	1342	Tedlar 1	X	X	26291
Sample A-2	A-2	12/8/21	1355	Tedlar 1	X	X	26292
Sample A-2 backup	A-2 backup	12/8/21	1358	Tedlar 1	X	X	26293
Sample A-3	A-3	12/8/21	1425	Tedlar 1	X	X	26294
Sample A-3 backup	A-3 backup	12/8/21	1428	Tedlar 1	X	X	26295

Not Used 12/8/21

Not Used 12/8/21

LAB USE ONLY
Sample Received via: ☐FedEx ☐UPS ☐Courier ☐Other
Temperature °C
Thermometer ID
Initials
Returned Eqmt
Total cans:
Unused cans:
Flow Controllers:

Client Notes/Special Instructions:
Only run backup samples if there is a leak/problem with orginal sample

EDD? ☐Yes ☒No

Relinquished By	Date	Received By	Date
Print: Tracy Mallgren	12/8/21	Print:	
Signature:	Time 1500	Signature:	Time
Relinquished By	Date	Received By	Date 12/9/21
Print:		Print:	
Signature:	Time	Signature: Chantel Nuckols	Time 0722

LAB USE ONLY
Notes:

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APPENDIX D

JANUARY AMBIENT AIR SAMPLING ANALYTICAL LABORATORY REPORT FOR EPA METHOD TO-15 – VOLATILE ORGANIC COMPOUNDS AND TENTATIVELY IDENTIFIED COMPOUNDS

Atmospheric Analysis & Consulting, Inc

CLIENT : Freestone Environmental
PROJECT NAME : DTG
AAC PROJECT NO. : 220168
REPORT DATE : 1/31/2022

On January 26, 2022, Atmospheric Analysis & Consulting, Inc. received eight (8) Six-Liter Summa Canisters for Volatile Organic Compounds and TICs analysis by EPA Method TO-15. Upon receipt, the samples were assigned unique Laboratory ID numbers as follows:

Client ID	Lab ID	Return Pressure (mmHga)
S-1 Vent	220168-27344	701.0
S-2 5' from vent	220168-27345	623.0
S-3 15' from vent	220168-27346	694.5
S-4 Upwind	220168-27347	558.5
S-5 Boundary	220168-27348	546.5
S-6 Boundary	220168-27349	745.5
S-7 Boundary	220168-27350	634.0
S-8 Boundary	220168-27351	542.0

This analysis is accredited under the laboratory's ISO/IEC 17025:2017 accreditation issued by the ANSI National Accreditation Board. Refer to certificate and scope of accreditation AT-1908. Test results apply to the sample(s) as received. For detailed information pertaining to specific EPA, NCASI, ASTM and SCAQMD accreditations (Methods & Analytes), please visit our website at www.aaclab.com.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract. Methanol was biased low as reflected in the daily CCV report; however, a low level standard was run to confirm the visibility this compound. No other problems were encountered during receiving, preparation, and/or analysis of these samples.

The Technical Director or his designee, as verified by the following signature, has authorized release of the data contained in this hardcopy report.

If you have any questions or require further explanation of data results, please contact the undersigned.

Sucha Parmar, Ph.D
Technical Director

This report consists of 19 pages.

Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 220168
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 01/26/2022
DATE REPORTED : 01/31/2022
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	S-1 Vent			Sample Reporting Limit (SRL) (MRLxDF's)	S-2 5' from vent			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	220168-27344				220168-27345				
Date Sampled	01/21/2022				01/21/2022				
Date Analyzed	01/27/2022				01/27/2022				
Can Dilution Factor	1.48				1.70				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Propene	23.6		1	1.48	18.0		1	1.70	1.00
Dichlorodifluoromethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Chloromethane	12.7		1	0.74	10.1		1	0.85	0.50
Dichlorotetrafluoroethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Vinyl Chloride	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Methanol	<SRL	U	1	7.41	<SRL	U	1	8.50	5.00
1,3-Butadiene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Bromomethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Chloroethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Dichlorofluoromethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Ethanol	<SRL	U	1	2.96	<SRL	U	1	3.40	2.00
Vinyl Bromide	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Acetone	3.64		1	2.96	3.76		1	3.40	2.00
Trichlorofluoromethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
2-Propanol (IPA)	<SRL	U	1	2.96	<SRL	U	1	3.40	2.00
Acrylonitrile	<SRL	U	1	2.96	<SRL	U	1	3.40	2.00
1,1-Dichloroethene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Methylene Chloride (DCM)	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
Allyl Chloride	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
Carbon Disulfide	<SRL	U	1	2.96	<SRL	U	1	3.40	2.00
Trichlorotrifluoroethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
trans-1,2-Dichloroethene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
1,1-Dichloroethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1	2.96	<SRL	U	1	3.40	2.00
Vinyl Acetate	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
2-Butanone (MEK)	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
cis-1,2-Dichloroethene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Hexane	1.96		1	0.74	1.84		1	0.85	0.50
Chloroform	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Ethyl Acetate	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Tetrahydrofuran	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
1,2-Dichloroethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
1,1,1-Trichloroethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Benzene	13.3		1	0.74	13.0		1	0.85	0.50

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Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 220168
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 01/26/2022
DATE REPORTED : 01/31/2022
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	S-1 Vent			Sample Reporting Limit (SRL) (MRLxDF's)	S-2 5' from vent			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	220168-27344				220168-27345				
Date Sampled	01/21/2022				01/21/2022				
Date Analyzed	01/27/2022				01/27/2022				
Can Dilution Factor	1.48				1.70				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Carbon Tetrachloride	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Cyclohexane	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
1,2-Dichloropropane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Bromodichloromethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
1,4-Dioxane	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
Trichloroethene (TCE)	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
2,2,4-Trimethylpentane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Heptane	1.16		1	0.74	<SRL	U	1	0.85	0.50
cis-1,3-Dichloropropene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
4-Methyl-2-pentanone (MiBK)	<SRL	U	1	2.96	<SRL	U	1	3.40	2.00
trans-1,3-Dichloropropene	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
1,1,2-Trichloroethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Toluene	4.49		1	0.74	3.98		1	0.85	0.50
2-Hexanone (MBK)	<SRL	U	1	7.41	<SRL	U	1	8.50	5.00
Dibromochloromethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
1,2-Dibromoethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Tetrachloroethene (PCE)	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Chlorobenzene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Ethylbenzene	1.85		1	1.48	1.99		1	1.70	1.00
m & p-Xylene	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
Bromoform	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
Styrene	<SRL	U	1	2.96	<SRL	U	1	3.40	2.00
1,1,2,2-Tetrachloroethane	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
o-Xylene	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
4-Ethyltoluene	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
1,3,5-Trimethylbenzene	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
1,2,4-Trimethylbenzene	<SRL	U	1	1.48	<SRL	U	1	1.70	1.00
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1	2.96	<SRL	U	1	3.40	2.00
1,3-Dichlorobenzene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
1,4-Dichlorobenzene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
1,2-Dichlorobenzene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
1,2,4-Trichlorobenzene	<SRL	U	1	7.41	<SRL	U	1	8.50	5.00
Hexachlorobutadiene	<SRL	U	1	0.74	<SRL	U	1	0.85	0.50
BFB-Surrogate Std, % Recovery		90%				96%			70-130%

U - Compound was not detected at or above the SRL.

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Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 220168
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 01/26/2022
DATE REPORTED : 01/31/2022
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	S-3 15' from vent			Sample Reporting Limit (SRL) (MRLxDF's)	S-4 Upwind			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	220168-27346				220168-27347				
Date Sampled	01/21/2022				01/21/2022				
Date Analyzed	01/27/2022				01/27/2022				
Can Dilution Factor	1.50				1.87				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Propene	35.6		1	1.50	<SRL	U	1	1.87	1.00
Dichlorodifluoromethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Chloromethane	17.7		1	0.75	<SRL	U	1	0.94	0.50
Dichlorotetrafluoroethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Vinyl Chloride	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Methanol	28.8		1	7.51	<SRL	U	1	9.36	5.00
1,3-Butadiene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Bromomethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Chloroethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Dichlorofluoromethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Ethanol	7.46		1	3.00	<SRL	U	1	3.74	2.00
Vinyl Bromide	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Acetone	10.9		1	3.00	<SRL	U	1	3.74	2.00
Trichlorofluoromethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
2-Propanol (IPA)	<SRL	U	1	3.00	<SRL	U	1	3.74	2.00
Acrylonitrile	<SRL	U	1	3.00	<SRL	U	1	3.74	2.00
1,1-Dichloroethene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Methylene Chloride (DCM)	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
Allyl Chloride	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
Carbon Disulfide	<SRL	U	1	3.00	<SRL	U	1	3.74	2.00
Trichlorotrifluoroethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
trans-1,2-Dichloroethene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
1,1-Dichloroethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1	3.00	<SRL	U	1	3.74	2.00
Vinyl Acetate	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
2-Butanone (MEK)	1.95		1	1.50	<SRL	U	1	1.87	1.00
cis-1,2-Dichloroethene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Hexane	4.02		1	0.75	<SRL	U	1	0.94	0.50
Chloroform	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Ethyl Acetate	2.69		1	0.75	<SRL	U	1	0.94	0.50
Tetrahydrofuran	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
1,2-Dichloroethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
1,1,1-Trichloroethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Benzene	26.8		1	0.75	<SRL	U	1	0.94	0.50

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Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 220168
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 01/26/2022
DATE REPORTED : 01/31/2022
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	S-3 15' from vent			Sample Reporting Limit (SRL) (MRLxDF's)	S-4 Upwind			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	220168-27346				220168-27347				
Date Sampled	01/21/2022				01/21/2022				
Date Analyzed	01/27/2022				01/27/2022				
Can Dilution Factor	1.50				1.87				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Carbon Tetrachloride	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Cyclohexane	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
1,2-Dichloropropane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Bromodichloromethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
1,4-Dioxane	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
Trichloroethene (TCE)	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
2,2,4-Trimethylpentane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Heptane	3.05		1	0.75	<SRL	U	1	0.94	0.50
cis-1,3-Dichloropropene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
4-Methyl-2-pentanone (MiBK)	<SRL	U	1	3.00	<SRL	U	1	3.74	2.00
trans-1,3-Dichloropropene	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
1,1,2-Trichloroethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Toluene	23.8		1	0.75	<SRL	U	1	0.94	0.50
2-Hexanone (MBK)	<SRL	U	1	7.51	<SRL	U	1	9.36	5.00
Dibromochloromethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
1,2-Dibromoethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Tetrachloroethene (PCE)	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Chlorobenzene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Ethylbenzene	5.82		1	1.50	<SRL	U	1	1.87	1.00
m & p-Xylene	1.91		1	1.50	<SRL	U	1	1.87	1.00
Bromoform	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
Styrene	<SRL	U	1	3.00	<SRL	U	1	3.74	2.00
1,1,2,2-Tetrachloroethane	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
o-Xylene	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
4-Ethyltoluene	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
1,3,5-Trimethylbenzene	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
1,2,4-Trimethylbenzene	<SRL	U	1	1.50	<SRL	U	1	1.87	1.00
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1	3.00	<SRL	U	1	3.74	2.00
1,3-Dichlorobenzene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
1,4-Dichlorobenzene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
1,2-Dichlorobenzene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
1,2,4-Trichlorobenzene	<SRL	U	1	7.51	<SRL	U	1	9.36	5.00
Hexachlorobutadiene	<SRL	U	1	0.75	<SRL	U	1	0.94	0.50
BFB-Surrogate Std. % Recovery		99%				94%			70-130%

U - Compound was not detected at or above the SRL.

Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 220168
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 01/26/2022
DATE REPORTED : 01/31/2022
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	S-5 Boundary			Sample Reporting Limit (SRL) (MRLxDF's)	S-6 Boundary			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	220168-27348				220168-27349				
Date Sampled	01/21/2022				01/21/2022				
Date Analyzed	01/27/2022				01/27/2022				
Can Dilution Factor	1.92				1.40				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Propene	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
Dichlorodifluoromethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Chloromethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Dichlorotetrafluoroethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Vinyl Chloride	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Methanol	<SRL	U	1	9.62	<SRL	U	1	6.98	5.00
1,3-Butadiene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Bromomethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Chloroethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Dichlorofluoromethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Ethanol	<SRL	U	1	3.85	<SRL	U	1	2.79	2.00
Vinyl Bromide	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Acetone	<SRL	U	1	3.85	3.57		1	2.79	2.00
Trichlorofluoromethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
2-Propanol (IPA)	<SRL	U	1	3.85	<SRL	U	1	2.79	2.00
Acrylonitrile	<SRL	U	1	3.85	<SRL	U	1	2.79	2.00
1,1-Dichloroethene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Methylene Chloride (DCM)	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
Allyl Chloride	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
Carbon Disulfide	<SRL	U	1	3.85	<SRL	U	1	2.79	2.00
Trichlorotrifluoroethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
trans-1,2-Dichloroethene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
1,1-Dichloroethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1	3.85	<SRL	U	1	2.79	2.00
Vinyl Acetate	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
2-Butanone (MEK)	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
cis-1,2-Dichloroethene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Hexane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Chloroform	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Ethyl Acetate	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Tetrahydrofuran	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
1,2-Dichloroethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
1,1,1-Trichloroethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Benzene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50

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Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 220168
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 01/26/2022
DATE REPORTED : 01/31/2022
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	S-5 Boundary			Sample Reporting Limit (SRL) (MRLxDF's)	S-6 Boundary			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	220168-27348				220168-27349				
Date Sampled	01/21/2022				01/21/2022				
Date Analyzed	01/27/2022				01/27/2022				
Can Dilution Factor	1.92				1.40				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Carbon Tetrachloride	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Cyclohexane	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
1,2-Dichloropropane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Bromodichloromethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
1,4-Dioxane	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
Trichloroethene (TCE)	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
2,2,4-Trimethylpentane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Heptane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
cis-1,3-Dichloropropene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
4-Methyl-2-pentanone (MiBK)	<SRL	U	1	3.85	<SRL	U	1	2.79	2.00
trans-1,3-Dichloropropene	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
1,1,2-Trichloroethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Toluene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
2-Hexanone (MBK)	<SRL	U	1	9.62	<SRL	U	1	6.98	5.00
Dibromochloromethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
1,2-Dibromoethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Tetrachloroethene (PCE)	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Chlorobenzene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Ethylbenzene	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
m & p-Xylene	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
Bromoform	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
Styrene	<SRL	U	1	3.85	<SRL	U	1	2.79	2.00
1,1,2,2-Tetrachloroethane	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
o-Xylene	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
4-Ethyltoluene	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
1,3,5-Trimethylbenzene	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
1,2,4-Trimethylbenzene	<SRL	U	1	1.92	<SRL	U	1	1.40	1.00
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1	3.85	<SRL	U	1	2.79	2.00
1,3-Dichlorobenzene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
1,4-Dichlorobenzene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
1,2-Dichlorobenzene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
1,2,4-Trichlorobenzene	<SRL	U	1	9.62	<SRL	U	1	6.98	5.00
Hexachlorobutadiene	<SRL	U	1	0.96	<SRL	U	1	0.70	0.50
BFB-Surrogate Std. % Recovery		94%				89%			70-130%

U - Compound was not detected at or above the SRL.

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Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 220168
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 01/26/2022
DATE REPORTED : 01/31/2022
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	S-7 Boundary			Sample Reporting Limit (SRL) (MRLxDF's)	S-8 Boundary			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	220168-27350				220168-27351				
Date Sampled	01/21/2022				01/21/2022				
Date Analyzed	01/27/2022				01/27/2022				
Can Dilution Factor	1.61				1.91				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Chlorodifluoromethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Propene	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
Dichlorodifluoromethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Chloromethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Dichlorotetrafluoroethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Vinyl Chloride	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Methanol	9.46		1	8.06	<SRL	U	1	9.54	5.00
1,3-Butadiene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Bromomethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Chloroethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Dichlorofluoromethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Ethanol	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
Vinyl Bromide	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Acetone	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
Trichlorofluoromethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
2-Propanol (IPA)	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
Acrylonitrile	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
1,1-Dichloroethene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Methylene Chloride (DCM)	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
Allyl Chloride	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
Carbon Disulfide	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
Trichlorotrifluoroethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
trans-1,2-Dichloroethene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
1,1-Dichloroethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Methyl Tert Butyl Ether (MTBE)	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
Vinyl Acetate	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
2-Butanone (MEK)	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
cis-1,2-Dichloroethene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Hexane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Chloroform	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Ethyl Acetate	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Tetrahydrofuran	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
1,2-Dichloroethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
1,1,1-Trichloroethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Benzene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50

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Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report

CLIENT : Freestone Environmental
PROJECT NO : 220168
MATRIX : AIR
UNITS : PPB (v/v)

DATE RECEIVED : 01/26/2022
DATE REPORTED : 01/31/2022
ANALYST : MB/RC

VOLATILE ORGANIC COMPOUNDS BY EPA TO-15

Client ID	S-7 Boundary			Sample Reporting Limit (SRL) (MRLxDF's)	S-8 Boundary			Sample Reporting Limit (SRL) (MRLxDF's)	Method Reporting Limit (MRL)
AAC ID	220168-27350				220168-27351				
Date Sampled	01/21/2022				01/21/2022				
Date Analyzed	01/27/2022				01/27/2022				
Can Dilution Factor	1.61				1.91				
Compound	Result	Qualifier	Analysis DF		Result	Qualifier	Analysis DF		
Carbon Tetrachloride	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Cyclohexane	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
1,2-Dichloropropane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Bromodichloromethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
1,4-Dioxane	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
Trichloroethene (TCE)	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
2,2,4-Trimethylpentane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Heptane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
cis-1,3-Dichloropropene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
4-Methyl-2-pentanone (MiBK)	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
trans-1,3-Dichloropropene	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
1,1,2-Trichloroethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Toluene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
2-Hexanone (MBK)	<SRL	U	1	8.06	<SRL	U	1	9.54	5.00
Dibromochloromethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
1,2-Dibromoethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Tetrachloroethene (PCE)	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Chlorobenzene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Ethylbenzene	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
m & p-Xylene	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
Bromoform	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
Styrene	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
1,1,2,2-Tetrachloroethane	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
o-Xylene	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
4-Ethyltoluene	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
1,3,5-Trimethylbenzene	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
1,2,4-Trimethylbenzene	<SRL	U	1	1.61	<SRL	U	1	1.91	1.00
Benzyl Chloride (a-Chlorotoluene)	<SRL	U	1	3.22	<SRL	U	1	3.82	2.00
1,3-Dichlorobenzene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
1,4-Dichlorobenzene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
1,2-Dichlorobenzene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
1,2,4-Trichlorobenzene	<SRL	U	1	8.06	<SRL	U	1	9.54	5.00
Hexachlorobutadiene	<SRL	U	1	0.81	<SRL	U	1	0.95	0.50
BFB-Surrogate Std. % Recovery		99%				93%			70-130%

U - Compound was not detected at or above the SRL.

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Laboratory Analysis Report

CLIENT : **Freestone Environmental**
PROJECT NO : **220168**
MATRIX : **AIR**
UNITS : **PPB (v/v)**

DATE RECEIVED : **01/26/2022**
DATE REPORTED : **01/31/2022**
ANALYST : **MB/RC**

TENTATIVELY IDENTIFIED COMPOUNDS (TICs) BY EPA TO-15

Client ID	S-1 Vent		
AAC ID	220168-27344		
Date Sampled	01/21/2022		
Date Analyzed	01/27/2022		
Can Dilution Factor	1.48		
Compound	Result*	Analysis DF	ID Quality§
2-Methyl-1-propene	4.86	1	74
Butane	3.54	1	42
2-Methylbutane	4.65	1	64
BFB-Surrogate Std. % Recovery	90%		

Client ID	S-2 5' from vent		
AAC ID	220168-27345		
Date Sampled	01/21/2022		
Date Analyzed	01/27/2022		
Can Dilution Factor	1.70		
Compound	Result*	Analysis DF	ID Quality§
2-Methyl-1-propene	4.88	1	81
Butane	3.86	1	53
2-Butene	1.87	1	72
Pentane	3.96	1	47
2-Methyl-2-butene	1.89	1	59
BFB-Surrogate Std. % Recovery	96%		

* Results obtained via TICs analysis are estimated.
§ Spectral Library match quality ranges from 1-100.

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Laboratory Analysis Report

CLIENT : **Freestone Environmental**
PROJECT NO : **220168**
MATRIX : **AIR**
UNITS : **PPB (v/v)**

DATE RECEIVED : **01/26/2022**
DATE REPORTED : **01/31/2022**
ANALYST : **MB/RC**

TENTATIVELY IDENTIFIED COMPOUNDS (TICs) BY EPA TO-15

Client ID	S-3 15' from vent		
AAC ID	220168-27346		
Date Sampled	01/21/2022		
Date Analyzed	01/27/2022		
Can Dilution Factor	1.50		
Compound	Result*	Analysis DF	ID Quality§
2-Methyl-1-propene	7.37	1	86
Butane	6.81	1	58
Pentane	9.07	1	72
2-Methyl-2-butene	3.12	1	83
2-Methylfuran	2.51	1	90
Octane	1.73	1	64
Hexamethylcyclotrisiloxane	5.04	1	64
2,2,6-Trimethyloctane	4.07	1	64
Decane	1.70	1	72
1-Methyl-4-(1-methylethyl)-benzene	8.02	1	97
BFB-Surrogate Std. % Recovery	99%		

Client ID	S-4 Upwind		
AAC ID	220168-27347		
Date Sampled	01/21/2022		
Date Analyzed	01/27/2022		
Can Dilution Factor	1.87		
Compound	Result*	Analysis DF	ID Quality§
No Library Search Compounds Detected			
BFB-Surrogate Std. % Recovery	94%		

* Results obtained via TICs analysis are estimated.
§ Spectral Library match quality ranges from 1-100.

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Laboratory Analysis Report

CLIENT : **Freestone Environmental**
PROJECT NO : **220168**
MATRIX : **AIR**
UNITS : **PPB (v/v)**

DATE RECEIVED : **01/26/2022**
DATE REPORTED : **01/31/2022**
ANALYST : **MB/RC**

TENTATIVELY IDENTIFIED COMPOUNDS (TICs) BY EPA TO-15

Client ID	S-5 Boundary		
AAC ID	220168-27348		
Date Sampled	01/21/2022		
Date Analyzed	01/27/2022		
Can Dilution Factor	1.92		
Compound	Result*	Analysis DF	ID Quality§
2-Methylbutane	4.37	1	64
BFB-Surrogate Std. % Recovery	94%		

Client ID	S-6 Boundary		
AAC ID	220168-27349		
Date Sampled	01/21/2022		
Date Analyzed	01/27/2022		
Can Dilution Factor	1.40		
Compound	Result*	Analysis DF	ID Quality§
Propane	1.74	1	9
BFB-Surrogate Std. % Recovery	89%		

* Results obtained via TICs analysis are estimated.
§ Spectral Library match quality ranges from 1-100.

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Laboratory Analysis Report

CLIENT : **Freestone Environmental**
PROJECT NO : **220168**
MATRIX : **AIR**
UNITS : **PPB (v/v)**

DATE RECEIVED : **01/26/2022**
DATE REPORTED : **01/31/2022**
ANALYST : **MB/RC**

TENTATIVELY IDENTIFIED COMPOUNDS (TICs) BY EPA TO-15

Client ID	S-7 Boundary		
AAC ID	220168-27350		
Date Sampled	01/21/2022		
Date Analyzed	01/27/2022		
Can Dilution Factor	1.61		
Compound	Result*	Analysis DF	ID Quality§
No Library Search Compounds Detected			
BFB-Surrogate Std. % Recovery	99%		

Client ID	S-8 Boundary		
AAC ID	220168-27351		
Date Sampled	01/21/2022		
Date Analyzed	01/27/2022		
Can Dilution Factor	1.91		
Compound	Result*	Analysis DF	ID Quality§
No Library Search Compounds Detected			
BFB-Surrogate Std. % Recovery	93%		

* Results obtained via TICs analysis are estimated.
§ Spectral Library match quality ranges from 1-100.

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QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 01/27/2022
MATRIX : High Purity N_2
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-02
CALIBRATION STD ID : MS1-010522-01
ANALYST : RC

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Continuing Calibration Verification of the 01/07/2022 Calibration

Analyte Compounds		*Source*[1]	*CCV*[2]	*% Recovery*[3]
4-BFB (surrogate standard)		10.00	10.17	102
Chlorodifluoromethane		10.50	10.00	95
Propene		10.60	9.19	87
Dichlorodifluoromethane		10.40	9.14	88
Dimethyl Ether		10.80	8.54	79
Chloromethane		10.40	7.51	72
Dichlorotetrafluoroethane		10.30	8.99	87
Vinyl Chloride		10.50	8.48	81
Acetaldehyde		22.50	17.99	80
Methanol	LR	20.10	12.17	61
1,3-Butadiene		10.60	8.53	80
Bromomethane		10.40	8.04	77
Chloroethane		10.30	7.70	75
Dichlorofluoromethane		10.50	8.19	78
Ethanol		11.20	8.10	72
Vinyl Bromide		10.50	8.42	80
Acrolein	LR	11.10	7.53	68
Acetone		10.60	7.82	74
Trichlorofluoromethane		10.50	7.87	75
2-Propanol (IPA)		11.00	8.02	73
Acrylonitrile		11.40	8.49	74
1,1-Dichloroethene		10.40	8.56	82
Methylene Chloride (DCM)		10.50	8.40	80
TertButanol (TBA)		11.30	8.23	73
Allyl Chloride		10.40	8.41	81
Carbon Disulfide		10.50	7.88	75
Trichlorotrifluoroethane		10.40	8.21	79
trans-1,2-Dichloroethene		10.60	10.97	103
1,1-Dichloroethane		10.50	9.81	93
Methyl Tert Butyl Ether (MTBE)		10.50	8.53	81
Vinyl Acetate		11.00	9.86	90
2-Butanone (MEK)		10.60	9.27	87
cis-1,2-Dichloroethene		10.50	10.54	100
Hexane		10.70	10.20	95
Chloroform		10.60	10.23	97
Ethyl Acetate		10.60	9.92	94
Tetrahydrofuran		10.20	8.90	87
1,2-Dichloroethane		10.50	9.91	94
1,1,1-Trichloroethane		10.40	9.98	96
Benzene		10.60	10.70	101
Carbon Tetrachloride		10.20	10.34	101
Cyclohexane		10.50	10.98	105

Analyte Compounds (Continued)	*Source*[1]	*CCV*[2]	*% Recovery*[3]
1,2-Dichloropropane	10.50	9.41	90
Bromodichloromethane	10.40	9.81	94
1,4-Dioxane	10.40	11.22	108
Trichloroethene (TCE)	10.40	11.53	111
2,2,4-Trimethylpentane	10.40	11.15	107
Methyl Methacrylate	11.00	9.63	88
Heptane	10.50	11.17	106
cis-1,3-Dichloropropene	10.40	10.85	104
4-Methyl-2-pentanone (MiBK)	10.40	9.62	93
trans-1,3-Dichloropropene	10.50	9.17	87
1,1,2-Trichloroethane	10.50	10.72	102
Toluene	10.60	11.88	112
2-Hexanone (MBK)	10.50	8.77	84
Dibromochloromethane	10.30	10.53	102
1,2-Dibromoethane	10.60	10.59	100
Tetrachloroethene (PCE)	10.40	11.05	106
Chlorobenzene	10.60	10.92	103
Ethylbenzene	10.50	11.43	109
m & p-Xylene	21.00	22.27	106
Bromoform	10.50	10.61	101
Styrene	10.50	10.38	99
1,1,2,2-Tetrachloroethane	10.50	10.80	103
o-Xylene	10.50	10.90	104
1,2,3-Trichloropropane	10.40	10.72	103
Isopropylbenzene (Cumene)	10.40	11.69	112
α-Pinene	11.40	10.14	89
2-Chlorotoluene	10.40	11.86	114
n-Propylbenzene	10.50	12.09	115
4-Ethyltoluene	10.30	10.79	105
1,3,5-Trimethylbenzene	10.30	10.47	102
β-Pinene	11.30	8.00	71
1,2,4-Trimethylbenzene	10.30	10.53	102
Benzyl Chloride (a-Chlorotoluene)	10.40	9.34	90
1,3-Dichlorobenzene	10.40	11.57	111
1,4-Dichlorobenzene	10.30	12.09	117
Sec-ButylBenzene	10.40	10.96	105
1,2-Dichlorobenzene	10.60	12.49	118
n-ButylBenzene	10.40	10.07	97
1,2-Dibromo-3-Chloropropane	10.40	10.54	101
1,2,4-Trichlorobenzene	11.00	9.29	84
Naphthalene	11.50	9.95	87
Hexachlorobutadiene	11.00	11.36	103

[1] Concentration of analyte compound in certified source standard.

[2] Measured result from daily Continuing Calibration Verification (CCV).

[3] The acceptable range for analyte recovery is 100±30%.

LR - Recovery for this compound was low. Results should be considered estimated.

QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 01/27/2022
MATRIX : High Purity N_2
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-02
CALIBRATION STD ID : MS1-010522-01
ANALYST : RC

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Laboratory Control Spike Analysis

System Monitoring Compounds	*Sample Concentration*	*Spike Added*	*LCS[1] Recovery*	*LCSD[1] Recovery*	*LCS[1] % Recovery[2]*	*LCSD[1] % Recovery[2]*	*RPD[3]*
4-BFB (surrogate standard)	0.0	10.00	10.17	10.65	101.7	106.5	4.6
1,1-Dichloroethene	0.0	10.40	8.56	7.98	82	77	7.0
Methylene Chloride (DCM)	0.0	10.50	8.40	8.25	80	79	1.8
Benzene	0.0	10.60	10.70	10.56	101	100	1.3
Trichloroethene (TCE)	0.0	10.40	11.53	10.49	111	101	9.4
Toluene	0.0	10.60	11.88	11.69	112	110	1.6
Tetrachloroethene (PCE)	0.0	10.40	11.05	10.52	106	101	4.9
Chlorobenzene	0.0	10.60	10.92	10.67	103	101	2.3
Ethylbenzene	0.0	10.50	11.43	10.95	109	104	4.3
m & p-Xylene	0.0	21.00	22.27	22.69	106	108	1.9
o-Xylene	0.0	10.50	10.90	10.50	104	100	3.7

[1] Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD)

[2] The acceptable range for analyte recovery is 100±30%.

[3] Relative Percent Difference (RPD) between LCS recovery and LCSD recovery (acceptable range is <25%).

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QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 01/27/2022 | **INSTRUMENT ID : GC/MS-02**

MATRIX : High Purity He or N_2 | **ANALYST : RC**

UNITS : PPB (v/v)

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Method Blank Analysis

Analyte Compounds	*MB 012722*	*Reporting Limit (RL)*
4-BFB (surrogate standard)	93%	100±30%
Chlorodifluoromethane	<RL	0.5
Propene	<RL	1.0
Dichlorodifluoromethane	<RL	0.5
Dimethyl Ether	<RL	0.5
Chloromethane	<RL	0.5
Dichlorotetrafluoroethane	<RL	0.5
Vinyl Chloride	<RL	0.5
Acetaldehyde	<RL	5.0
Methanol	<RL	5.0
1,3-Butadiene	<RL	0.5
Bromomethane	<RL	0.5
Chloroethane	<RL	0.5
Dichlorofluoromethane	<RL	0.5
Ethanol	<RL	2.0
Vinyl Bromide	<RL	0.5
Acrolein	<RL	1.0
Acetone	<RL	2.0
Trichlorofluoromethane	<RL	0.5
2-Propanol (IPA)	<RL	2.0
Acrylonitrile	<RL	2.0
1,1-Dichloroethene	<RL	0.5
Methylene Chloride (DCM)	<RL	1.0
TertButanol (TBA)	<RL	0.5
Allyl Chloride	<RL	1.0
Carbon Disulfide	<RL	2.0
Trichlorotrifluoroethane	<RL	0.5
trans-1,2-Dichloroethene	<RL	0.5
1,1-Dichloroethane	<RL	0.5
Methyl Tert Butyl Ether (MTBE)	<RL	2.0
Vinyl Acetate	<RL	1.0
2-Butanone (MEK)	<RL	1.0
cis-1,2-Dichloroethene	<RL	0.5
Hexane	<RL	0.5
Chloroform	<RL	0.5
Ethyl Acetate	<RL	0.5
Tetrahydrofuran	<RL	0.5
1,2-Dichloroethane	<RL	0.5
1,1,1-Trichloroethane	<RL	0.5
Benzene	<RL	0.5
Carbon Tetrachloride	<RL	0.5
Cyclohexane	<RL	1.0

Analyte Compounds (Continued)	*MB 012722*	*Reporting Limit (RL)*
1,2-Dichloropropane	<RL	0.5
Bromodichloromethane	<RL	0.5
1,4-Dioxane	<RL	1.0
Trichloroethene (TCE)	<RL	0.5
2,2,4-Trimethylpentane	<RL	0.5
Methyl Methacrylate	<RL	2.0
Heptane	<RL	0.5
cis-1,3-Dichloropropene	<RL	0.5
4-Methyl-2-pentanone (MiBK)	<RL	2.0
trans-1,3-Dichloropropene	<RL	1.0
1,1,2-Trichloroethane	<RL	0.5
Toluene	<RL	0.5
2-Hexanone (MBK)	<RL	5.0
Dibromochloromethane	<RL	0.5
1,2-Dibromoethane	<RL	0.5
Tetrachloroethene (PCE)	<RL	0.5
Chlorobenzene	<RL	0.5
Ethylbenzene	<RL	1.0
m & p-Xylene	<RL	1.0
Bromoform	<RL	0.5
Styrene	<RL	2.0
1,1,2,2-Tetrachloroethane	<RL	0.5
o-Xylene	<RL	1.0
1,2,3-Trichloropropane	<RL	0.5
Isopropylbenzene (Cumene)	<RL	0.5
α-Pinene	<RL	2.0
2-Chlorotoluene	<RL	0.5
n-Propylbenzene	<RL	0.5
4-Ethyltoluene	<RL	1.0
1,3,5-Trimethylbenzene	<RL	1.0
β-Pinene	<RL	5.0
1,2,4-Trimethylbenzene	<RL	1.0
Benzyl Chloride (a-Chlorotoluene)	<RL	2.0
1,3-Dichlorobenzene	<RL	0.5
1,4-Dichlorobenzene	<RL	0.5
Sec-ButylBenzene	<RL	1.0
1,2-Dichlorobenzene	<RL	0.5
n-ButylBenzene	<RL	2.0
1,2-Dibromo-3-Chloropropane	<RL	1.0
1,2,4-Trichlorobenzene	<RL	5.0
Naphthalene	<RL	5.0
Hexachlorobutadiene	<RL	0.5

Atmospheric Analysis & Consulting, Inc

QUALITY CONTROL / QUALITY ASSURANCE REPORT

ANALYSIS DATE : 01/27/2022
MATRIX : Air
UNITS : PPB (v/v)

INSTRUMENT ID : GC/MS-02
ANALYST : RC
DILUTION FACTOR[1] : x1.91

VOLATILE ORGANIC COMPOUNDS BY EPA METHOD TO-15

Duplicate Analysis of AAC Sample ID: 220168-27351

Analyte Compounds	*Sample*	*Duplicate*	*RPD[2]*
4-BFB (surrogate standard)	9.28	9.50	2.3
Chlorodifluoromethane	<SRL	<SRL	*NA*
Propene	<SRL	<SRL	*NA*
Dichlorodifluoromethane	<SRL	<SRL	*NA*
Dimethyl Ether	<SRL	<SRL	*NA*
Chloromethane	<SRL	<SRL	*NA*
Dichlorotetrafluoroethane	<SRL	<SRL	*NA*
Vinyl Chloride	<SRL	<SRL	*NA*
Acetaldehyde	<SRL	<SRL	*NA*
Methanol J	7.31	6.20	16.4
1,3-Butadiene	<SRL	<SRL	*NA*
Bromomethane	<SRL	<SRL	*NA*
Chloroethane	<SRL	<SRL	*NA*
Dichlorofluoromethane	<SRL	<SRL	*NA*
Ethanol	<SRL	<SRL	*NA*
Vinyl Bromide	<SRL	<SRL	*NA*
Acrolein	<SRL	<SRL	*NA*
Acetone J	2.12	2.29	7.8
Trichlorofluoromethane	<SRL	<SRL	*NA*
2-Propanol (IPA)	<SRL	<SRL	*NA*
Acrylonitrile	<SRL	<SRL	*NA*
1,1-Dichloroethene	<SRL	<SRL	*NA*
Methylene Chloride (DCM)	<SRL	<SRL	*NA*
TertButanol (TBA)	<SRL	<SRL	*NA*
Allyl Chloride	<SRL	<SRL	*NA*
Carbon Disulfide	<SRL	<SRL	*NA*
Trichlorotrifluoroethane	<SRL	<SRL	*NA*
trans-1,2-Dichloroethene	<SRL	<SRL	*NA*
1,1-Dichloroethane	<SRL	<SRL	*NA*
Methyl Tert Butyl Ether (MTBE)	<SRL	<SRL	*NA*
Vinyl Acetate	<SRL	<SRL	*NA*
2-Butanone (MEK)	<SRL	<SRL	*NA*
cis-1,2-Dichloroethene	<SRL	<SRL	*NA*
Hexane	<SRL	<SRL	*NA*
Chloroform	<SRL	<SRL	*NA*
Ethyl Acetate	<SRL	<SRL	*NA*
Tetrahydrofuran	<SRL	<SRL	*NA*
1,2-Dichloroethane	<SRL	<SRL	*NA*
1,1,1-Trichloroethane	<SRL	<SRL	*NA*
Benzene	<SRL	<SRL	*NA*
Carbon Tetrachloride	<SRL	<SRL	*NA*
Cyclohexane	<SRL	<SRL	*NA*

Analyte Compounds (Continued)	*Sample*	*Duplicate*	*RPD[2]*
1,2-Dichloropropane	<SRL	<SRL	*NA*
Bromodichloromethane	<SRL	<SRL	*NA*
1,4-Dioxane	<SRL	<SRL	*NA*
Trichloroethene (TCE)	<SRL	<SRL	*NA*
2,2,4-Trimethylpentane	<SRL	<SRL	*NA*
Methyl Methacrylate	<SRL	<SRL	*NA*
Heptane	<SRL	<SRL	*NA*
cis-1,3-Dichloropropene	<SRL	<SRL	*NA*
4-Methyl-2-pentanone (MiBK)	<SRL	<SRL	*NA*
trans-1,3-Dichloropropene	<SRL	<SRL	*NA*
1,1,2-Trichloroethane	<SRL	<SRL	*NA*
Toluene	<SRL	<SRL	*NA*
2-Hexanone (MBK)	<SRL	<SRL	*NA*
Dibromochloromethane	<SRL	<SRL	*NA*
1,2-Dibromoethane	<SRL	<SRL	*NA*
Tetrachloroethene (PCE)	<SRL	<SRL	*NA*
Chlorobenzene	<SRL	<SRL	*NA*
Ethylbenzene	<SRL	<SRL	*NA*
m & p-Xylene	<SRL	<SRL	*NA*
Bromoform	<SRL	<SRL	*NA*
Styrene	<SRL	<SRL	*NA*
1,1,2,2-Tetrachloroethane	<SRL	<SRL	*NA*
o-Xylene	<SRL	<SRL	*NA*
1,2,3-Trichloropropane	<SRL	<SRL	*NA*
Isopropylbenzene (Cumene)	<SRL	<SRL	*NA*
α-Pinene	<SRL	<SRL	*NA*
2-Chlorotoluene	<SRL	<SRL	*NA*
n-Propylbenzene	<SRL	<SRL	*NA*
4-Ethyltoluene	<SRL	<SRL	*NA*
1,3,5-Trimethylbenzene	<SRL	<SRL	*NA*
β-Pinene	<SRL	<SRL	*NA*
1,2,4-Trimethylbenzene	<SRL	<SRL	*NA*
Benzyl Chloride (a-Chlorotoluene)	<SRL	<SRL	*NA*
1,3-Dichlorobenzene	<SRL	<SRL	*NA*
1,4-Dichlorobenzene	<SRL	<SRL	*NA*
Sec-ButylBenzene	<SRL	<SRL	*NA*
1,2-Dichlorobenzene	<SRL	<SRL	*NA*
n-ButylBenzene	<SRL	<SRL	*NA*
1,2-Dibromo-3-Chloropropane	<SRL	<SRL	*NA*
1,2,4-Trichlorobenzene	<SRL	<SRL	*NA*
Naphthalene	<SRL	<SRL	*NA*
Hexachlorobutadiene	<SRL	<SRL	*NA*

[1] Dilution factor is the product of the Canister Dilution Factor and the Analysis Dilution Factor.

[2] Relative Percent Difference (RPD) between Sample analysis and Duplicate analysis (acceptable range is <25%).

SRL - Sample Reporting Limit (minimum)

J - Estimated value between the detection limit and the minimum reporting limit, shown for duplication purposes only.

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220168

CHAIN OF CUSTODY AND ANALYSIS REQUEST – Chain of Custody is a LEGAL DOCUMENT. Complete all relevant fields.

Atmospheric Analysis and Consulting · Phone: 805-650-1642 · Email: info@aaclab.com · 1534 Eastman Ave Suite A, Ventura, CA 93003

AAC Project No.:

Client/Company Name Freestone **Project Manager Name** Kira Murray	**Project Name** DTG **Project Number**
Turnaround Time ☐ Rush 24 h ☐ Same Day ☐ Rush 48 h ☐ 5 Days ☐ Rush 72 h ☒ Normal	**Sampler Name** **Print:** Tracy Mallgren **Signature:**

Send Report To (Name/Email/Address)
Kira Murray
kiramurray@gofreestone.com
1100 Jadwin Ave, Suite 250
Richland, WA 99352

Send Invoice To (Name/Email/Address)
Kira Murray
kiramurray@gofreestone.com
1100 Jadwin Ave
PO Number

LAB USE ONLY

Client Sample Name	Sample ID	Sampling Date	Sampling Time	Container Type/Qty	Analysis Requested: EPA TO-15 TICs + VOCs (TM 1/21/22)					Lab ID
S-1 Vent	S-1	1/21/22	1249-1456	canister 1	x	27344				
S-2 5' from vent	S-2	1/21/22	1250-1443	canister 1	x	27345				
S-3 15' from vent	S-3	1/21/22	1250-1445	canister 1	x	27346				
S-4 ~~Boundary~~ (TM 1/21/22) Upwind	S-4	1/21/22	1246-1440	canister 1	x	27347				
S-5 Boundary	S-5	1/21/22	1300-1455	canister 1	x	27348				
S-6 Boundary	S-6	1/21/22	1257-1446	canister 1	x	27349				
S-7 Boundary	S-7	1/21/22	1253-1448	canister 1	x	27350				
S-8 Boundary	S-8	1/21/22	1415-1233	canister 1	x	27351				
			(TM 1/21/22)	~~canister~~ 1						

Sample Received via: ☐FedEx ☐UPS ☐Courier ☐Other_____

Temperature _____°C

Thermometer ID _____

Initials _____

Returned Eqmt

Total cans: _____

Unused cans: _____

Flow Controllers: _____

Client Notes/Special Instructions:

EDD? ☐Yes ☒No

LAB USE ONLY
Notes:

Relinquished By **Print:** **Signature:**	**Date** **Time**	**Received By** **Print:** **Signature:**	**Date** **Time**
Relinquished By **Print:** **Signature:**	**Date** **Time**	**Received By** **Print:** **Signature:**	**Date** 1/24/22 **Time** 1232

UPS 8L cans + 8x Entechs

220 168

CHAIN OF CUSTODY AND ANALYSIS REQUEST – Chain of Custody is a LEGAL DOCUMENT. Complete all relevant fields.

Atmospheric Analysis and Consulting · Phone: 805-650-1642 · Email: info@aaclab.com · 1534 Eastman Ave Suite A, Ventura, CA 93003

AAC Project No.:

Client/Company Name: Freestone
Project Manager Name: Kira Murray

Project Name: DTG
Project Number:

Turnaround Time
☐ Rush 24 h ☐ Same Day
☐ Rush 48 h ☐ 5 Days
☐ Rush 72 h ☒ Normal

Sampler Name
Print: Tracy Mallgren
Signature:

Send Report To (Name/Email/Address)
Kira Murray
kiramurray@gofreestone.com
1100 Jadwin Ave, Suite 250
Richland, WA 99352

Send Invoice To (Name/Email/Address)
Kira Murray
kiramurray@gofreestone.com
1100 Jadwin Ave
PO Number

Analysis Requested

Client Sample Name	Sample ID	Sampling Date	Sampling Time	Container Type/Qty	TIM 1/21/22 EPA TO-15 VOCs + TICs					Lab ID
S-1 Vent	S-1	1/21/22	1219-1456	canister 1	x	27344				
S-2 5' from vent	S-2	1/21/22	1250-1443	canister 1	x	27345				
S-3 15' from vent	S-3	1/21/22	1250-1445	canister 1	x	27346				
S-4 ~~Boundary~~ Upwind	S-4	1/21/22	1246-1440	canister 1	x	27347				
S-5 Boundary	S-5	1/21/22	1300-1455	canister 1	x	27348				
S-6 Boundary	S-6	1/21/22	1257-1446	canister 1	x	27349				
S-7 Boundary	S-7	1/21/22	1253-1448	canister 1	x	27350				
S-8 Boundary	S-8	1/21/22	1415-1233-1415	canister 1	x	27351				
			TIM 1/21/22	~~canister 1~~						

LAB USE ONLY

Sample Received via:
☐ FedEx
☐ UPS
☐ Courier
☐ Other_____

Temperature
_____°C
Thermometer ID _____
Initials _____

Returned Eqmt
Total cans: _____
Unused cans: _____
Flow Controllers: _____

Client Notes/Special Instructions:

EDD?
☐ Yes
☒ No

LAB USE ONLY
Notes:
2123 09 x200 / x2000

Relinquished By	Date	Received By	Date
Print:		Print:	
Signature:	Time	Signature:	Time
Relinquished By	Date	Received By	Date 1/24/22
Print:		Print:	
Signature:	Time	Signature:	Time 1232

UPS 8x cans + 8x Entechs