

SOURCE TEST REPORT FOR 2025 2ND QUARTER LEACHATE AND CONDENSATE VAPOR SAMPLING AT THE CHIQUITA CANYON LANDFILL FACILITY ID: 119219

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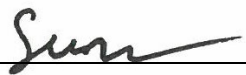
REVIEW AND CERTIFICATION

All work, calculations, and other activities and tasks performed and presented in this document were carried out by me or under my direction and supervision. I hereby certify that, to the best of my knowledge, Montrose operated in conformance with the requirements of the Montrose Quality Management System and ASTM D7036-04 during this test project.

Signature:  _____ Date: 7/11/2025

Name: Pete SanJuan Title: Client Project Manager

I have reviewed, technically and editorially, details, calculations, results, conclusions, and other appropriate written materials contained herein. I hereby certify that, to the best of my knowledge, the presented material is authentic, accurate, and conforms to the requirements of the Montrose Quality Management System and ASTM D7036-04.

Signature:  _____ Date: 7/11/2025

Name: Surya Adhikari Title: Senior Reporting QC Specialist

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1.0 INTRODUCTION

Montrose Air Quality Services, LLC (MAQS) was contacted by SCS Engineers (SCS) to conduct quarterly sampling at various locations on the vapor ventilation system located at the Chiquita Canyon Landfill (Chiquita), in Castaic, California. Testing was conducted to comply with Condition 72 of the Modified Stipulated Order for Abatement (SOFA) issued to Chiquita by the South Coast Air Quality Management District (SCAQMD). The tests were conducted according to the test protocol (MAQS Document Number W002AS-056454-PP-1074) and source test protocol evaluation (S/T ID: P24228). The Montrose test team consisted of Pete San Juan, Allen Dusky, and Jose Iniguez. Pete San Juan was the on-site qualified individual for MAQS. MAQS qualifies as an independent testing laboratory under SCAQMD Rule 304 (no conflict of interest) and is certified by the SCAQMD to conduct testing for criteria pollutants according to District Methods.

Equipment and facility information is provided in Section 2.0. Source test information is detailed in Section 3.0. Test results are provided in Section 4.0. Supplemental information is contained in the Appendices.

2.0 FACILITY AND SOURCE INFORMATION

The facility address is:

Physical Address: Chiquita Canyon Landfill
29201 Henry Mayo Drive
Castaic, California 91384

Sampling of leachate and condensate vapors was conducted from the following locations:

- The tank vents or manifolds which are representative of a set of tanks;
- The header/manifold from each leachate tank farm or manifold including Tank Farm #2, Tank Farm #6, Tank Farm #7A, Tank Farm #7B, Tank Farm Canyon D, inlet to Zeeco Flare, Inlet to Parnel Flare, Flare Station Pre-H₂S treatment, and Flare Station Post-H₂S treatment. Testing was performed upstream of the piping connection to the LFG Collection and Conveyance System where landfill gas may affect results.

2.1 PROCESS EQUIPMENT INFORMATION

Vapors created from the volatilization of chemicals in the head space in the leachate tanks at tank farms #2, #6, #7A, #7B, and Canyon D are transferred under vacuum through the wellhead and into the landfill gas collection system then to the flare station for combustion. The pressure and temperature of the vapors in the piping varies based on ambient temperatures during normal operation. The facility operates 24 hours per day. Photographs of the locations sampled are located in Appendix A.1.

3.0 TEST INFORMATION AND METHODOLOGY

The pollutants measured and test methodology are summarized in Table 3-1. Volume flow rate measurements were performed before the sample collection.

The field sampling procedures utilized during the test program are described below. The published reference methods provide greater detailed descriptions than in this section. The purpose of this section is to provide an overview of the sampling methods and any variations. The sampling procedures are based on SCAQMD, and EPA Reference Methods.

**TABLE 3-1
TEST PROCEDURES
TEST PROGRAM OVERVIEW
CHIKUITA CANYON LANDFILL
LEACHATE AND CONDENSATE VAPOR SAMPLING**

Parameter	Sample Medium	Analytical Technique	Reference Method	Number of Replicates
Flow Rate/Temperature	Pitot Tube / TC	Differential Pressure	SCAQMD 2.1	1 for each location
Moisture	Wet Bulb/Dry Bulb	Psychrometric Chart	SCAQMD 4.1	1 for each location
H ₂ S and TRS	Summa Can	GC/SCD	SCAQMD 307-91	1 for each location
TO-15 (Rule 1150.1)	Summa Can	GC/MS	EPA TO-15	1 for each location

3.1 SCAQMD METHOD 1.1 – SAMPLING AND VELOCITY TRAVERSES FOR STATIONARY SOURCES

A preliminary source test site assessment was performed prior to the source test in order to determine applicable sample point traverse locations. The stack diameter, and the distance from sample ports to disturbances (bends, flanges, etc.), both upstream and downstream, were measured. This information is utilized to determine the minimum number of sampling points per traverse, and the distance from the inner stack wall to each sample point location. All sample locations were located according to the minimum requirements of SCAQMD Method 1.1. Additionally, this method considers cyclonic flow patterns and in-situ stratified pollutant concentrations. Cyclonic flow tests were performed at locations where flow was measurable.

3.2 SCAQMD METHOD 2.1 – VELOCITY AND VOLUMETRIC FLOW RATE

The velocity of the gas stream was determined by using an "S" type or standard pitot tube, a low flow electronic manometer, and type "K" thermocouple with a digital temperature measuring device. The calibrated pitot tube is connected to the calibrated electronic Air Data Multimeter (ADM) manometer and leak checked. A temperature and delta P is obtained at each traverse point, and a duct static pressure is measured and recorded. The dry volumetric flow rate is determined from the gas velocity data, stack pressure, stack gas moisture content, stack gas molecular weight, and cross-sectional area of duct.

3.3 SCAQMD METHOD 3.1 – GAS ANALYSIS FOR DRY MOLECULAR WEIGHT AND EXCESS AIR

Leachate and condensate vapor gases were analyzed by GC for O₂ and CO₂.

3.4 SCAQMD METHOD 4.1 – DETERMINATION OF MOISTURE CONTENT IN STACK GASES

Moisture was measured using a wet bulb/dry bulb and calculated with a psychrometric chart.

3.5 SCAQMD METHOD 307-91 – HYDROGEN SULFIDE AND REDUCED SULFUR COMPOUNDS

Samples for determination of hydrogen sulfide and speciated reduced sulfur compounds were collected in Summa canisters. The samples were analyzed by GC/SCD by AtmAA, Inc., in Calabasas, California, following SCAQMD Method 307-91 protocol. The samples are analyzed within 24 hours of sampling.

3.6 EPA METHOD TO-15 – VOLATILES AND HYDROCARBON COLLECTED IN SUMMA CANISTER

Samples were collected in glass silicate lined Summa canisters. The samples were analyzed by AtmAA Inc., located in Calabasas, California for volatile organics listed in SCAQMD Rule 1150.1 Table 1 list.

Sampling Procedure:

One summa can per location was filled with sample gas using an evacuated cylinder. The sampling probe was connected to the can with Teflon tubing. The samples were collected at a fixed point halfway into the sampling duct.

4.0 RESULTS

The emission results are presented in Tables 4-1 and 4-2. Site schematics are presented in Appendix A.1.

TABLE 4-1
H₂S AND TOTAL REDUCED SULFUR RESULTS
CHIQUITA CANYON LANDFILL
LEACHATE AND CONDENSATE VAPOR SAMPLING
JUNE 12, 2025

Parameter/Units	Tank Farm 6	Zeeco	Parnel	Tank Farm 2	Canyon D	Tank Farm 7A	Tank Farm 7B	Flare Station Pre-H ₂ S	Flare Station Post-H ₂ S
O ₂ , %	21.54	7.59	3.37	20.72	20.47	20.85	20.80	3.68	3.65
CO ₂ , %	0.10	36.57	52.30	0.44	2.18	0.10	0.73	44.88	45.31
N ₂ , %	77.17	32.21	16.29	74.88	74.18	75.56	74.92	16.25	16.50
H ₂ O, %	3.08	5.83	4.81	0.75	0.90	0.90	0.90	2.82	2.64
Flow Rate, scfm	180	2,132	1,341	107	110	210	173	1,604	1,615
Temperature, °F	80	165	125	91	93	90	90	119	114
Sulfur Compounds									
H ₂ S, ppm	<0.10	126	298	<0.10	<0.10	<0.10	0.11	240	2.16
Carbonyl Sulfide, ppm	<0.10	<0.80	0.83	<0.10	<0.10	<0.10	<0.10	<0.80	0.81
Methyl Mercaptan, ppm	0.20	101	332	0.38	0.65	<0.10	1.92	214	33.2
Ethyl Mercaptan, ppm	<0.10	1.79	4.38	<0.10	<0.10	<0.10	<0.10	2.76	<0.80
Dimethyl Sulfide, ppm	1.76	548	1020	8.96	6.06	3.19	16.3	661	637
Carbon Disulfide, ppm	<0.10	<0.80	<0.80	<0.10	<0.10	<0.10	<0.10	<0.80	<0.80
i-Propyl Mercaptan, ppm	<0.10	1.44	3.44	<0.10	<0.10	<0.10	<0.10	2.79	1.21
t-Butyl Mercaptan, ppm	<0.10	<0.80	<0.80	<0.10	<0.10	<0.10	<0.10	<0.80	<0.80
n-Propyl Mercaptan, ppm	<0.10	7.78	14	<0.10	<0.10	<0.10	0.16	9.02	7.96
s-Butyl Mercaptan, ppm	<0.10	8.01	16.1	<0.10	<0.10	<0.10	0.13	11.4	8.94
i-Butyl Mercaptan, ppm	<0.10	<0.80	<0.80	<0.10	0.10	<0.10	<0.10	<0.80	<0.80
Dimethyl Disulfide, ppm	<0.10	11.30	6.88	0.13	<0.10	<0.10	0.10	4.26	44.1
Tetrahydrothiophene, ppm	<0.10	4.55	7.62	<0.10	<0.10	<0.10	<0.10	4.95	5.05
Unidentified S Compounds, ppm	<0.10	44.7	29.2	0.55	0.12	0.20	0.19	18.2	87.8
Total Sulfur Compounds									
Total Sulfur, ppm	1.96	864.96	1739.22	10.13	6.92	3.39	18.99	1172.54	872.11

TABLE 4-2
TRACE ORGANICS SPECIES RESULTS
CHIQUITA CANYON LANDFILL
LEACHATE AND CONDENSATE VAPOR SAMPLING
JUNE 12, 2025

Sample Location:	Tank Farm 6	Zeeco	Parnel	Tank Farm 2	Canyon D	Tank Farm 7A	Tank Farm 7B	Flare Station Pre-H ₂ S	Flare Station Post-H ₂ S
Test No.:	1	1	1	1	1	1	1	1	1
Start Time:	730	810	845	925	930	1010	1010	1050	1050
Flow Rate, scfm:	180	2132	1341	107	110	210	173	1,604	1,615
Species	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Hydrogen sulfide:	< 100	126,000	298,000	< 100	< 100	< 100	< 100	240,000	2,155
Benzene:	293	187,000	487,000	1,320	403	220	2,650	232,000	246,000
Benzyl Chloride:	< 30	< 5,000	< 5,000	< 30	< 30	< 30	< 30	< 5,000	< 5,000
Chlorobenzene:	< 25	< 4,500	< 4,500	< 25	< 25	< 25	< 25	< 4,500	< 4,500
Dichlorobenzenes*:	< 40	< 6,500	< 6,500	64.3	< 40	< 40	< 40	< 6,500	< 6,500
1,1-dichloroethane:	< 30	< 5,000	< 5,000	< 30	< 30	< 30	< 30	< 5,000	< 5,000
1,2-dichloroethane:	< 30	< 5,000	< 5,000	< 30	< 30	< 30	< 30	< 5,000	< 5,000
1,1-dichloroethylene:	< 30	< 5,000	< 5,000	< 30	< 30	< 30	< 30	< 5,000	< 5,000
Dichloromethane:	< 60	< 11,000	< 11,000	< 60	< 60	< 60	< 60	< 11,000	< 11,000
1,2-dibromoethane:	< 15	< 3,000	< 3,000	< 15	< 15	< 15	< 15	< 3,000	< 3,000
Perchloroethylene:	< 15	< 3,000	< 3,000	< 15	< 15	< 15	< 15	< 3,000	< 3,000
Carbon Tetrachloride:	< 35	< 6,000	< 6,000	< 35	< 35	< 35	< 35	< 6,000	< 6,000
Toluene:	24.6	13,200	33,100	186	204	36.8	153	18,900	22,200
1,1,1-trichloroethane:	< 20	< 4,000	< 4,000	< 20	< 20	< 20	< 20	< 4,000	< 4,000
Trichloroethene:	< 20	< 4,000	< 4,000	< 20	< 20	< 20	< 20	< 4,000	< 4,000
Chloroform:	< 20	< 4,000	< 4,000	< 20	< 20	< 20	< 20	< 4,000	< 4,000
Vinyl Chloride:	< 20	< 4,000	< 4,000	< 20	< 20	< 20	< 20	< 4,000	< 4,000
M+P-xylenes:	< 25	4,630	9,725	200	114	49.4	104	5,380	9,080
O-xylene:	< 25	< 4,500	< 4,500	57.4	32.8	< 25	26.1	< 4,500	< 4,500

< - indicates that the species was not detected in the sample above the analytical detection limit for this species.

The values reported is the detection limit for the species and the actual concentration is lower.

*Total amount containing meta, para, and ortho isomers.

APPENDIX A TEST DATA

Appendix A.1

Sample Location Data

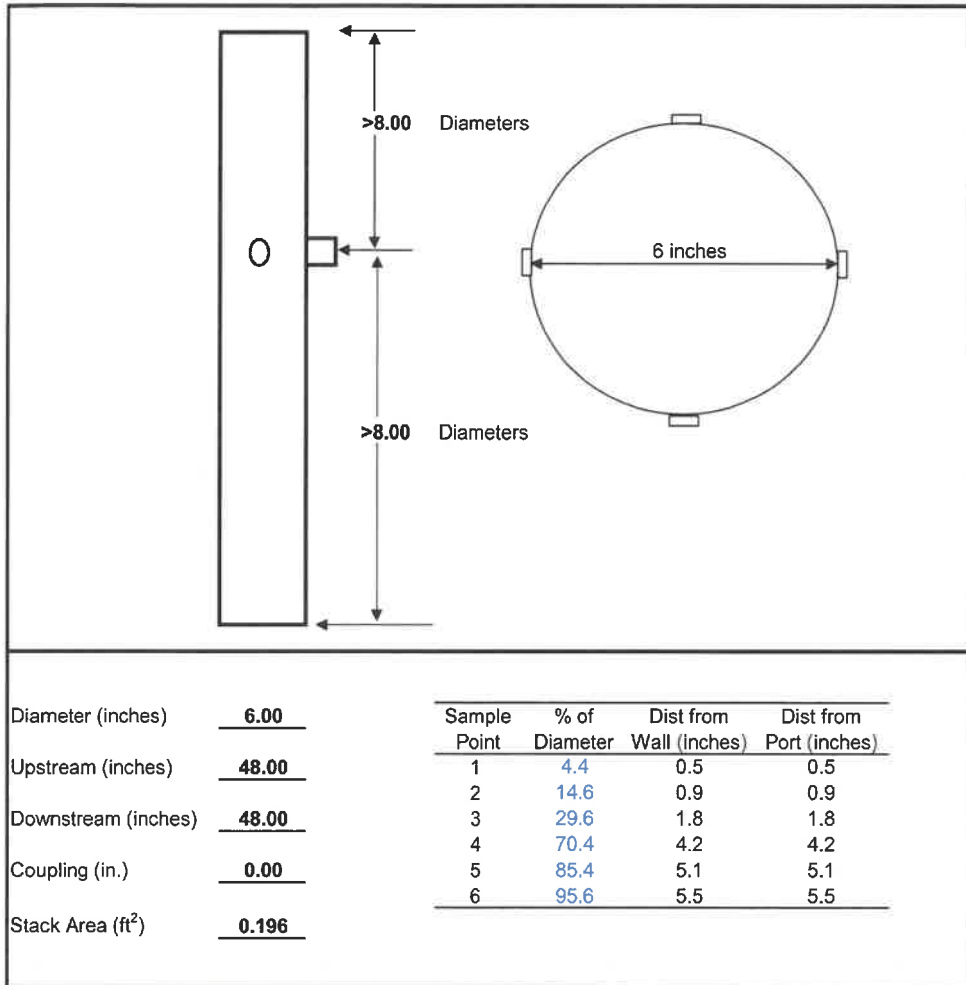
METHOD 1 DATA SHEET INLET SAMPLE LOCATION

Client: SCS Field Services

Date: 6/12/25

Location: Chiquita TF 6

Performed By: SJ, AD, JI



METHOD 1 DATA SHEET INLET SAMPLE LOCATION

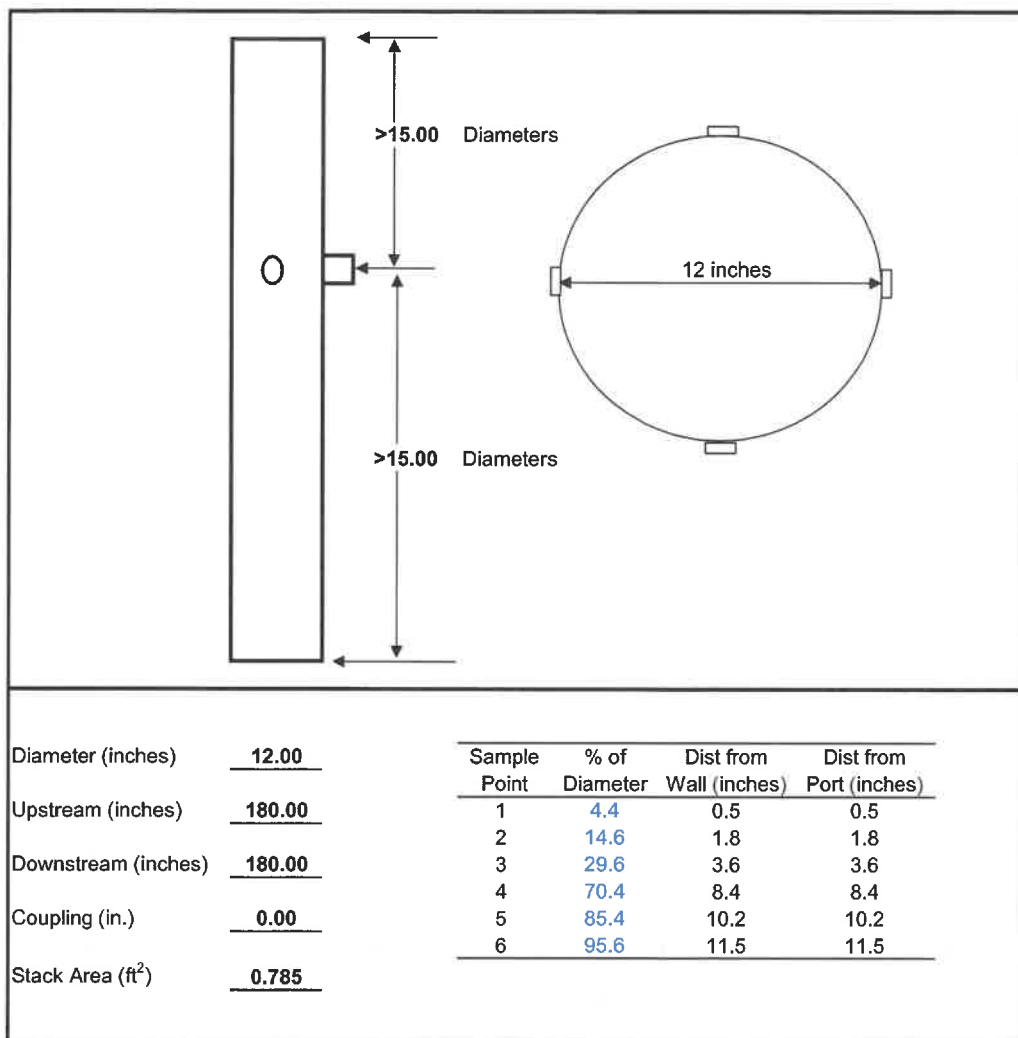


Client: SCS Field Services

Date: 6/12/25

Location: Chiquita Zeeco Flare Inlet

Performed By: SJ, AD, JI



METHOD 1 DATA SHEET **INLET SAMPLE LOCATION**

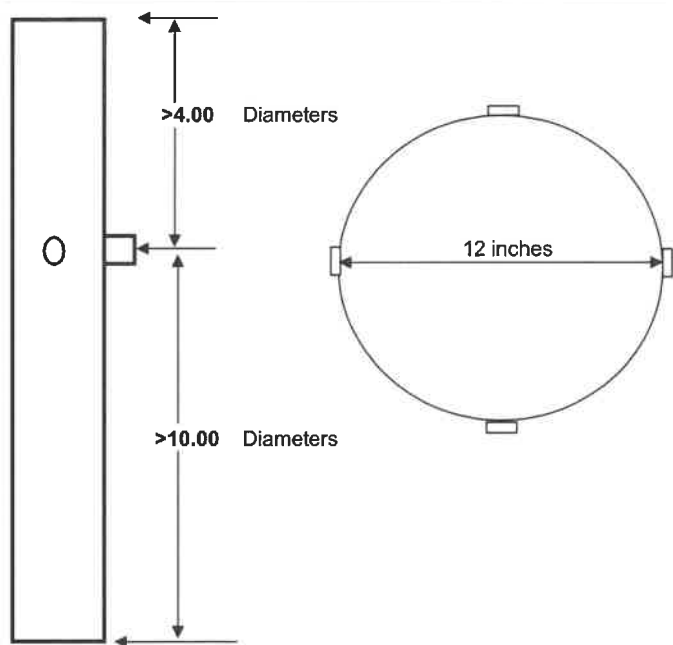


Client: SCS Field Services

Date: 6/12/25

Location: Chiquita Parnel Inlet

Performed By: SJ, AD, JI



Diameter (inches)	<u>12.00</u>
Upstream (inches)	<u>120.00</u>
Downstream (inches)	<u>48.00</u>
Coupling (in.)	<u>0.00</u>
Stack Area (ft ²)	<u>0.785</u>

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	0.5	0.5
2	14.6	1.8	1.8
3	29.6	3.6	3.6
4	70.4	8.4	8.4
5	85.4	10.2	10.2
6	95.6	11.5	11.5



METHOD 1 DATA SHEET INLET SAMPLE LOCATION

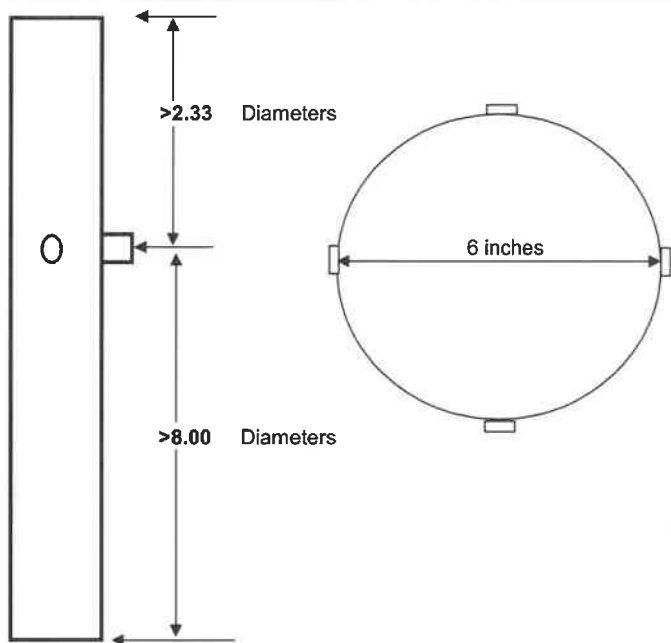


Client: SCS Field Services

Date: 6/12/25

Location: Chiquita TF 2

Performed By: SJ, AD, JI



Diameter (inches)	<u>6.00</u>
Upstream (inches)	<u>48.00</u>
Downstream (inches)	<u>14.00</u>
Coupling (in.)	<u>0.00</u>
Stack Area (ft ²)	<u>0.196</u>

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	0.5	0.5
2	14.6	0.9	0.9
3	29.6	1.8	1.8
4	70.4	4.2	4.2
5	85.4	5.1	5.1
6	95.6	5.5	5.5



METHOD 1 DATA SHEET INLET SAMPLE LOCATION

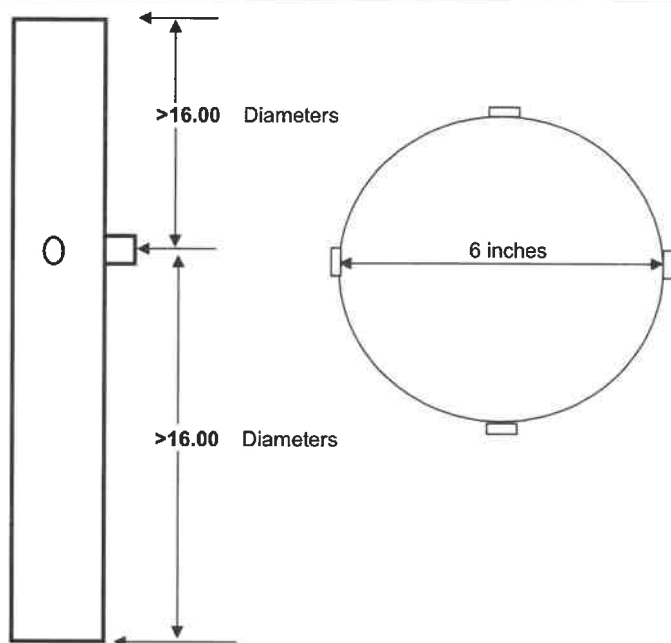


Client: SCS Field Services

Date: 6/12/25

Location: Chiquita TF Canyon D

Performed By: SJ, AD, JI



Diameter (inches)	<u>6.00</u>
Upstream (inches)	<u>96.00</u>
Downstream (inches)	<u>96.00</u>
Coupling (in.)	<u>0.00</u>
Stack Area (ft ²)	<u>0.196</u>

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	0.5	0.5
2	14.6	0.9	0.9
3	29.6	1.8	1.8
4	70.4	4.2	4.2
5	85.4	5.1	5.1
6	95.6	5.7	5.7



METHOD 1 DATA SHEET INLET SAMPLE LOCATION

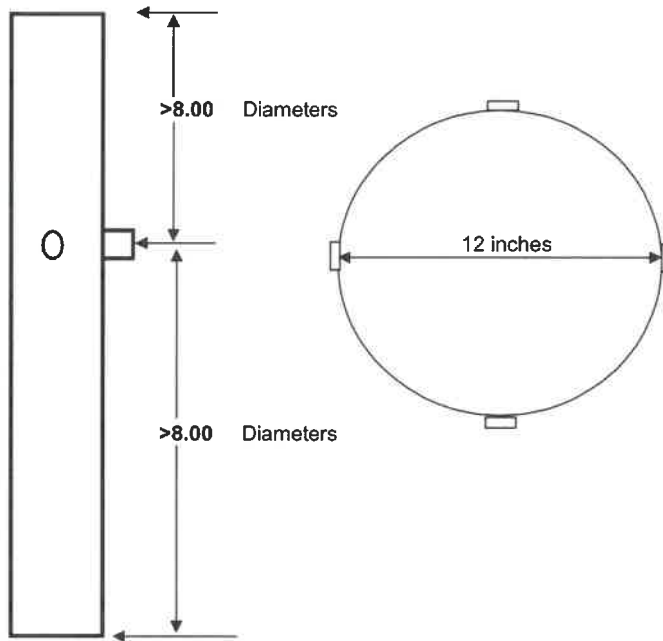


Client: SCS Field Services

Date: 6/12/25

Location: Chiquita TF 7A

Performed By: SJ, AD, JI



Diameter (inches)	<u>12.00</u>
Upstream (inches)	<u>96.00</u>
Downstream (inches)	<u>96.00</u>
Coupling (in.)	<u>0.00</u>
Stack Area (ft ²)	<u>0.785</u>

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	0.5	0.5
2	14.6	1.8	1.8
3	29.6	3.6	3.6
4	70.4	8.4	8.4
5	85.4	10.2	10.2
6	95.6	11.5	11.5



METHOD 1 DATA SHEET INLET SAMPLE LOCATION

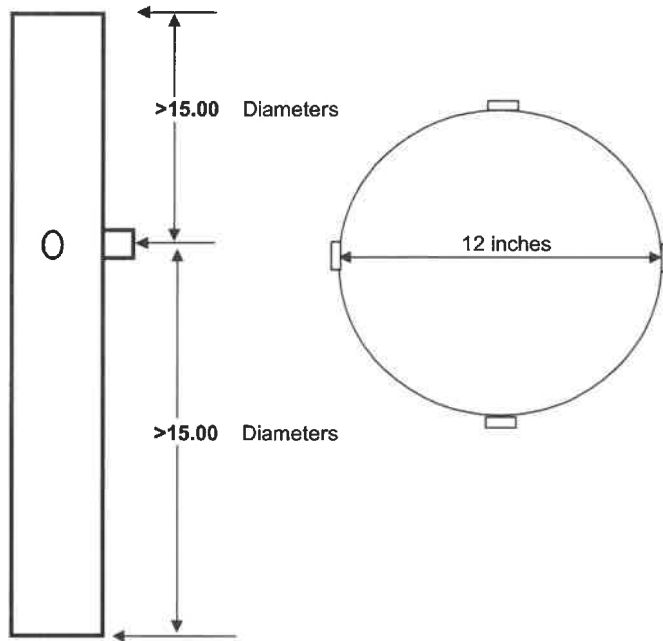


Client: SCS Field Services

Date: 6/12/25

Location: Chiquita TF 7B

Performed By: SJ, AD, JI



Diameter (inches)	<u>12.00</u>
Upstream (inches)	<u>180.00</u>
Downstream (inches)	<u>180.00</u>
Coupling (in.)	<u>0.00</u>
Stack Area (ft ²)	<u>0.785</u>

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	4.4	0.5	0.5
2	14.6	1.8	1.8
3	29.6	3.6	3.6
4	70.4	8.4	8.4
5	85.4	10.2	10.2
6	95.6	11.5	11.5



METHOD 1 DATA SHEET INLET SAMPLE LOCATION

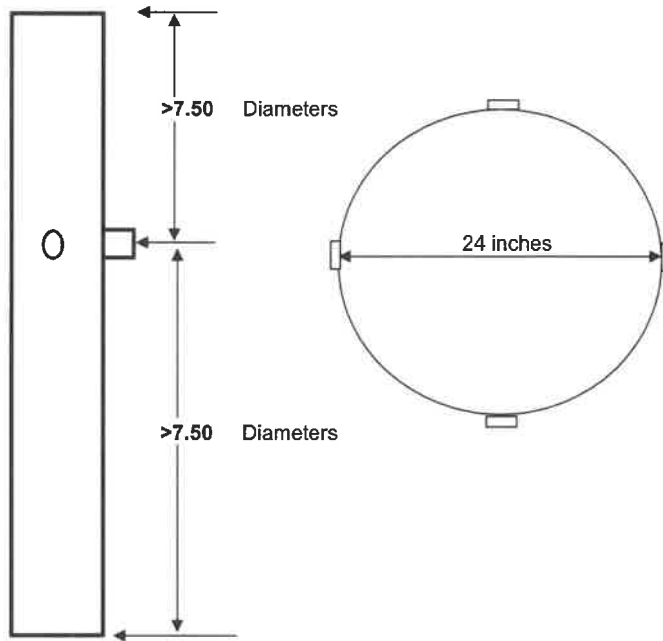


Client: SCS Field Services

Date: 6/12/25

Location: Flare Station Pre-H2S

Performed By: SJ, AD, JI



Diameter (inches)	<u>24.00</u>
Upstream (inches)	<u>180.00</u>
Downstream (inches)	<u>180.00</u>
Coupling (in.)	<u>0.00</u>
Stack Area (ft ²)	<u>3.142</u>

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	3.2	0.8	0.8
2	10.5	2.5	2.5
3	19.4	4.7	4.7
4	32.3	7.8	7.8
5	67.7	16.2	16.2
6	80.6	19.3	19.3
7	89.5	21.5	21.5
8	96.8	23.2	23.2



METHOD 1 DATA SHEET INLET SAMPLE LOCATION

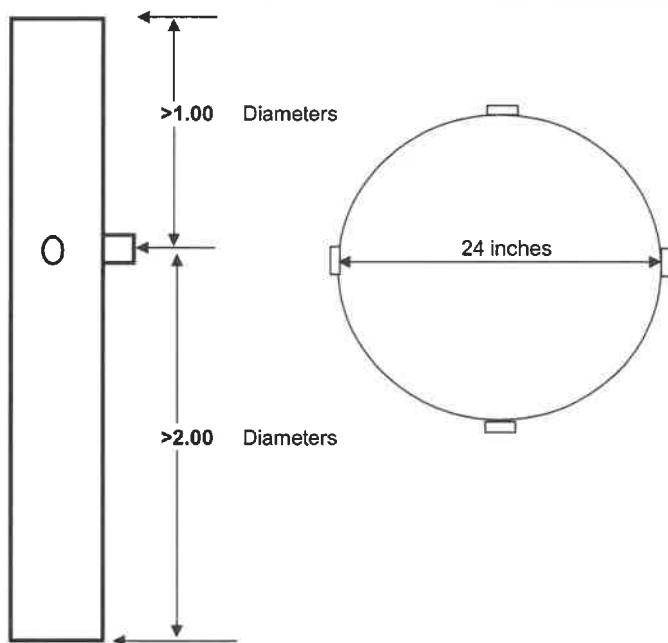


Client: SCS Field Services

Date: 6/12/25

Location: Flare Station Post-H2S

Performed By: SJ, AD, JI



Diameter (inches)	<u>24.00</u>
Upstream (inches)	<u>48.00</u>
Downstream (inches)	<u>24.00</u>
Coupling (in.)	<u>0.00</u>
Stack Area (ft ²)	<u>3.142</u>

Sample Point	% of Diameter	Dist from Wall (inches)	Dist from Port (inches)
1	3.2	0.8	0.8
2	10.5	2.5	2.5
3	19.4	4.7	4.7
4	32.3	7.8	7.8
5	67.7	16.2	16.2
6	80.6	19.3	19.3
7	89.5	21.5	21.5
8	96.8	23.2	23.2



Appendix A.2

Velocity, Moisture and Flow Rate Data

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 6				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.196 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 7:30 8:00				
Test Condition: Normal				
Barom. Pressure: 29.01				
Pstack: -0.10 iwg				
Pstack: 29.00 "Hg				
MW Wet: 28.24 lb/lb-mole				
MW Dry: 28.56 lb/lb-mole				
Moisture				
Moisture Content: 3.08 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 21.54 % From canister analysis				
CO ₂ : <0.10 % From canister analysis				
N ₂ : 77.17 % From canister analysis				
CH ₄ : <0.10 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.072	0.2683	80	15.62
2	0.077	0.2775	80	16.15
3	0.081	0.2846	80	16.57
4	0.082	0.2864	80	16.67
5	0.084	0.2898	80	16.87
6	0.081	0.2846	80	16.57
1	0.080	0.2828	80	16.47
2	0.084	0.2898	80	16.87
3	0.082	0.2864	80	16.67
4	0.079	0.2811	80	16.36
5	0.075	0.2739	80	15.94
6	0.070	0.2646	80	15.40
Average	0.0789	0.2808	80	16.35
Flow Rate: 193 wacfm				
Flow Rate: 180 scfm				
Flow Rate: 174 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WATER CONNECTIONS / SCS
 LOCATION: # CH/DUTIA
 UNIT: TF-6
 TEST DATE: 6/12/25
 TEST NUMBER: 1
 LEAK CHECK PRE- ✓ POST- ✓
 ΔP INDICATOR TYPE: ELECTRONIC
 ΔP INDICATOR ID: ADM 850 #9

PERFORMED BY: BJ/AD
 BAR. PRESSURE: 29.01
 STATIC PRESSURE: -0.10
 TC READOUT ID: PTC43
 TC ID: WB/DB
 PITOT TUBE ID: 180
 PITOT TUBE COEFFICIENT: 0.84
 ZERO: ✓ LEVEL: ✓

<u>cycl</u> Time	Port	Point	Vel. Head in. H ₂ O	Temp., °F	<u>cycl</u> Time	Port	Point	Vel. Head in. H ₂ O	Temp., °F
2°	T	1	0.072	80	4°	S	1	0.080	80
6		2	0.077	↓	7		2	0.084	↓
3		3	0.081		1		3	0.082	
0		4	0.082		3		4	0.079	
2		5	0.084		6		5	0.075	
1		6	0.081	↓	1		6	0.070	↓

Comments: _____

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: ZEECO				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 8:10 8:40				
Test Condition: Normal				
Barom. Pressure: 29.01				
Pstack: -12.5 iwg				
Pstack: 28.09 "Hg				
MW Wet: 29.55 lb/lb-mole				
MW Dry: 30.26 lb/lb-mole				
Moisture				
Moisture Content: 5.83 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 7.59 % From canister analysis				
CO ₂ : 36.57 % From canister analysis				
N ₂ : 32.21 % From canister analysis				
CH ₄ : 17.01 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.740	0.8602	165	53.52
2	0.780	0.8832	165	54.94
3	0.850	0.9220	165	57.36
4	0.840	0.9165	165	57.02
5	0.860	0.9274	165	57.69
6	0.830	0.9110	165	56.68
1	0.880	0.9381	165	58.36
2	0.910	0.9539	165	59.35
3	0.930	0.9644	165	60.00
4	0.970	0.9849	165	61.27
5	0.940	0.9695	165	60.32
6	0.880	0.9381	165	58.36
Average	0.8663	0.9308	165	57.91
Flow Rate: 2,729 wacfm				
Flow Rate: 2,132 scfm				
Flow Rate: 2,007 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WASTE CONVERSIONS/SCS
LOCATION: CHIRQUITA
UNIT: ZEED
TEST DATE: 6/12/25
TEST NUMBER: 1
LEAK CHECK PRE- ✓ POST- ✓
ΔP INDICATOR TYPE: REC.
ΔP INDICATOR ID: ADM 850-#9

PERFORMED BY: SVAD
BAR. PRESSURE: 27.01
STATIC PRESSURE: -12.5
TC READOUT ID: PTC43
TC ID: WIPB
PITOT TUBE ID: KPD
PITOT TUBE COEFFICIENT: 0.04
ZERO: ✓ LEVEL: ✓

[illegible]

Comments: _____

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Parnel				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 8:45 9:15				
Test Condition: Normal				
Barom. Pressure: 29.01				
Pstack: -13.0 iwg				
Pstack: 28.06 "Hg				
MW Wet: 30.94 lb/lb-mole				
MW Dry: 31.60 lb/lb-mole				
Moisture				
Moisture Content: 4.81 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 3.37 % From canister analysis				
CO ₂ : 52.30 % From canister analysis				
N ₂ : 16.29 % From canister analysis				
CH ₄ : 18.41 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.330	0.5745	125	33.81
2	0.350	0.5916	125	34.82
3	0.370	0.6083	125	35.80
4	0.360	0.6000	125	35.31
5	0.350	0.5916	125	34.82
6	0.330	0.5745	125	33.81
1	0.290	0.5385	125	31.69
2	0.320	0.5657	125	33.29
3	0.350	0.5916	125	34.82
4	0.330	0.5745	125	33.81
5	0.340	0.5831	125	34.32
6	0.320	0.5657	125	33.29
Average	0.3363	0.5800	125	34.13
Flow Rate: 1,608 wacfm				
Flow Rate: 1,341 scfm				
Flow Rate: 1,276 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WASTE CONNECTIONS / SCS PERFORMED BY: 35/AD
 LOCATION: CITIQUEIRA BAR. PRESSURE: 29.01
 UNIT: PANEL STATIC PRESSURE: -13.0
 TEST DATE: 6/12/25 TC READOUT ID: PTC43
 TEST NUMBER: 1 TC ID: WB/DB
 LEAK CHECK PRE- ☒ POST- ☒ PITOT TUBE ID: 180
 ΔP INDICATOR TYPE: Elec. PITOT TUBE COEFFICIENT: 0.84
 ΔP INDICATOR ID: ADM450#9 ZERO: ☒ LEVEL: ☒

Cycle Time	T Port	Point	Vel. Head in. H ₂ O	Temp., °F	Cycle Time	S Port	Point	Vel. Head in. H ₂ O	Temp., °F
1		1	0.33	125	3		1	0.29	125
1		2	0.35		6		2	0.32	
3		3	0.37		2		3	0.35	
1		4	0.36		4		4	0.33	
0		5	0.35		3		5	0.34	
4		6	0.33		1		6	0.32	

Comments: _____

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 2				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.196 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 9:25 9:55				
Test Condition: Normal				
Barom. Pressure: 29.01				
Pstack: -0.008 iwg				
Pstack: 29.01 "Hg				
MW Wet: 27.73 lb/lb-mole				
MW Dry: 27.81 lb/lb-mole				
Moisture				
Moisture Content: 0.75 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 20.72 % From canister analysis				
CO ₂ : 0.44 % From canister analysis				
N ₂ : 74.88 % From canister analysis				
CH ₄ : <0.10 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.025	0.1581	91	9.38
2	0.029	0.1703	91	10.10
3	0.031	0.1761	91	10.45
4	0.030	0.1732	91	10.28
5	0.028	0.1673	91	9.93
6	0.026	0.1612	91	9.57
1	0.024	0.1549	91	9.19
2	0.027	0.1643	91	9.75
3	0.033	0.1817	91	10.78
4	0.029	0.1703	91	10.10
5	0.027	0.1643	91	9.75
6	0.026	0.1612	91	9.57
Average	0.0279	0.1669	91	9.90
Flow Rate: 117 wacfm				
Flow Rate: 107 scfm				
Flow Rate: 106 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WAXO CONNECTIONS / SCS PERFORMED BY: JS / AD
 LOCATION: CHICOUTA BAR. PRESSURE: 29.01
 UNIT: TF -2 STATIC PRESSURE: -0.008
 TEST DATE: 6/12/25 TC READOUT ID: PIC47
 TEST NUMBER: 1 TC ID: WB / DB
 LEAK CHECK PRE- ☒ POST- ☒ PITOT TUBE ID: 180
 ΔP INDICATOR TYPE: UCL PITOT TUBE COEFFICIENT: 0.84
 ΔP INDICATOR ID: ADM 550 #9 ZERO: ☒ LEVEL: ☒

cycle Time	T Port	Point	Vel. Head in. H ₂ O	Temp., °F	cycle Time	S Port	Point	Vel. Head in. H ₂ O	Temp., °F
6'		1	0.025	91	3'		1	0.024	91
3		2	0.029	↓	0		2	0.027	↓
2		3	0.031		0		3	0.033	
4		4	0.030		1		4	0.029	
0		5	0.028		2		5	0.027	
3		6	0.026		0		6	0.026	

Comments: _____

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Canyon D				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.196 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 9:30 10:00				
Test Condition: Normal				
Barom. Pressure: 29.01				
Pstack: -0.050 iwg				
Pstack: 29.01 "Hg				
MW Wet: 28.24 lb/lb-mole				
MW Dry: 28.34 lb/lb-mole				
Moisture				
Moisture Content: 0.90 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 20.47 % From canister analysis				
CO ₂ : 2.18 % From canister analysis				
N ₂ : 74.18 % From canister analysis				
CH ₄ : 0.36 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.026	0.1612	93	9.50
2	0.028	0.1673	93	9.86
3	0.024	0.1549	93	9.12
4	0.030	0.1732	93	10.20
5	0.036	0.1897	93	11.18
6	0.039	0.1975	93	11.63
1	0.024	0.1549	93	9.12
2	0.028	0.1673	93	9.86
3	0.033	0.1817	93	10.70
4	0.035	0.1871	93	11.02
5	0.031	0.1761	93	10.37
6	0.029	0.1703	93	10.03
Average	0.0301	0.1734	93	10.22
Flow Rate: 120 wacfm				
Flow Rate: 110 scfm				
Flow Rate: 109 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WASTE CONNECTIONS / SUS
LOCATION: CAIQUITA
UNIT: CANYON D
TEST DATE: 6/12/25
TEST NUMBER: 1
LEAK CHECK PRE- ☒ POST- ☒
 ΔP INDICATOR TYPE: OK
 ΔP INDICATOR ID: ADM 450 #9

PERFORMED BY: JS/AD
BAR. PRESSURE: 29.01
STATIC PRESSURE: -0.050
TC READOUT ID: P7C45
TC ID: NB/0B
PITOT TUBE ID: 180
PITOT TUBE COEFFICIENT: 0.84
ZERO: ☒ LEVEL: ☒

Cycl Time	Port	Point	Vel. Head in. H ₂ O	Temp., °F	Cycl Time	Port	Point	Vel. Head in. H ₂ O	Temp., °F
3°		1	0.026	93	2°		1	0.024	93
8		2	0.028		4		2	0.028 ^{0.028}	
6		3	0.029		7		3	0.033	
1		4	0.030		1		4	0.035	
2		5	0.036		6		5	0.021	
2		6	0.039		4		6	0.029	

Comments: _____

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 7A				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 10:10 10:40				
Test Condition: Normal				
Barom. Pressure: 29.01				
Pstack: -0.005 iwg				
Pstack: 29.01 "Hg				
MW Wet: 27.80 lb/lb-mole				
MW Dry: 27.89 lb/lb-mole				
Moisture				
Moisture Content: 0.90 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 20.85 % From canister analysis				
CO ₂ : <0.10 % From canister analysis				
N ₂ : 75.56 % From canister analysis				
CH ₄ : <0.10 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.006	0.0775	90	4.59
2	0.005	0.0707	90	4.19
3	0.009	0.0949	90	5.62
4	0.010	0.1000	90	5.92
5	0.005	0.0707	90	4.19
6	0.006	0.0775	90	4.59
1	0.004	0.0632	90	3.74
2	0.007	0.0837	90	4.95
3	0.011	0.1049	90	6.21
4	0.009	0.0949	90	5.62
5	0.007	0.0837	90	4.95
6	0.004	0.0632	90	3.74
Average	0.0067	0.0821	90	4.86
Flow Rate: 229 wacfm				
Flow Rate: 210 scfm				
Flow Rate: 208 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WASTE CONNECTIONS / SCS
 LOCATION: CHICUITA
 UNIT: TE 7A
 TEST DATE: 4/21/25
 TEST NUMBER: 1
 LEAK CHECK PRE- ☒ POST- ☒
 ΔP INDICATOR TYPE: elec.
 ΔP INDICATOR ID: ADM 850 19

PERFORMED BY: SS / DN
 BAR. PRESSURE: 24.01
 STATIC PRESSURE: -0.005
 TC READOUT ID: PTC43
 TC ID: WB108
 PITOT TUBE ID: 180
 PITOT TUBE COEFFICIENT: 0.84
 ZERO: ☒ LEVEL: ☒

<u>Cycle</u> Time	<u>T</u> Port	Point	Vel. Head in. H ₂ O	Temp., °F	<u>Cycle</u> Time	<u>S</u> Port	Point	Vel. Head in. H ₂ O	Temp., °F
<u>4'</u>		<u>1</u>	<u>0.006</u>	<u>90</u>	<u>5'</u>		<u>1</u>	<u>0.004</u>	<u>90</u>
<u>3</u>		<u>2</u>	<u>0.005</u>	↓	<u>3</u>		<u>2</u>	<u>0.007</u>	↓
<u>1</u>		<u>3</u>	<u>0.009</u>		<u>1</u>		<u>3</u>	<u>0.011</u>	
<u>2</u>		<u>4</u>	<u>0.010</u>		<u>0</u>		<u>4</u>	<u>0.009</u>	
<u>1</u>		<u>5</u>	<u>0.005</u>		<u>3</u>		<u>5</u>	<u>0.007</u>	
<u>3</u>		<u>6</u>	<u>0.006</u>		<u>2</u>		<u>6</u>	<u>0.004</u>	

Comments: _____

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 7B				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 10:10 10:40				
Test Condition: Normal				
Barom. Pressure: 29.01				
P _{stack} : -0.01 iwg				
P _{stack} : 29.01 "Hg				
MW Wet: 27.88 lb/lb-mole				
MW Dry: 27.97 lb/lb-mole				
Moisture				
Moisture Content: 0.90 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 20.80 % From canister analysis				
CO ₂ : 0.73 % From canister analysis				
N ₂ : 74.92 % From canister analysis				
CH ₄ : <0.10 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.005	0.0707	90	4.18
2	0.003	0.0548	90	3.24
3	0.006	0.0775	90	4.58
4	0.005	0.0707	90	4.18
5	0.004	0.0632	90	3.74
6	0.004	0.0632	90	3.74
1	0.006	0.0775	90	4.58
2	0.005	0.0707	90	4.18
3	0.004	0.0632	90	3.74
4	0.006	0.0775	90	4.58
5	0.005	0.0707	90	4.18
6	0.003	0.0548	90	3.24
Average	0.0046	0.0679	90	4.01
Flow Rate: 189 wacfm				
Flow Rate: 173 scfm				
Flow Rate: 172 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WAXE CONNECTIONS / SUS
LOCATION: CHIRQUITA
UNIT: TF 7B
TEST DATE: 6/24/25
TEST NUMBER: _____
LEAK CHECK PRE- ✓ POST- ✓
ΔP INDICATOR TYPE: ELICA
ΔP INDICATOR ID: ADM 350119

PERFORMED BY: AS
BAR. PRESSURE: 29.01
STATIC PRESSURE: -0.01
TC READOUT ID: PTC43
TC ID: WB10B
PITOT TUBE ID: 170
PITOT TUBE COEFFICIENT: 0.84
ZERO: ✓ LEVEL: ✓

[illegible]

Comments: _____

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Flare Station Pre-H2S				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 3.142 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 10:50 11:20				
Test Condition: Normal				
Barom. Pressure: 29.01				
Pstack: -0.04 iwg				
Pstack: 29.01 "Hg				
MW Wet: 29.31 lb/lb-mole				
MW Dry: 29.63 lb/lb-mole				
Moisture				
Moisture Content: 2.82 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 3.68 % From canister analysis				
CO ₂ : 44.88 % From canister analysis				
N ₂ : 16.25 % From canister analysis				
CH ₄ : 25.99 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.034	0.1844	119	10.91
2	0.025	0.1581	119	9.36
3	0.028	0.1673	119	9.90
4	0.029	0.1703	119	10.08
5	0.031	0.1761	119	10.42
6	0.024	0.1549	119	9.17
7	0.025	0.1581	119	9.36
8	0.021	0.1449	119	8.57
1	0.037	0.1924	119	11.38
2	0.022	0.1483	119	8.78
3	0.025	0.1581	119	9.36
4	0.028	0.1673	119	9.90
5	0.031	0.1761	119	10.42
6	0.026	0.1612	119	9.54
7	0.029	0.1703	119	10.08
8	0.024	0.1549	119	9.17
Average	0.0273	0.1652	119	9.77
Flow Rate: 1,842 wacfm				
Flow Rate: 1,604 scfm				
Flow Rate: 1,559 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WASTE CONNECTIONS / SES PERFORMED BY: SA/AD
 LOCATION: _____ BAR. PRESSURE: 29.01
 UNIT: FLARE STATION PRE H₂S STATIC PRESSURE: -0.04
 TEST DATE: 6/12/25 TC READOUT ID: PTCY3
 TEST NUMBER: 1 TC ID: 180
 LEAK CHECK PRE- ☒ POST- ☒ PITOT TUBE ID: 180
 ΔP INDICATOR TYPE: REL. PITOT TUBE COEFFICIENT: 0.84
 ΔP INDICATOR ID: ADM 850 #9 ZERO: ☒ LEVEL: ☒

Cycle Time	A Port	Point	Vel. Head in. H ₂ O	Temp., °F	Cycle Time	B Port	Point	Vel. Head in. H ₂ O	Temp., °F
3		1	0.034	119	5	1 →		0.037	119
2		2	0.025		3	2 →		0.022	
4		3	0.028		1	3 →		0.025	
1		4	0.029		0	4 →		0.028	
3		5	0.031		3	5 →		0.031	
5		6	0.024		2	6 →		0.026	
2		7	0.025		0	7 -		0.029	
0		8	0.021	11	1	8 -		0.024	11

Comments: _____

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Flare Station Post-H2S				
Performed By: 6/12/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 3.142 ft ²				
TEST VARIABLES				
Start Date: 6/12/25				
Start/End Time: 10:50 11:20				
Test Condition: Normal				
Barom. Pressure: 29.01				
Pstack: 3.80 iwg				
Pstack: 29.29 "Hg				
MW Wet: 29.63 lb/lb-mole				
MW Dry: 29.94 lb/lb-mole				
Moisture				
Moisture Content: 2.64 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 3.65 % From canister analysis				
CO ₂ : 45.31 % From canister analysis				
N ₂ : 16.50 % From canister analysis				
CH ₄ : 26.36 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.027	0.1643	114	9.58
2	0.036	0.1897	114	11.06
3	0.031	0.1761	114	10.27
4	0.028	0.1673	114	9.76
5	0.024	0.1549	114	9.03
6	0.029	0.1703	114	9.93
7	0.029	0.1703	114	9.93
8	0.030	0.1732	114	10.10
1	0.033	0.1817	114	10.59
2	0.027	0.1643	114	9.58
3	0.024	0.1549	114	9.03
4	0.026	0.1612	114	9.40
5	0.025	0.1581	114	9.22
6	0.026	0.1612	114	9.40
7	0.025	0.1581	114	9.22
8	0.021	0.1449	114	8.45
Average	0.0274	0.1657	114	9.66
Flow Rate: 1,821 wacfm				
Flow Rate: 1,615 scfm				
Flow Rate: 1,572 dscfm				

FLUE GAS VELOCITY DATASHEET

CLIENT: WASTE CONNECTIONS / SCS PERFORMED BY: SS/A
 LOCATION: CHIRQUITA BAR. PRESSURE: 29.01
 UNIT: FLUE GAS STATION POST H2S STATIC PRESSURE: 3.8
 TEST DATE: 6/14/25 TC READOUT ID: PTC43
 TEST NUMBER: 1 TC ID: 190
 LEAK CHECK PRE- ✓ POST- ✓ PITOT TUBE ID: 180
 ΔP INDICATOR TYPE: ESCC PITOT TUBE COEFFICIENT: 0.84
 ΔP INDICATOR ID: ADM 850 #1 ZERO: ✓ LEVEL: ✓

Cycle Time	A Port	Point	Vel. Head in. H ₂ O	Temp., °F	Cycle Time	B Port	Point	Vel. Head in. H ₂ O	Temp., °F
3"		1	0.027	114	0"		1	0.033	114
2"		2	0.036		3		2	0.027	
6		3	0.031		1		3	0.024	
1		4	0.028		0		4	0.026	
0		5	0.024		3		5	0.025	
4		6	0.029		1		6	0.026	
2		7	0.029		2		7	0.025	
2		8	0.030		0		8	0.021	✓

Comments: _____

MONTROSE AQS
Duct Moisture by Wet bulb/Dry bulb Measurements

Facility: Chiquita Canyon Landfill
 CEM I.D. : T-4

TEST DATE: June 12, 2025

BY: PSJ

$$B_{ws} = \frac{e''}{P_a}$$

$$e_a = e'' - \frac{(P_a - e'') [T_{dry} - T_{wet}]}{2800 - 1.3 \times T_{wet}}$$

	P _{bar}	Static Pressure (in. of H ₂ O)	P _a	T _{dry}	T _{wet}	e _a	B _{ws}	e''
Tank Farm 6	29.01	-4.30	28.6958	80	76	0.8827	3.08	0.923801
Zeeco	29.01	-12.50	28.0929	165	105	1.636687	5.83	2.21953
Parnel	29.01	-13.00	28.0561	125	95	1.348268	4.81	1.64431
Tank Farm 2	29.01	-0.008	29.0114	91	60	0.217913	0.75	0.54214
Tank Farm Canyon D	29.01	-0.050	29.0083	93	62	0.260196	0.90	0.584219
Tank Farm 7A	29.01	-0.005	29.0116	90	61	0.259836	0.90	0.56307
Tank Farm 7B	29.01	-0.005	29.0116	90	61	0.259836	0.90	0.56307
Flare Station Pre	29.01	-0.040	29.0091	119	84	0.816951	2.82	1.178946
Flare Station Post	29.01	3.800	29.2914	114	82	0.774707	2.64	1.109533

Appendix A.3

Organics and Sulfur Field and Laboratory Data

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SCS CHIQUITA Date: 6/12/25
 Unit/Location: TANK FARM 6 Performed By: GA/AD
 Barometric Pressure 29.01 Ambient Temperature

SUMMA CANISTER DATA

Test No.		1	
Canister ID		639	
		Time	Vacuum
Pre-Test Leak Check	Start	0700	30
Pre-Test Leak Check	Stop	0710	30
Sample Collection	Start	0730	30
	10	0746	22
	20	0756	14
end →	30	0800	5
Sample Collection	Stop	1130	
Post -Test Leak Check	Start	1130	5
Post-Test Leak Check	Stop	1140	5

FLOWRATE DATA

Diameter: 6"
 Upstream: 48"
 Downstream: 48"
 Flow Rate: 175 SCFM
 Wet bulb: 76
 Dry bulb: 80

TEDLAR BAG DATA

Start: NA
 Stop: NA
 Bag ID: NA

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SCS CAHQUITA Date: 6/12/25
 Unit/Location: 2EELO INLET Performed By: SS/KD
 Barometric Pressure 29.01 Ambient Temperature —

SUMMA CANISTER DATA

Test No.		1	
Canister ID		636	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0716	30
Sample Collection	Start	0810	30
	10	0820	23
	20	0837	15
end →	30	0840	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1130	5
Post-Test Leak Check	Stop	1140	5

FLOWRATE DATA

Diameter: 12"
 Upstream: 180"
 Downstream: 180"
 Flow Rate: 2100 SCFM
 Wet bulb: 105
 Dry bulb: 165

TEDLAR BAG DATA

Start: U/A
 Stop: U/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SCS CHIQUITA Date: 6/12/25
 Unit/Location: PARNEL INLET Performed By: AS/AP
 Barometric Pressure 29.01 Ambient Temperature ✓

SUMMA CANISTER DATA

Test No.		1	
Canister ID		631	
		Time	Vacuum
Pre-Test Leak Check	Start	0700	30
Pre-Test Leak Check	Stop	0710	30
Sample Collection	Start	0845	30
	10	0855	22
	20	0905	12
end →	30	0915	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1130	5
Post-Test Leak Check	Stop	1140	5

FLOWRATE DATA

Diameter: 12"
 Upstream: 120"
 Downstream: 48"
 Flow Rate: 1337 SCFM
 Wet bulb: 95
 Dry bulb: 125

TEDLAR BAG DATA

Start: N/A
 Stop: N/A
 Bag ID:

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SCS CHIVITA Date: 6/12/25
 Unit/Location: TANK FARM 2 Performed By: SA/AO
 Barometric Pressure 29.01 Ambient Temperature —

SUMMA CANISTER DATA

Test No.			
Canister ID		65B	
		Time	Vacuum
Pre-Test Leak Check	Start	0700	30
Pre-Test Leak Check	Stop	0710	30
Sample Collection	Start	0925	30
	10	0935	22
	20	0945	14
end	30	0955	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1130	5
Post-Test Leak Check	Stop	1140	5

FLOWRATE DATA

Diameter: 6"
 Upstream: 48"
 Downstream: 14"
 Flow Rate: 111.4
 Wet bulb: 60
 Dry bulb: 91

TEDLAR BAG DATA

Start: N/A
 Stop: N/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SCS CHIOULTA Date: 6/12/25
 Unit/Location: CANYON D Performed By: SS/AD
 Barometric Pressure 29.01 Ambient Temperature —

SUMMA CANISTER DATA

Test No.		1	
Canister ID		0597	
		Time	Vacuum
Pre-Test Leak Check	Start	0700	30
Pre-Test Leak Check	Stop	0710	30
Sample Collection	Start	0930	30
	10	0940	23
	20	0950	14
end -	30	1000	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1130	5
Post-Test Leak Check	Stop	1140	5

FLOWRATE DATA

Diameter: 6"
 Upstream: 96"
 Downstream: 96"
 Flow Rate: 113 SCFM
 Wet bulb: 62
 Dry bulb: 93

TEDLAR BAG DATA

Start: N/A
 Stop: N/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SCS CHIRQUITA Date: 6/12/25
 Unit/Location: TANK FARM 7A Performed By: 85/AD
 Barometric Pressure 29.01 Ambient Temperature -

SUMMA CANISTER DATA

Test No.			
Canister ID		0532	
		Time	Vacuum
Pre-Test Leak Check	Start	0700	30
Pre-Test Leak Check	Stop	0710	30
Sample Collection	Start	1010	30
	10	1020	23
	20	1030	13
END →	30	1040	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1130	5
Post-Test Leak Check	Stop	1140	5

FLOWRATE DATA

Diameter: 6.12" 12"
 Upstream: 96"
 Downstream: 96"
 Flow Rate: 201.7
 Wet bulb: 61
 Dry bulb: 90

TEDLAR BAG DATA

Start: NS/A
 Stop: NS/A
 Bag ID:

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SCS CHIRQUITA Date: 6/12/25
 Unit/Location: TANK FARM 7B Performed By: SA/AD
 Barometric Pressure 29.01 Ambient Temperature -

SUMMA CANISTER DATA

Test No.		1	
Canister ID		0540	
		Time	Vacuum
Pre-Test Leak Check	Start	0700	30
Pre-Test Leak Check	Stop	0710	30
Sample Collection	Start	1010	30
	10	1020	22
	20	1030	14
end -	30	1040	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1130	5
Post-Test Leak Check	Stop	1140	5

FLOWRATE DATA

Diameter: 12"
 Upstream: 180"
 Downstream: 180"
 Flow Rate: 164
 Wet bulb: 61
 Dry bulb: 90

TEDLAR BAG DATA

Start: NA
 Stop: NA
 Bag ID: NA

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SCS CHIRQUITA Date: 6/12/24

Unit/Location: FLARE STATION PREH2S Performed By: AS/AD

Barometric Pressure 29.01 Ambient Temperature —

SUMMA CANISTER DATA

Test No.			
Canister ID		<u>641</u>	
		Time	Vacuum
Pre-Test Leak Check	Start	<u>0700</u>	<u>30</u>
Pre-Test Leak Check	Stop	<u>0710</u>	<u>30</u>
Sample Collection	Start	<u>1050</u>	<u>30</u>
	<u>10</u>	<u>1100</u>	<u>26</u>
	<u>20</u>	<u>1110</u>	<u>14</u>
<u>end →</u>	<u>30</u>	<u>1120</u>	<u>5</u>
Sample Collection	Stop		
Post -Test Leak Check	Start	<u>1130</u>	<u>5</u>
Post-Test Leak Check	Stop	<u>1140</u>	<u>5</u>

FLOWRATE DATA

Diameter: 24"

Upstream: 180"

Downstream: 180"

Flow Rate: N/A

Wet bulb: 84

Dry bulb: 119

TEDLAR BAG DATA

Start: N/A

Stop: N/A

Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: SOS CHIRQUITA Date: 6/12/25
 Unit/Location: FLARE STATION Post #25 Performed By: APM
 Barometric Pressure 29.01 Ambient Temperature —

SUMMA CANISTER DATA

Test No.			
Canister ID		<u>640</u>	
		Time	Vacuum
Pre-Test Leak Check	Start	<u>0700</u>	<u>30</u>
Pre-Test Leak Check	Stop	<u>0710</u>	<u>30</u>
Sample Collection	Start	<u>1050</u>	<u>30</u>
	<u>10</u>	<u>1150</u>	<u>22</u>
	<u>20</u>	<u>1110</u>	<u>12</u>
end -	<u>30</u>	<u>1120</u>	<u>5</u>
Sample Collection	Stop		
Post -Test Leak Check	Start	<u>1130</u>	<u>5</u>
Post-Test Leak Check	Stop	<u>1140</u>	<u>5</u>

FLOWRATE DATA

Diameter: 24"
 Upstream: 40"
 Downstream: 24"
 Flow Rate: N/A
 Wet bulb: 82
 Dry bulb: 114

TEDLAR BAG DATA

Start: N/A
 Stop: N/A
 Bag ID: _____



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LABORATORY ANALYSIS REPORT

Permanent Gases Analysis in Silco Canister Samples by Method ASTM D1946-90

Report Date: July 9, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 17, 2025

ANALYSIS DESCRIPTION

Permanent gases were measured by thermal conductivity detection/gas chromatography (TCD/GC), ASTM D1946-90.

AtmAA Lab No.:	21635-43	21635-44	21635-45	21635-46
Sample I.D.:	Tank Farm 6	Zeeco Inlet	Parnel Inlet	Tank Farm 2

Components	(Concentration in %,v)			
Nitrogen	77.17	32.21	16.29	74.88
Oxygen	21.54	7.59	3.37	20.72
Methane	<0.10	17.01	18.41	<0.10
Carbon dioxide	<0.10	36.57	52.30	0.44
Hydrogen	<0.10	3.00	<0.10	<0.10

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon. The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported. Actual analysis results are reported on a "wet" basis.


Brian W. Fung
Laboratory Director



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LABORATORY ANALYSIS REPORT

Permanent Gases Analysis in Silco Canister Samples by Method ASTM D1946-90

Report Date: July 9, 2025
Client: Montrose AQS
Project Location: Chiquita Canyon Leachate
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 17, 2025

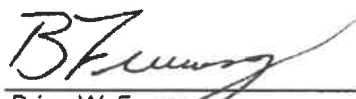
ANALYSIS DESCRIPTION

Permanent gases were measured by thermal conductivity detection/gas chromatography (TCD/GC), ASTM D1946-90.

AtmAA Lab No.:	21635-47	21635-48	21635-49
Sample I.D.:	Canyon D	Tank Farm 7A	Tank Farm 7B

Components	(Concentration in %,v)		
Nitrogen	74.18	75.56	74.92
Oxygen	20.47	20.85	20.80
Methane	0.36	<0.10	<0.10
Carbon dioxide	2.18	<0.10	0.73
Hydrogen	0.29	<0.10	<0.10

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon. The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported. Actual analysis results are reported on a "wet" basis.


Brian W. Fung
Laboratory Director



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LABORATORY ANALYSIS REPORT

Permanent Gases Analysis in Silco Canister Samples by Method ASTM D1946-90

Report Date: July 9, 2025
Client: Montrose AQS
Project Location: Chiquita Canyon Leachate
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 17, 2025

ANALYSIS DESCRIPTION

Permanent gases were measured by thermal conductivity detection/gas chromatography (TCD/GC), ASTM D1946-90.

AtmAA Lab No.:	21635-50	21635-51
Sample I.D.:	Flare Station Pre H2S	Flare Station Post H2S

Components	(Concentration in %,v)	
Nitrogen	16.25	16.50
Oxygen	3.68	3.65
Methane	25.99	26.36
Carbon dioxide	44.88	45.31
Hydrogen	3.58	3.58

The reported oxygen concentration includes any argon present in the sample. Calibration is based on a standard atmosphere containing 20.95% oxygen and 0.93% argon. The accuracy of permanent gas analysis by TCD/GC is +/- 2%, actual results are reported. Actual analysis results are reported on a "wet" basis.


Brian W. Fung
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Chiquita Landfill
Date Received: June 12, 2025
Date Analyzed: June 17, 2025

Components	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Concentration in %,v)			
Nitrogen	Tank Farm 6	77.12	77.22	77.17	0.13
Oxygen	Tank Farm 6	21.48	21.59	21.54	0.51
Methane	Tank Farm 6	<0.10	<0.10	--	---
Carbon dioxide	Tank Farm 6	<0.10	<0.10	--	--
Hydrogen	Tank Farm 6	<0.10	<0.10	--	--

Nine Silco canister samples, laboratory numbers 21635-(43-51), were analyzed for permanent gases. Agreement between repeat analyses is a measure of precision and is shown above in the column "% RPD". The average % RPD for 2 repeat measurements from nine Silco canister samples is 0.32%.





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LABORATORY ANALYSIS REPORT

Speciated Hydrocarbons Analysis in Silco Canister Samples


Report Date: July 9, 2025
Client: Montrose AQS
Project Location: Chiquita Canyon Leachate
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 17, 2025
Laboratory Temp: 73.5 °F
Barometric Pressure: 29.95 inHg

ANALYSIS DESCRIPTION

Hydrocarbon speciation analysis was performed by flame ionization detection/gas chromatography (FID/GC), modified EPA-18. Methane was measured by thermal conductivity detection/gas chromatography (TCD/GC), ASTM D1946-90

AtmAA Lab No.: Sample ID:	21635-43 Tank Farm 6	21635-44 Zeeco Inlet	21635-45 Parnel Inlet	21635-46 Tank Farm 2
Component	(Concentration in ppmv, component)			
Methane	200	170100	184100	9.64
Ethene	<0.30	19.7	33.9	<0.20
Acetylene	<0.30	<0.30	<0.20	<0.20
Ethane	<0.30	72.8	120	<0.20
Non-methane hydrocarbons analysis by carbon number grouping				
C3	<0.10	264	425	<0.10
C4	61.8	1634	2976	62.0
C5	38.8	1259	2364	124
C6	24.3	1665	3166	71.2
C7	4.54	390	772	15.7
C8	4.90	332	622	9.82
C9	3.76	328	538	14.5
C10	8.13	345	483	42.8
C11	5.09	71.5	90.3	20.2
C12	2.75	40.8	51.2	8.74
C13	2.84	21.0	22.7	5.87
C14	1.11	<0.06	5.43	20.7
		(Concentration in ppmvC)		
TNMHC	915	37136	66340	2733

TNMHC - total non-methane hydrocarbons as ppmvC.
Actual analysis results are reported on a "wet" basis.


Brian W. Fung
Laboratory Director



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LABORATORY ANALYSIS REPORT

Speciated Hydrocarbons Analysis in Silco Canister Samples

Report Date: July 9, 2025
Client: Montrose AQS
Project Location: Chiquita Canyon Leachate
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 17, 2025
Laboratory Temp: 73.5 °F
Barometric Pressure: 29.95 inHg

ANALYSIS DESCRIPTION

Hydrocarbon speciation analysis was performed by flame ionization detection/gas chromatography (FID/GC), modified EPA-18. Methane was measured by thermal conductivity detection/gas chromatography (TCD/GC), ASTM D1946-90

AtmAA Lab No.:	21635-47	21635-48	21635-49
Sample ID:	Canyon D	Tank Farm 7A	Tank Farm 7B
<u>Component</u>	<u>(Concentration in ppmv, component)</u>		
Methane	3620	54.5	685
Ethene	<0.30	<0.30	<0.20
Acetylene	<0.30	<0.30	<0.20
Ethane	<0.30	<0.30	<0.20
Non-methane hydrocarbons analysis by carbon number grouping			
C3	<0.10	<0.10	<0.10
C4	214	140	215
C5	233	107	253
C6	79.6	63.1	122
C7	22.4	14.2	30.0
C8	11.6	8.19	16.8
C9	14.7	10.1	15.9
C10	32.5	28.5	30.5
C11	26.8	14.6	16.2
C12	16.9	12.9	13.6
C13	7.31	6.08	6.33
C14	3.86	2.83	2.82
(Concentration in ppmvC)			
TNMHC	3851	2446	4112

TNMHC - total non-methane hydrocarbons as ppmvC.
Actual analysis results are reported on a "wet" basis.


Brian W. Fung
Laboratory Director



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LABORATORY ANALYSIS REPORT

Speciated Hydrocarbons Analysis in Silco Canister Samples

Report Date: July 9, 2025
Client: Montrose AQS
Project Location: Chiquita Canyon Leachate
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 17, 2025
Laboratory Temp: 73.5 °F
Barometric Pressure: 29.95 inHg

ANALYSIS DESCRIPTION

Hydrocarbon speciation analysis was performed by flame ionization detection/gas chromatography (FID/GC), modified EPA-18. Methane was measured by thermal conductivity detection/gas chromatography (TCD/GC), ASTM D1946-90

AtmAA Lab No.:	21635-50	21635-51
Sample ID:	Flare Station Pre H2S	Flare Station Post H2S


Component	(Concentration in ppmv, component)	
Methane	259900	263600
Ethene	14.4	9.68
Acetylene	<0.30	<0.30
Ethane	67.3	66.8

Non-methane hydrocarbons analysis by carbon number grouping

C3	271	263
C4	1381	1592
C5	1269	1455
C6	1722	2040
C7	527	577
C8	305	342
C9	342	417
C10	320	386
C11	55.7	68.5
C12	32.0	33.2
C13	14.2	12.8
C14	1.51	1.18

	(Concentration in ppmvC)	
TNMHC	36785	42550

TNMHC - total non-methane hydrocarbons as ppmvC.
Actual analysis results are reported on a "wet" basis.


Brian W. Fung
Laboratory Director

QUALITY ASSURANCE SUMMARY

(Repeat Analyses)

Project Location: Chiquita Landfill

Date Received: June 12, 2025

Date Analyzed: June 17, 2025

Component	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Conc. in ppmv, component)			
Methane	Tank Farm 6	222	228	225	2.7
Ethene	Tank Farm 6	<0.30	<0.30	<0.30	---
Acetylene	Tank Farm 6	<0.30	<0.30	<0.30	---
Ethane	Tank Farm 6	<0.30	<0.30	<0.30	---
non-methane hydrocarbons analysis by carbon number grouping					
C3	Tank Farm 6	<0.10	<0.10	<0.10	---
C4	Tank Farm 6	61.5	62.1	61.8	1.1
C5	Tank Farm 6	39.1	38.6	38.8	1.1
C6	Tank Farm 6	24.7	24.0	24.3	2.6
C7	Tank Farm 6	4.57	4.51	4.54	1.3
C8	Tank Farm 6	5.15	4.65	4.90	10
C9	Tank Farm 6	3.74	3.79	3.76	1.3
C10	Tank Farm 6	8.19	8.06	8.13	1.7
C11	Tank Farm 6	5.09	5.09	5.09	0.14
C12	Tank Farm 6	2.57	2.93	2.75	13
C13	Tank Farm 6	2.87	2.81	2.84	1.8
C14	Tank Farm 6	1.05	1.17	1.11	10
(Concentration in ppmvC)					
TNMHC	Tank Farm 6	916	913	915	0.36

Nine Silco canister samples, laboratory numbers 21635-(43-51), were analyzed for hydrocarbon speciation, EPA Method 18. Agreement between repeat analyses is a measure of precision and is shown above in the column "% RPD". The average % RPD for 13 repeat measurements from Nine Silco canister samples is 3.7%.



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-43
 Sample ID: Tank Farm 6

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt.%	
Methane	0.00	0.00	Carbon	0.04
Carbon dioxide	0.00	0.00	Hydrogen	0.01
Nitrogen	78.17	75.60	Oxygen	23.08
Oxygen	20.89	23.08	Nitrogen	75.60
Argon	0.93	1.28	Argon	1.28
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.016	0.05		
Specific Volume		13.095		
BTU/ft ³ (Dry @60F, 14.696 psia)		0.74	(HHV)	0.68 (LHV)
BTU/ft ³ (Water Saturated @ 0.25636 psia)		0.72	(HHV)	0.67 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		9.63	(HHV)	8.91 (LHV)
F _d (factor)		5818		
F _w (factor)		7334		
F _c (factor)		1281		
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		0.74		
Specific Gravity		0.9877		

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-44
 Sample ID: Zeeco Inlet

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	17.53	8.81	Carbon	22.26
Carbon dioxide	37.69	52.10	Hydrogen	2.68
Nitrogen	33.19	29.20	Oxygen	45.42
Oxygen	7.49	7.53	Nitrogen	29.20
Argon	0.33	0.42	Argon	0.42
Hydrogen	3.09	0.19	Sulfur	0.01
(CH ₂) _n	0.664	1.73		
Specific Volume		11.909		
BTU/ft3 (Dry @60F, 14.696 psia)		217.5	(HHV)	196.1 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		213.7	(HHV)	192.7 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		2591	(HHV)	2335 (LHV)
F _d (factor)		10430		
F _w (factor)		12427		
F _c (factor)		2759		
Compressibility Factor (@60F, 14.696 psia)		0.9979		
Wobbe Index		207.9		
Specific Gravity		1.0945		

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-45
 Sample ID: Parnel Inlet

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	19.08	9.02	Carbon	28.41
Carbon dioxide	54.21	70.44	Hydrogen	3.03
Nitrogen	16.89	13.96	Oxygen	54.39
Oxygen	3.34	3.16	Nitrogen	13.96
Argon	0.15	0.18	Argon	0.18
Hydrogen	5.08	0.30	Sulfur	0.03
(CH ₂) _n	1.210	2.91		
Specific Volume		11.191		
BTU/ft ³ (Dry @60F, 14.696 psia)		264.0	(HHV)	238.2 (LHV)
BTU/ft ³ (Water Saturated @ 0.25636 psia)		259.4	(HHV)	234.0 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		2955	(HHV)	2666 (LHV)
F _d (factor)		10647		
F _w (factor)		12629		
F _c (factor)		3086		
Compressibility Factor (@60F, 14.696 psia)		0.9968		
Wobbe Index		244.0		
Specific Gravity		1.1712		

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-46
 Sample ID: Tank Farm 2

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	0.00	0.00	Carbon	0.31
Carbon dioxide	0.46	0.69	Hydrogen	0.02
Nitrogen	77.94	75.15	Oxygen	23.26
Oxygen	20.65	22.76	Nitrogen	75.15
Argon	0.92	1.26	Argon	1.26
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.041	0.14		
Specific Volume		13.057		
BTU/ft ³ (Dry @60F, 14.696 psia)		2.24	(HHV)	2.07 (LHV)
BTU/ft ³ (Water Saturated @ 0.25636 psia)		2.20	(HHV)	2.04 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		29.19	(HHV)	27.05 (LHV)
F _d (factor)		12746		
F _w (factor)		14228		
F _c (factor)		3374		
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		2.2		
Specific Gravity		1.0046		

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Canyon Leachate
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-47
 Sample ID: Canyon D

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	0.37	0.20	Carbon	1.23
Carbon dioxide	2.23	3.37	Hydrogen	0.10
Nitrogen	76.04	72.97	Oxygen	24.47
Oxygen	20.09	22.02	Nitrogen	72.97
Argon	0.89	1.22	Argon	1.22
Hydrogen	0.30	0.02	Sulfur	0.00
(CH ₂) _n	0.068	0.19		
Specific Volume		12.992		
BTU/ft3 (Dry @60F, 14.696 psia)		7.829	(HHV)	7.075 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		7.692	(HHV)	6.951 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		101.7	(HHV)	91.91 (LHV)
F _d (factor)		12007		
F _w (factor)		13973		
F _c (factor)		3891		
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		7.836		
Specific Gravity		0.9980		

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Canyon Leachate
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-48
 Sample ID: Tank Farm 7A

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt.%	
Methane	0.00	0.00	Carbon	0.11
Carbon dioxide	0.00	0.00	Hydrogen	0.02
Nitrogen	78.34	75.74	Oxygen	22.87
Oxygen	20.70	22.87	Nitrogen	75.74
Argon	0.92	1.27	Argon	1.27
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.042	0.13		
Specific Volume		13.091		
BTU/ft3 (Dry @60F, 14.696 psia)		2.008	(HHV)	1.859 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		1.973	(HHV)	1.827 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		26.28	(HHV)	24.34 (LHV)
F _d (factor)		12100		
F _w (factor)		13599		
F _c (factor)		1283		
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		2.018		
Specific Gravity		0.9893		

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Canyon Leachate
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-49
 Sample ID: Tank Farm 7B

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt.%	
Methane	0.00	0.00	Carbon	0.49
Carbon dioxide	0.76	1.14	Hydrogen	0.03
Nitrogen	77.62	74.69	Oxygen	23.53
Oxygen	20.63	22.69	Nitrogen	74.69
Argon	0.92	1.26	Argon	1.26
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.075	0.21		
Specific Volume		13.031		
BTU/ft3 (Dry @60F, 14.696 psia)		3.383	(HHV)	3.132 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		3.324	(HHV)	3.077 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		44.09	(HHV)	40.81 (LHV)
F _d (factor)		11500		
F _w (factor)		13007		
F _c (factor)		3550		
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		3.393		
Specific Gravity		0.9940		

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Canyon Leachate
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-50
 Sample ID: Flare Station Pre H2S

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt. %		
Methane	27.35	13.77	Carbon	29.56	
Carbon dioxide	47.23	65.25	Hydrogen	3.99	
Nitrogen	17.10	15.04	Oxygen	51.17	
Oxygen	3.71	3.72	Nitrogen	15.04	
Argon	0.16	0.21	Argon	0.21	
Hydrogen	3.77	0.24	Sulfur	0.03	
(CH ₂) _n	0.665	1.75			
Specific Volume		11.911			
BTU/ft ³ (Dry @60F, 14.696 psia)		319.3	(HHV)	287.6	(LHV)
BTU/ft ³ (Water Saturated @ 0.25636 psia)		313.7	(HHV)	282.6	(LHV)
BTU/lb (Dry @60F, 14.696 psia)		3803	(HHV)	3425	(LHV)
F _d (factor)		10077			
F _w (factor)		12101			
F _c (factor)		2495			
Compressibility Factor (@60F, 14.696 psia)		0.9971			
Wobbe Index		304.66			
Specific Gravity		1.0983			

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F



Calculated values for Specific Volume, BTU, and F (factor)

Report Date: July 9, 2025
 Client: Montrose AQS
 Project Location: Chiquita Canyon Leachate
 Date Received: June 12, 2025
 Date Analyzed: June 17, 2025
 AtmAA Lab #: 21635-51
 Sample ID: Flare Station Post H2S

Specific volume, BTU, and F-factor are calculated using normalized laboratory analysis results for methane, carbon dioxide, nitrogen, oxygen, TNMHC, and sulfur compounds in equations that include gross/net heating and specific gas volume values taken from the GPA-2145 Midstream Standard. Heating value factor is a calculated according to ASTM 3588-98 (14.696 psia and 60°F). The F-factor is calculated according to the equation in EPA Method 19.

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	27.42	13.77	Carbon	29.74
Carbon dioxide	47.14	65.07	Hydrogen	4.00
Nitrogen	17.17	15.08	Oxygen	50.98
Oxygen	3.64	3.65	Nitrogen	15.08
Argon	0.16	0.20	Argon	0.20
Hydrogen	3.72	0.23	Sulfur	0.00
(CH ₂) _n	0.756	1.99		
Specific Volume		11.889		
BTU/ft3 (Dry @60F, 14.696 psia)		324.1	(HHV)	292.1 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		318.5	(HHV)	287.0 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		3854	(HHV)	3473 (LHV)
F _d (factor)		10048		
F _w (factor)		12052		
F _c (factor)		2477		
Compressibility Factor (@60F, 14.696 psia)		0.9971		
Wobbe Index		309.1		
Specific Gravity		1.0994		

Component	Specific volume reference values *
Methane	23.7 (ft ³ /lb)
Carbon dioxide	8.62
Nitrogen	13.5
Oxygen	11.9
Argon	9.52
Hydrogen	188.2

* reference, Rev. 2016, GPA-2145 Midstream Standard, Selected Hydrocarbons 60°F





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LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Silco Canister Samples

Report Date: July 9, 2025
Client: Montrose AQS
Project Name: Chiquita Landfill
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 19, 2025

AtmAA Lab No.:	21635-43	21635-44	21635-45
Sample I.D.:	Tank Farm 6	Zeeco Inlet	Parnel Inlet

(Concentration in ppbv)

Components

Hydrogen sulfide	<100	126000	298000
Benzene	293	187000	487000
Benzyl chloride	<30	<5000	<5000
Chlorobenzene	<25	<4500	<4500
Dichlorobenzenes*	<40	<6500	<6500
1,1-dichloroethane	<30	<5000	<5000
1,2-dichloroethane	<30	<5000	<5000
1,1-dichloroethylene	<30	<5000	<5000
Dichloromethane	<60	<11000	<11000
1,2-dibromoethane	<15	<3000	<3000
Perchloroethylene	<15	<3000	<3000
Carbon tetrachloride	<35	<6000	<6000
Toluene	24.6	13200	33100
1,1,1-trichloroethane	<20	<4000	<4000
Trichloroethene	<20	<4000	<4000
Chloroform	<20	<4000	<4000
Vinyl chloride	<20	<4000	<4000
m+p-xylenes	<25	4630	9725
o-xylene	<25	<4500	<4500

Toxic air contaminants (TAC) compounds were analyzed by GC/MS, EPA TO-15.

Hydrogen sulfide was analyzed by SCD/GC, SCAQMD 307.91.

* total amount containing meta, para, and ortho isomers


Brian W. Fung
Laboratory Director



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LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Silco Canister Samples

Report Date: July 9, 2025
Client: Montrose AQS
Project Name: Chiquita Landfill
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 19, 2025

AtmAA Lab No.:	21635-46	21635-47	21635-48
Sample I.D.:	Tank Farm 2	Canyon D	Tank Farm 7A

(Concentration in ppbv)

Components

Hydrogen sulfide	<100	<100	<100
Benzene	1320	403	220
Benzyl chloride	<30	<30	<30
Chlorobenzene	<25	<25	<25
Dichlorobenzenes*	64.3	<40	<40
1,1-dichloroethane	<30	<30	<30
1,2-dichloroethane	<30	<30	<30
1,1-dichloroethylene	<30	<30	<30
Dichloromethane	<60	<60	<60
1,2-dibromoethane	<15	<15	<15
Perchloroethylene	<15	<15	<15
Carbon tetrachloride	<35	<35	<35
Toluene	186	204	36.8
1,1,1-trichloroethane	<20	<20	<20
Trichloroethene	<20	<20	<20
Chloroform	<20	<20	<20
Vinyl chloride	<20	<20	<20
m+p-xylenes	200	114	49.4
o-xylene	57.4	32.8	<25

Toxic air contaminants (TAC) compounds were analyzed by GC/MS, EPA TO-15.

Hydrogen sulfide was analyzed by SCD/GC, SCAQMD 307.91.

* total amount containing meta, para, and ortho isomers


Brian W. Fung
Laboratory Director



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LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Silco Canister Samples

Report Date: July 9, 2025
Client: Montrose AQS
Project Name: Chiquita Landfill
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 19, 2025

AtmAA Lab No.:	21635-49	21635-50	21635-51
Sample I.D.:	Tank Farm 7B	Flare Station Pre H2S	Flare Station Post H2S

(Concentration in ppbv)

Components

Hydrogen sulfide	<100	240000	2155
Benzene	2650	232000	246000
Benzyl chloride	<30	<5000	<5000
Chlorobenzene	<25	<4500	<4500
Dichlorobenzenes*	<40	<6500	<6500
1,1-dichloroethane	<30	<5000	<5000
1,2-dichloroethane	<30	<5000	<5000
1,1-dichloroethylene	<30	<5000	<5000
Dichloromethane	<60	<11000	<11000
1,2-dibromoethane	<15	<3000	<3000
Perchloroethylene	<15	<3000	<3000
Carbon tetrachloride	<35	<6000	<6000
Toluene	153	18900	22200
1,1,1-trichloroethane	<20	<4000	<4000
Trichloroethene	<20	<4000	<4000
Chloroform	<20	<4000	<4000
Vinyl chloride	<20	<4000	<4000
m+p-xylenes	104	5380	9080
o-xylene	26.1	<4500	<4500

Toxic air contaminants (TAC) compounds were analyzed by GC/MS, EPA TO-15.

Hydrogen sulfide was analyzed by SCD/GC, SCAQMD 307.91.

* total amount containing meta, para, and ortho isomers


Brian W. Fong
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Name: Chiquita Landfill
Date Received: June 12, 2025
Date Analyzed: June 19, 2025

Components	Sample ID	Repeat Analysis		Mean	%
		Run #1	Run #2	Conc.	RPD
		(Concentration in ppbv)			
Hydrogen sulfide	Tank Farm 6	<100	<100	---	---
	Parnel Inlet	298000	298000	298000	0.00
Benzene	Tank Farm 6	289	297	293	2.7
	Parnel Inlet	511000	463000	487000	10
Benzyl chloride	Tank Farm 6	<30	<30	---	---
	Parnel Inlet	<5000	<5000	---	---
Chlorobenzene	Tank Farm 6	<25	<25	---	---
	Parnel Inlet	<4500	<4500	---	---
Dichlorobenzenes	Tank Farm 6	<40	<40	---	---
	Parnel Inlet	<6500	<6500	---	---
1,1-dichloroethane	Tank Farm 6	<30	<30	---	---
	Parnel Inlet	<5000	<5000	---	---
1,2-dichloroethane	Tank Farm 6	<30	<30	---	---
	Parnel Inlet	<5000	<5000	---	---
1,1-dichloroethylene	Tank Farm 6	<30	<30	---	---
	Parnel Inlet	<5000	<5000	---	---
Dichloromethane	Tank Farm 6	<60	<60	---	---
	Parnel Inlet	<11000	<11000	---	---
1,2-dibromoethane	Tank Farm 6	<15	<15	---	---
	Parnel Inlet	<3000	<3000	---	---
Perchloroethylene	Tank Farm 6	<15	<15	---	---
	Parnel Inlet	<3000	<3000	---	---
Carbon tetrachloride	Tank Farm 6	<35	<35	---	---
	Parnel Inlet	<6000	<6000	---	---
Toluene	Tank Farm 6	25.3	23.9	24.6	5.7
	Parnel Inlet	35000	31200	33100	11
1,1,1-trichloroethane	Tank Farm 6	<20	<20	---	---
	Parnel Inlet	<4000	<4000	---	---



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Name: Chiquita Landfill
Date Received: June 12, 2025
Date Analyzed: June 19, 2025

Components	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Concentration in ppbv)			
Trichloroethene	Tank Farm 6	<20	<20	---	---
	Parnel Inlet	<4000	<4000	---	---
Chloroform	Tank Farm 6	<20	<20	---	---
	Parnel Inlet	<4000	<4000	---	---
Vinyl chloride	Tank Farm 6	<20	<20	---	---
	Parnel Inlet	<4000	<4000	---	---
m+p-xylenes	Tank Farm 6	<25	<25	---	---
	Parnel Inlet	10600	8850	9725	18
o-xylene	Tank Farm 6	<25	<25	---	---
	Parnel Inlet	<4500	<4500	---	---

Nine Silco canister samples, laboratory numbers 20795-(31-39), were analyzed for SCAQMD Rule 1150.1 components. Agreement between repeat analyses is a measure of precision and is shown above in the column "% RPD". The average % RPD for 7 repeat measurements from nine Silco canister samples is 3.5%.





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LABORATORY ANALYSIS REPORT

Hydrogen Sulfide and Reduced Sulfur Compounds
Analysis in Silco Canister Sample by SCAQMD Method 307.91

Report Date: July 9, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-056243
Date Received: June 12, 2025
Date Analyzed: June 14, 2025

ANALYSIS DESCRIPTION

Total sulfur analysis measured by gas chromatography with sulfur chemiluminescence detector (SCD), SCAQMD 307.91.

AtmAA Lab No.:	21635-43	21635-44	21635-45
Sample I.D.:	Tank Farm 6	Zeeco Inlet	Parnel Inlet
Components	(Concentration in ppmv)		
Hydrogen sulfide	<0.10	126	298
Carbonyl sulfide	<0.10	<0.80	0.83
Methyl mercaptan	0.20	101	332
Ethyl mercaptan	<0.10	1.79	4.38
Dimethyl sulfide	1.76	548	1020
Carbon disulfide	<0.10	<0.80	<0.80
i-Propyl mercaptan	<0.10	1.44	3.44
t-Butyl mercaptan	<0.10	<0.80	<0.80
n-Propyl mercaptan	<0.10	7.78	14.0
s-Butyl mercaptan	<0.10	8.01	16.1
i-Butyl mercaptan	<0.10	<0.80	<0.80
Dimethyl disulfide	<0.10	11.3	6.88
Tetrahydrothiophene	<0.10	4.55	7.62
Unidentified sulfurs	<0.10	44.7	29.2

(Concentration in ppmv, as H₂S)

Total Sulfur	1.96	864.96	1739.22
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Brian W. Fung
Laboratory Director



AtmAA inc.

5107 Douglas Fir Rd., Calabasas, CA 91302 • (818) 223-3277

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ANALYSIS DESCRIPTION

Total sulfur analysis measured by gas chromatography with sulfur chemiluminescence detector (SCD), SCAQMD 307.91.

AtmAA Lab No.:	21635-46	21635-47	21635-48
Sample I.D.:	Tank Farm 2	Canyon D	Tank Farm 7A
Components	(Concentration in ppmv)		
Hydrogen sulfide	<0.10	<0.10	<0.10
Carbonyl sulfide	<0.10	<0.10	<0.10
Methyl mercaptan	0.38	0.65	<0.10
Ethyl mercaptan	<0.10	<0.10	<0.10
Dimethyl sulfide	8.96	6.06	3.19
Carbon disulfide	<0.10	<0.10	<0.10
i-Propyl mercaptan	<0.10	<0.10	<0.10
t-Butyl mercaptan	<0.10	<0.10	<0.10
n-Propyl mercaptan	<0.10	<0.10	<0.10
s-Butyl mercaptan	<0.10	<0.10	<0.10
i-Butyl mercaptan	<0.10	0.10	<0.10
Dimethyl disulfide	0.13	<0.10	<0.10
Tetrahydrothiophene	<0.10	<0.10	<0.10
Unidentified sulfurs	0.55	0.12	0.20

(Concentration in ppmv, as H₂S)

Total Sulfur	10.13	6.92	3.39
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Date Analyzed: June 14, 2025

ANALYSIS DESCRIPTION

Total sulfur analysis measured by gas chromatography with sulfur chemiluminescence detector (SCD), SCAQMD 307.91.

AtmAA Lab No.:	21635-49	21635-50	21635-51
Sample I.D.:	Tank Farm 7B	Flare Station Pre H2S	Flare Station Post H2S
Components	(Concentration in ppmv)		
Hydrogen sulfide	0.11	240	2.16
Carbonyl sulfide	<0.10	<0.80	0.81
Methyl mercaptan	1.92	214	33.2
Ethyl mercaptan	<0.10	2.76	<0.80
Dimethyl sulfide	16.3	661	637
Carbon disulfide	<0.10	<0.80	<0.80
i-Propyl mercaptan	<0.10	2.79	1.21
t-Butyl mercaptan	<0.10	<0.80	<0.80
n-Propyl mercaptan	0.16	9.02	7.96
s-Butyl mercaptan	0.13	11.4	8.94
i-Butyl mercaptan	<0.10	<0.80	<0.80
Dimethyl disulfide	0.10	4.26	44.1
Tetrahydrothiophene	<0.10	4.95	5.05
Unidentified sulfurs	0.19	18.2	87.8
(Concentration in ppmv, as H ₂ S)			
Total Sulfur	18.99	1172.54	872.11


Brian W. Fung
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Chiquita Landfill
Date Received: June 12, 2025
Date Analyzed: June 14, 2025

Components	Sample ID	Repeat Analysis		Mean	%
		Run #1	Run #2	Conc.	RPD
		(Concentration in ppmv)			
Hydrogen sulfide	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	124	128	126	3.2
	Parnel Inlet	298	298	298	0.00
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.12	0.10	0.11	18
	Flare Station Pre H2S	243	237	240	2.5
	Flare Station Post H2S	2.14	2.17	2.16	1.4
Carbonyl sulfide	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	<0.80	<0.80	---	---
	Parnel Inlet	0.83	0.82	0.83	1.2
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
	Flare Station Pre H2S	<0.80	<0.80	---	---
	Flare Station Post H2S	0.80	0.81	0.81	1.2
Methyl mercaptan	Tank Farm 6	0.20	0.20	0.20	0.00
	Zeeco Inlet	99.5	102	101	2.5
	Parnel Inlet	333	331	332	0.60
	Tank Farm 2	0.37	0.38	0.38	2.7
	Canyon D	0.65	0.64	0.65	1.6
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	1.98	1.85	1.92	6.8
	Flare Station Pre H2S	216	212	214	1.9
	Flare Station Post H2S	33.3	33.0	33.2	0.90
Ethyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	1.77	1.80	1.79	1.7
	Parnel Inlet	4.47	4.29	4.38	4.1
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
	Flare Station Pre H2S	2.87	2.65	2.76	8.0
	Flare Station Post H2S	<0.80	<0.80	---	---
Dimethyl sulfide	Tank Farm 6	1.77	1.74	1.76	1.7
	Zeeco Inlet	542	553	548	2.0
	Parnel Inlet	1030	1010	1020	2.0
	Tank Farm 2	8.88	9.03	8.96	1.7
	Canyon D	5.97	6.15	6.06	3.0
	Tank Farm 7A	3.21	3.17	3.19	1.3
	Tank Farm 7B	16.8	15.8	16.3	6.1
	Flare Station Pre H2S	677	645	661	4.8
	Flare Station Post H2S	630	644	637	2.2



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis		Mean	%
		Run #1	Run #2	Conc.	RPD
		(Concentration in ppmv)			
Carbon disulfide	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	<0.80	<0.80	---	---
	Parnel Inlet	<0.80	<0.80	---	---
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
	Flare Station Pre H2S	<0.80	<0.80	---	---
Flare Station Post H2S	<0.80	<0.80	---	---	
i-Propyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	1.42	1.46	1.44	2.8
	Parnel Inlet	3.56	3.31	3.44	7.3
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
	Flare Station Pre H2S	2.86	2.72	2.8	5.0
Flare Station Post H2S	1.26	1.16	1.2	8.3	
t-Butyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	<0.80	<0.80	---	---
	Parnel Inlet	<0.80	<0.80	---	---
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
	Flare Station Pre H2S	<0.80	<0.80	---	---
Flare Station Post H2S	<0.80	<0.80	---	---	
n-Propyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	7.75	7.81	7.78	0.77
	Parnel Inlet	13.6	14.3	14.0	5.0
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.16	0.15	0.16	6.5
	Flare Station Pre H2S	9.21	8.83	9.02	4.2
Flare Station Post H2S	7.95	7.96	7.96	0.13	
s-Butyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	7.94	8.08	8.01	1.7
	Parnel Inlet	15.7	16.5	16.1	5.0
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.13	0.12	0.13	8.0
	Flare Station Pre H2S	11.7	11.0	11.4	6.2
Flare Station Post H2S	8.88	8.99	8.94	1.2	



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Concentration in ppmv)			
i-Butyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	<0.80	<0.80	---	---
	Parnel Inlet	<0.80	<0.80	---	---
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	0.10	0.10	0.10	0.00
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
	Flare Station Pre H2S	<0.80	<0.80	---	---
	Flare Station Post H2S	<0.80	<0.80	---	---
Dimethyl disulfide	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	11.3	11.2	11.3	0.89
	Parnel Inlet	6.65	7.11	6.88	6.7
	Tank Farm 2	0.13	0.12	0.13	8.0
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.10	0.10	0.10	2.0
	Flare Station Pre H2S	4.37	4.15	4.26	5.2
	Flare Station Post H2S	43.0	45.1	44.1	4.8
Tetrahydrothiophene	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	4.55	4.54	4.55	0.22
	Parnel Inlet	7.59	7.65	7.62	0.79
	Tank Farm 2	<0.10	<0.10	---	---
	Canyon D	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
	Flare Station Pre H2S	5.26	4.64	4.95	13
	Flare Station Post H2S	5.03	5.06	5.05	0.59
Unidentified sulfurs	Tank Farm 6	<0.10	<0.10	---	---
	Zeeco Inlet	45.5	43.8	44.7	3.8
	Parnel Inlet	26.9	31.4	29.15	15.4
	Tank Farm 2	0.56	0.54	0.55	3.6
	Canyon D	0.12	0.11	0.12	8.7
	Tank Farm 7A	0.20	0.19	0.20	5.1
	Tank Farm 7B	0.19	0.19	0.19	0.00
	Flare Station Pre H2S	18.8	17.5	18.2	7.2
	Flare Station Post H2S	88.3	87.2	87.8	1.3

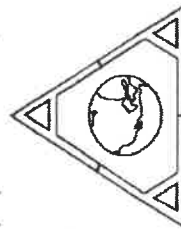
Nine Silco canister samples, laboratory numbers 21635-(43-51), were analyzed for total sulfur compounds. Agreement between repeat analyses is a measure of precision and is shown above in the column "% RPD". The average % RPD for 60 repeat measurements from nine Silco canister samples is 3.9%.



Pg 1 of 2

CHAIN OF CUSTODY RECORD

Client/Project Name: 2ND QTR CHIKUITA CANYON LEACHATE		Project Location: CHIKUITA LANDFILL		ANALYSES REQUESTED			
Project Number: PROJ-056243		Purchase Order Number:		ASTM 1945/3578 FIXED GASER TO 15 Rule 115D-1 SCRAM 307.91			
Sampler: (Signature)		Turnaround Times: Standard 10 day Expedited: 24hr / 48hr / 72hr / 5 day					
Client Sample Identification	Type of Sample Canister ID	AtmAA Lab Number	Sampling Date	Sampling Time	Special Remarks		
TANK FARM 6	639	21635-43	6-12-25		X	X	
ZEED INLET	636	-44			X	X	
PANEL INLET	631	-45			X	X	
TANK FARM 2	658	-46			X	X	
CANYON D	0577	-47			X	X	
TANK FARM 7A	0532	-48			X	X	
TANK FARM 7B	0540	-49			X	X	
Relinquished by: (Signature)		Date: 6/12/25	Time: 1227	Received by: (Signature)		Date:	Time:
Relinquished by: (Signature)		Date:	Time:	Received by: (Signature)		Date:	Time:
Relinquished by: (Signature)		Date:	Time:	Received for Laboratory by: (Signature)		Date: 6/10/25	Time: 12:27 pm
Company Info:		Send Report to:		Analytical Laboratory			
Company: MONTROUSE AGS		Company:		AtmAA Inc.			
Street Address: 1631 E ST-ADRIAN		Street Address:		23917 Craftsman Rd.			
City/State/Zip: SANTA ANA CA		City/State/Zip:		Calabasas, CA 91302			
Telephone No.: 626 617 6313		Project Manager:		TEL: (818) 223-3277			
Email Address:		Email Address:		Email Address: info@atmaa.com			



CHAIN OF CUSTODY RECORD

Appendix A.4

Quality Assurance Data

Barometric Pressure Determination

Date: 06/12/25

0

Time: 7:00

Data By: SJ, AD, JI

Reference: <https://forecast.weather.gov/MapClick.php?lat=33.6873&lon=-118.66712>
 Lat: 34.42972°N Lon: 118.66712°W Elev: 1278.0ft.

Reference Barometer ID	DEL VALLE (DLVC1)
Reference Barometer Location	
Reference Barometer Other Info.	
Reference Barometer Indication, corrected to sea level	
Reference Barometer Reference Elevation	1278
Reference Barometer Actual Pressure	28.73
Test Barometer Location/Site	Chiquita Canyon
Location/Site Elevation	997
Location/Site Barometric Pressure	29.01
Sampling Location Height (above/below site elevation)	1
Sampling Location Barometric Pressure	29.01



THERMOCOUPLE CALIBRATION

Thermocouple ID: TC-WB

Date: 1/3/2025

Performed By: JS/JS/JL

Calibrated Digital Temperature Readout ID: PTC-69

T1 Reference Thermometer ID: 2788

T2 Reference Thermometer ID: 2736

T3 Reference Thermometer ID: 0514-1120

T/C I.D. TC-WB	Readout I.D. PTC-69	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	PTC-69	367	367	367	367	370	370	370	370	3.0	0.4%	Pass
T2 (~ 212 F)	PTC-69	215	215	215	215	212	212	212	212	3.0	0.4%	Pass
T1 (~ 32 F)	PTC-69	33	33	33	33	32	32	32	32	1.0	0.2%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)

2) Pass if all Differences are less than 1.5% (°R)



THERMOCOUPLE CALIBRATION

Thermocouple ID: TC-DB
Date: 1/3/2025
Performed By: JS/JS/JL

Calibrated Digital Temperature Readout ID: PTC-69
T1 Reference Thermometer ID: 2788
T2 Reference Thermometer ID: 2736
T3 Reference Thermometer ID: 0514-1120

T/C I.D. TC-DB	Readout I.D. PTC-69	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	PTC-69	371	371	371	371	370	370	370	370	1.0	0.1%	Pass
T2 (~ 212 F)	PTC-69	215	215	215	215	212	212	212	212	3.0	0.4%	Pass
T1 (~ 32 F)	PTC-69	32	32	32	32	32	32	32	32	0.0	0.0%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)

2) Pass if all Differences are less than 1.5% (°R)



THERMOCOUPLE CALIBRATION

Thermocouple ID: 180
Date: 1/3/2025
Performed By: JS/JS/JL

Calibrated Digital Temperature Readout ID: PTC-69
T1 Reference Thermometer ID: 2788
T2 Reference Thermometer ID: 2736
T3 Reference Thermometer ID: 0514-1120

T/C I.D.	Readout I.D.	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	PTC-69	364	364	364	364	370	370	370	370	6.0	0.7%	Pass
T2 (~ 212 F)	PTC-69	212	212	212	212	212	212	212	212	0.0	0.0%	Pass
T1 (~ 32 F)	PTC-69	32	32	32	32	32	32	32	32	0.0	0.0%	Pass

1) Difference % (°R) = Difference (°F) / (Average Tref + 460)

2) Pass if all Differences are less than 1.5% (°R)



DIGITAL TEMPERATURE READOUT CALIBRATION

Digital Temperature Readout ID: PTC-43
 Readout Description: Handheld
 Date: 1/3/2025
 Performed By: JS, JS, JI

Calibrated Thermocouple ID: TC-Cal
 T1 Reference Thermometer ID: 2788
 T2 Reference Thermometer ID: 2736
 T3 Reference Thermometer ID: 0514-1120

T/C I.D. TC-Cal	Readout I.D.	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	PTC-43	370	370	370	370	370	370	370	370	0.0	0.0%	Pass
T2 (~212 F)	PTC-43	213	213	213	213	212	212	212	212	1.0	0.1%	Pass
T1 (~ 32 F)	PTC-43	32	32	32	32	32	32	32	32	0.0	0.0%	Pass

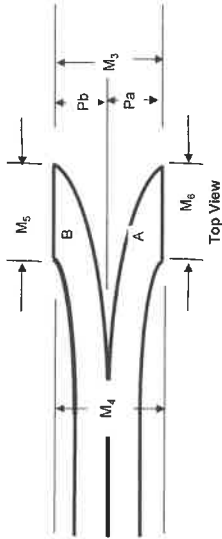
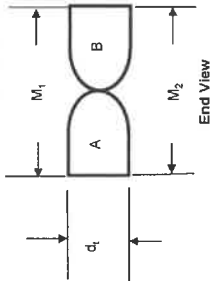
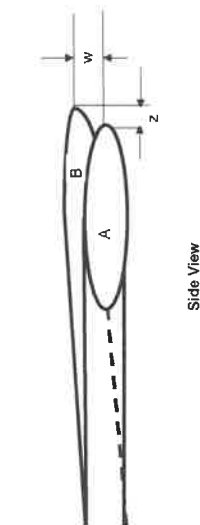
- 1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
 2) Pass if all Differences are less than 1.5% (°R)

Thermocouple Source Readings

T/C Source S/N	T/C - Readout °F				T/C Source °F				Difference		
	Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T4 (~650 F)	129462	648	648	648	650	650	650	650	2.0	0.2%	Pass
T3 (~370 F)	129462	370	370	370	370	370	370	370	0.0	0.0%	Pass
T2 (~212 F)	129462	212	212	212	212	212	212	212	0.0	0.0%	Pass
T1 (~32 F)	129462	32	32	32	32	32	32	32	0.0	0.0%	Pass

- 1) Difference % (°R) = Difference (°F) / (Average Tref + 460)
 2) Pass if all Differences are less than 1.5% (°R)

S Type Pitot Tube Dimensional Calibration Record



Acceptability Criteria		z < 1/8"	w < 1/32"	Yes	"3/16" < Dt < 3/8"	n/a	n/a	n/a	n/a	n/a	10 degrees	5 degrees	1.05 Dt < P < 1.5 Dt	Status		
Pitot ID	Date	Calibrated By	Side View, Impact openings Properly aligned, z < 1/8"	Side View, Impact openings Properly aligned, w < 1/32"	Pa = Pb	Tubing Diameter, dt	M1	M2	M3	M4	M5	M6	Average Face Opening Plane Angle, offset from perpendicular to transverse axis	Average Face Opening Plane Frontal Angle from parallel to Longitudinal Axis	Ratio of P/Dt	Status
180	1/3/25	JAC	Y	Y	Y	0.199	0.480	0.475	0.490	0.480	0.180	0.175	0.7	1.6	1.2	Pass

Notes: Reference "A Type-S Pitot Tube Calibration Study", Robert F. Vollaro, October 15, 1975
If tube is not visibly deformed it is assumed that Pa = Pb = .5 x avg. of M1 & M2, and that average face opening plane angles represent individual angles to tube axis

DIFFERENTIAL PRESSURE CALIBRATION Semi-annual

Reference Device ID: Microtector
Reference Serial Number: S270
Calibrated By: K. Thomas

Display ID: ADM 9
Description: Air Data Multimeter (ADM 850)
Serial Number: M14140
Calibration Date: 1/3/2025

Calibration Range		Run 1		Absolute Value	Individual Run Results % Difference	Pass/ Fail
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)			
Target 20%	0.010	0.010	0.010	0.0000	0.00%	Pass
Target 40%	0.020	0.020	0.020	0.0000	0.00%	Pass
Target 60%	0.030	0.030	0.030	0.0000	0.00%	Pass
Target 80%	0.040	0.040	0.040	0.0000	0.00%	Pass
Target 100%	0.050	0.050	0.050	0.0000	0.00%	Pass

Calibration Range		Run 2		Absolute Value	Individual Run Results % Difference	Pass/ Fail
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)			
Target 20%	0.010	0.010	0.010	0.0000	0.00%	Pass
Target 40%	0.020	0.020	0.020	0.0000	0.00%	Pass
Target 60%	0.030	0.030	0.030	0.0000	0.00%	Pass
Target 80%	0.040	0.040	0.040	0.0000	0.00%	Pass
Target 100%	0.050	0.050	0.050	0.0000	0.00%	Pass

Calibration Range		Run 3		Absolute Value	Individual Run Results % Difference	Pass/ Fail
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)			
Target 20%	0.010	0.010	0.010	0.0000	0.00%	Pass
Target 40%	0.020	0.020	0.020	0.0000	0.00%	Pass
Target 60%	0.030	0.030	0.030	0.0000	0.00%	Pass
Target 80%	0.040	0.040	0.040	0.0000	0.00%	Pass
Target 100%	0.050	0.050	0.050	0.0000	0.00%	Pass

Average results for three runs

% Difference	Pass/Fail
0.00%	Pass

Criteria: Each individual measured value within + or - 5.0% of reference value.
Percent difference of three run average within 5.0 %.



DIFFERENTIAL PRESSURE CALIBRATION

Semi-annual

Display ID: ADM 9
 Description: Air Data Multimeter (ADM 850)
 Serial Number: M14140
 Calibration Date: 1/3/2025

Reference Device ID: Microtector
 Reference Serial Number: S270
 Calibrated By: K. Thomas

Calibration Range		Run 1		Individual Run Results	
Scale: 0 - 0.100 inches H ₂ O		Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	0.020	0.020	0.020	0.0000	Pass
Target 40%	0.040	0.040	0.040	0.0000	Pass
Target 60%	0.060	0.059	0.060	0.0010	Pass
Target 80%	0.080	0.079	0.080	0.0010	Pass
Target 100%	0.100	0.100	0.100	0.0000	Pass

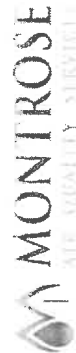
Calibration Range		Run 2		Individual Run Results	
Scale: 0 - 0.100 inches H ₂ O		Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	0.020	0.020	0.020	0.0000	Pass
Target 40%	0.040	0.040	0.040	0.0000	Pass
Target 60%	0.060	0.059	0.060	0.0010	Pass
Target 80%	0.080	0.079	0.080	0.0010	Pass
Target 100%	0.100	0.100	0.100	0.0000	Pass

Calibration Range		Run 3		Individual Run Results	
Scale: 0 - 0.100 inches H ₂ O		Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	0.020	0.020	0.020	0.0000	Pass
Target 40%	0.040	0.040	0.040	0.0000	Pass
Target 60%	0.060	0.059	0.060	0.0010	Pass
Target 80%	0.080	0.079	0.080	0.0010	Pass
Target 100%	0.100	0.100	0.100	0.0000	Pass

Average results for three runs

% Difference	Pass/Fail
0.58%	Pass

Criteria: Each individual measured value within + or - 5.0% of reference value.
 Percent difference of three run average within 5.0 %.



DIFFERENTIAL PRESSURE CALIBRATION

Semi-annual

Display ID: ADM 9
Description: Air Data Multimeter (ADM 850)
Serial Number: M14140
Calibration Date: 1/3/2025

Reference Device ID: Microtector
Reference Serial Number: S270
Calibrated By: K. Thomas

Calibration Range		Run 1		Individual Run Results	
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	0.200	0.200	0.200	0.0000	Pass
Target 40%	0.400	0.401	0.400	0.0010	Pass
Target 60%	0.600	0.602	0.600	0.0020	Pass
Target 80%	0.800	0.800	0.800	0.0000	Pass
Target 100%	1.000	1.000	1.000	0.0000	Pass

Calibration Range		Run 2		Individual Run Results	
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	0.200	0.200	0.200	0.0000	Pass
Target 40%	0.400	0.401	0.400	0.0010	Pass
Target 60%	0.600	0.602	0.600	0.0020	Pass
Target 80%	0.800	0.801	0.800	0.0010	Pass
Target 100%	1.000	1.000	1.000	0.0000	Pass

Calibration Range		Run 3		Individual Run Results	
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	0.200	0.200	0.200	0.0000	Pass
Target 40%	0.400	0.401	0.400	0.0010	Pass
Target 60%	0.600	0.602	0.600	0.0020	Pass
Target 80%	0.800	0.800	0.800	0.0000	Pass
Target 100%	1.000	1.000	1.000	0.0000	Pass

Average results for three runs

Criteria: Each individual measured value within + or - 5.0% of reference value.
Percent difference of three run average within 5.0 %.

% Difference	Pass/Fail
0.13%	Pass



DIFFERENTIAL PRESSURE CALIBRATION

Semi-annual

Display ID: ADM 9

Description: Air Data Multimeter (ADM 850)

Serial Number: M14140

Calibration Date: 1/3/2025

Reference Device ID: Dwyer 0 - 10" Manometer

Reference Serial Number: CC-2

Calibrated By: K. Thomas

Calibration Range		Run 1		Individual Run Results	
Scale: 0 - 10.000 inches H ₂ O		Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	2.000	1.955	2.000	0.0450	Pass
Target 40%	4.000	4.015	4.000	0.0150	Pass
Target 60%	6.000	6.010	6.000	0.0100	Pass
Target 80%	8.000	8.045	8.000	0.0450	Pass
Target 100%	10.000	10.100	10.000	0.1000	Pass

Calibration Range		Run 2		Individual Run Results	
Scale: 0 - 10.000 inches H ₂ O		Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	2.000	1.995	2.000	0.0050	Pass
Target 40%	4.000	4.035	4.000	0.0350	Pass
Target 60%	6.000	6.095	6.000	0.0950	Pass
Target 80%	8.000	8.055	8.000	0.0550	Pass
Target 100%	10.000	10.100	10.000	0.1000	Pass

Calibration Range		Run 3		Individual Run Results	
Scale: 0 - 10.000 inches H ₂ O		Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/ Fail
Target 20%	2.000	1.990	2.000	0.0100	Pass
Target 40%	4.000	4.090	4.000	0.0900	Pass
Target 60%	6.000	6.095	6.000	0.0950	Pass
Target 80%	8.000	8.040	8.000	0.0400	Pass
Target 100%	10.000	10.050	10.000	0.0500	Pass

Average results for three runs

% Difference	Pass/Fail
0.94%	Pass

Criteria: Each individual measured value within + or - 5.0% of reference value.
Percent difference of three run average within 5.0 %.



APPENDIX B

GENERAL EMISSIONS CALCULATIONS

GENERAL EMISSIONS CALCULATIONS

I. Stack Gas Velocity

A. Stack gas molecular weight, lb/lb-mole

$$MW_{dry} = 0.44 * \% CO_2 + 0.32 * \% O_2 + 0.28 * \% N_2$$

$$MW_{wet} = MW_{dry} * (1 - B_{wo}) + 18 * B_{wo}$$

B. Absolute stack pressure, iwg

$$P_s = P_{bar} + \frac{P_{sg}}{13.6}$$

C. Stack gas velocity, ft/sec

$$V_s = 2.9 * C_p * \sqrt{\Delta P} * \sqrt{T_s} * \sqrt{\frac{29.92 * 28.95}{P_s * MW_{wet}}}$$

II. Moisture

A. Sample gas volume, dscf

$$V_{mstd} = 0.03342 * V_m * \left(P_{bar} + \frac{\Delta H}{13.6} \right) * \frac{T_{ref}}{T_m} * Y_d$$

B. Water vapor volume, scf

$$V_{wstd} = 0.0472 * V_{ic} * \frac{T_{ref}}{528^{\circ}R}$$

C. Moisture content, dimensionless

$$B_{wo} = \frac{V_{wstd}}{(V_{mstd} + V_{wstd})}$$

III. Stack Gas Volumetric Flow Rate

A. Actual stack gas volumetric flow rate, wacfm

$$Q = V_s * A_s * 60$$

B. Standard stack gas flow rate, dscfm

$$Q_{sd} = Q * (1 - B_{wo}) * \frac{T_{ref}}{T_s} * \frac{P_s}{29.92}$$

SCS Engineers – Chiquita Canyon Landfill
2025 1st Quarter Leachate and Condensate Vapor Sampling

Nomenclature:

A_s	=	stack area, ft ²
B_{wo}	=	flue gas moisture content, dimensionless
$C_{12\%CO_2}$	=	particulate grain loading, gr/dscf corrected to 12% CO ₂
C	=	particulate grain loading, gr/dscf
C_p	=	pitot calibration factor, dimensionless
D_n	=	nozzle diameter, inches
F	=	fuel F-Factor, dscf/MMBtu @ 0% O ₂
H	=	orifice differential pressure, iwg
I	=	% isokinetics
M_n	=	mass of collected particulate, mg
M_i	=	mass emission rate of specie i, lb/hr
MW	=	molecular weight of flue gas, lb/lb-mole
M_{wi}	=	molecular weight of specie i:
		SO ₂ : 64
		NO _x : 46
		CO: 28
		HC: 16
t	=	sample time, minutes
ΔP	=	average velocity head, iwg = $(\sqrt{\Delta P})^2$
P_{bar}	=	barometric pressure, inches Hg
P_s	=	stack absolute pressure, inches Hg
P_{sg}	=	stack static pressure, iwbg
Q	=	wet stack flow rate at actual conditions, wacfm
Q_{sd}	=	dry standard stack flow rate, dscfm
SV	=	specific molar volume of an ideal gas at standard conditions, ft ³ /lb-mole
T_m	=	meter temperature, °R
T_{ref}	=	reference temperature, °R
T_s	=	stack temperature, °R
V_s	=	stack gas velocity, ft/sec
V_{lc}	=	volume of liquid collected in impingers, ml
V_m	=	uncorrected dry meter volume, dcf
V_{mstd}	=	dry meter volume at standard conditions, dscf
V_{wstd}	=	volume of water vapor at standard conditions, scf
Y_d	=	meter calibration coefficient

APPENDIX C QUALITY ASSURANCE

Appendix C.1

Quality Assurance Program Summary

QUALITY ASSURANCE PROGRAM SUMMARY

As part of Montrose Air Quality Services, LLC (Montrose) ASTM D7036-04 certification, Montrose is committed to providing emission related data which is complete, precise, accurate, representative, and comparable. Montrose quality assurance program and procedures are designed to ensure that the data meet or exceed the requirements of each test method for each of these items. The quality assurance program consists of the following items:

- Assignment of an Internal QA Officer
- Development and use of an internal QA Manual
- Personnel training
- Equipment maintenance and calibration
- Knowledge of current test methods
- Chain-of-custody
- QA reviews of test programs

Assignment of an Internal QA Officer: Montrose has assigned an internal QA Officer who is responsible for administering all aspects of the QA program.

Internal Quality Assurance Manual: Montrose has prepared a QA Manual according to the requirements of ASTM D7036-04 and guidelines issued by EPA. The manual documents and formalizes all of Montrose's QA efforts. The manual is revised upon periodic review and as Montrose adds capabilities. The QA manual provides details on the items provided in this summary.

Personnel Testing and Training: Personnel testing and training is essential to the production of high quality test results. Montrose training programs include:

- A requirement for all technical personnel to read and understand the test methods performed
- A requirement for all technical personnel to read and understand the Montrose QA manual
- In-house testing and training
- Quality Assurance meetings
- Third party testing where available
- Maintenance of training records.

Equipment Maintenance and Calibration: All laboratory and field equipment used as a part of Montrose's emission measurement programs is maintained according to manufacturer's recommendations. A summary of the major equipment maintenance schedules is summarized in Table 1. In addition to routine maintenance, calibrations are performed on all sampling equipment according to the procedures outlined in the applicable test method. The calibration intervals and techniques for major equipment components is summarized in Table 2. The calibration technique may vary to meet regulatory agency requirements.

Knowledge of Current Test Methods: Montrose maintains current copies of EPA, ARB, and SCAQMD Source Test Manuals and Rules and Regulations.

Chain-of-Custody: Montrose maintains chain-of-custody documentation on all data sheets and samples. Samples are stored in a locked area accessible only to Montrose source test personnel. Data sheets are kept in the custody of the originator, program manager, or in locked storage until return to Montrose office. Electronic field data is duplicated for backup on secure storage media. The original data sheets are used for report preparation and any additions are initialed and dated.

QA Reviews: Periodic field, laboratory, and report reviews are performed by the in-house QA coordinator. Periodically, test plans are reviewed to ensure proper test methods are selected and reports are reviewed to ensure that the methods were followed and any deviations from the methods are justified and documented.

ASTM D7036-04 Required Information

Uncertainty Statement

Montrose is qualified to conduct this test program and has established a quality management system that led to accreditation with ASTM Standard D7036-04 (Standard Practice for Competence of Air Emission Testing Bodies). Montrose participates in annual functional assessments for conformance with D7036-04 which are conducted by the American Association for Laboratory Accreditation (A2LA). All testing performed by Montrose is supervised on site by at least one Qualified Individual (QI) as defined in D7036-04 Section 8.3.2. Data quality objectives for estimating measurement uncertainty within the documented limits in the test methods are met by using approved test protocols for each project as defined in D7036-04 Sections 7.2.1 and 12.10. Additional quality assurance information is presented in the report appendices.

Performance Data

Performance data are available for review.

Qualified Personnel

A qualified individual (QI), defined by performance on a third party or internal test on the test methods, is present on each test event.

Plant Entry and Safety Requirements

Plant Entry

All test personnel are required to check in with the guard at the entrance gate or other designated area. Specific details are provided by the facility and project manager.

Safety Requirements

All personnel shall have the following personal protective equipment (PPE) and wear them where designated:

- Hard Hat
- Safety Glasses
- Steel Toe Boots
- Hearing Protection
- Gloves
- High Temperature Gloves (if required)
- Flame Resistant Clothing (if required)

The following safety measures are followed:

- Good housekeeping
- SDS for all on-site hazardous materials
- Confine selves to necessary areas (stack platform, mobile laboratory, CEMS data acquisition system, control room, administrative areas)
- Knowledge of evacuation procedures

Each facility will provide plant specific safety training.

TABLE 1
EQUIPMENT MAINTENANCE SCHEDULE

Equipment	Acceptance Limits	Frequency of Service	Methods of Service
Pumps	1. Absence of leaks 2. Ability to draw manufacturers required vacuum and flow	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Replace parts 4. Leak check
Flow Meters	1. Free mechanical movement	As recommended by manufacturer	1. Visual inspection 2. Clean 3. Calibrate
Sampling Instruments	1. Absence of malfunction 2. Proper response to zero span gas	As recommended by manufacturer	As recommended by manufacturer
Integrated Sampling Tanks	1. Absence of leaks	Depends on nature of use	1. Steam clean 2. Leak check
Mobile Van Sampling System	1. Absence of leaks	Depends on nature of use	1. Change filters 2. Change gas dryer 3. Leak check 4. Check for system contamination
Sampling Lines	1. Sample degradation less than 2%	After each test series	1. Blow dry, inert gas through line until dry

TABLE 2
MAJOR SAMPLING EQUIPMENT CALIBRATION REQUIREMENTS

Sampling Equipment	Calibration Frequency	Calibration Procedure	Acceptable Calibration Criteria
Continuous Analyzers	Before and After Each Test Day	3-point calibration error test	< 2% of analyzer range
Continuous Analyzers	Before and After Each Test Run	2-point sample system bias check	< 5% of analyzer range
Continuous Analyzers	After Each Test Run	2-point analyzer drift determination	< 3% of analyzer range
CEMS System	Beginning of Each Day	leak check	< 1 in. Hg decrease in 5 min. at > 20 in. Hg
Continuous Analyzers	Semi-Annually	3-point linearity	< 1% of analyzer range
NO _x Analyzer	Daily	NO ₂ -> NO converter efficiency	> 90%
Differential Pressure Gauges (except for manometers)	Semi-Annually	Correction factor based on 5-point comparison to standard	± 5%
Differential Pressure Gauges (except for manometers)	Bi-Monthly	3-point comparison to standard, no correction factor	± 5%
Barometer	Semi-Annually	Adjusted to mercury-in-glass or National Weather Service Station	± 0.1 inches Hg
Dry Gas Meter	Semi-Annually	Calibration check at 4 flow rates using a NIST traceable standard	± 2%
Dry Gas Meter	Bi-Monthly	Calibration check at 2 flow rates using a NIST traceable standard	± 2% of semi-annual factor
Dry Gas Meter Orifice	Annually	4-point calibration for ΔH@	--
Temperature Sensors	Semi-Annually	3-point calibration vs. NIST traceable standard	± 1.5%

Note: Calibration requirements that meet applicable regulatory agency requirements are used.

Appendix C.2

SCAQMD and STAC Certifications

SCS Engineers – Chiquita Canyon Landfill
2025 1st Quarter Leachate and Condensate Vapor Sampling



September 26, 2024

Mr. John Peterson
Montrose Air Quality Services, LLC
1631 E. Saint Andrew Place
Santa Ana, CA 92705

Subject: LAP Approval Notice
Reference # 96LA1220

Dear Mr. Peterson:

We have completed our review of Montrose Air Quality Services' revised renewal application, which was submitted as notification of Montrose's recent acquisition of AirKinetics, Inc. under the South Coast AQMD Laboratory Approval Program (LAP). We are pleased to inform you that your firm is approved for the period beginning September 30, 2024, and ending September 30, 2025, for the following methods, subject to the requirements in the LAP Conditions For Approval Agreement and conditions listed in the attachment to this letter:

South Coast AQMD Methods 1-4
South Coast AQMD Methods 10.1 and 100.1
South Coast AQMD Methods 5.1, 5.2, 5.3, 6.1 (Sampling and Analysis)
South Coast AQMD Methods 25.1 and 25.3 (Sampling)
Rule 1121/ 1146.2 Protocol
Rule 1420/1420.1/1420.2 – (Lead) Source and Ambient Sampling
USEPA CTM-030 and ASTM D6522-00

Your LAP approval to perform nitrogen oxide emissions compliance testing for Rule 1121/ 1146.2 Protocols includes satellite facilities located at:

McKenna Boiler 1510 North Spring Street Los Angeles, CA 90012	Noritz America Corp. 11160 Grace Avenue Fountain Valley, CA 92708	Ajax Boiler, Inc. 2701 S. Harbor Blvd. Santa Ana, CA 92704
VA Laundry Bldg., Greater LA Healthcare Sys. 508 Constitution Avenue Los Angeles, CA 90049	So Cal Gas – Engr Analysis Ctr, Bldg H 8101 Rosemead Blvd Pico Rivera, CA 90660	

Thank you for participating in the LAP. Your cooperation helps us to achieve the goal of the LAP: to maintain high standards of quality in the sampling and analysis of source emissions. You may direct any questions or information to LAP Coordinator, Colin Eckerle. He may be reached by telephone at (909) 396-2476, or via e-mail at ceckerle@aqmd.gov.

Sincerely,

D. Sarkar

Dipankar Sarkar
Program Supervisor
Source Test Engineering

DS:CE
Attachment
240926 LapRenewal.doc



American Association for Laboratory Accreditation

Accredited Air Emission Testing Body

A2LA has accredited

MONTROSE AIR QUALITY SERVICES

In recognition of the successful completion of the joint A2LA and Stack Testing Accreditation Council (STAC) evaluation process, this laboratory is accredited to perform testing activities in compliance with ASTM D7036:2004 - Standard Practice for Competence of Air Emission Testing Bodies.

Presented this 27th day of February 2024.

Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3925.01
Valid to February 28, 2026



This accreditation program is not included under the A2LA ILAC Mutual Recognition Arrangement.

Appendix C.3

Individual QI Certifications

CERTIFICATE OF COMPLETION	
Pedro SanJuan	
This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):	
SCAQMD Methods 1.1, 1.2, 2.1, 2.2, 2.3, 3.1, & 4.1	
Certificate Number: <u>002-2022-50</u>	
 Tate Strickler, VP – Quality Systems	DATE OF ISSUE: <u>02/28/2022</u> DATE OF EXPIRATION: <u>02/27/2027</u>
 MONTROSE ENVIRONMENTAL	

CERTIFICATE OF COMPLETION	
Pedro SanJuan	
This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):	
SCAQMD Methods 25.1, 25.3 & 307-91	
Certificate Number: <u>002-2022-52</u>	
	DATE OF ISSUE: <u>02/28/2022</u>
Tate Strickler, VP – Quality Systems	DATE OF EXPIRATION: <u>02/27/2027</u>
	
MONTROSE ENVIRONMENTAL	

CERTIFICATE OF COMPLETION	
Pedro SanJuan	
This document certifies that this individual has passed a comprehensive examination and is now a Qualified Individual (QI) as defined in Section 8.3 of ASTM D7036-04 for the following method(s):	
EPA Methods 3C, TO-8, TO-12 and TO-15	
Certificate Number: <u>002-2023-48</u>	
<i>Tate Strickler</i>	DATE OF ISSUE: 11/01/2023
Tate Strickler, VP – Quality Systems	DATE OF EXPIRATION: 10/31/2028
	

Appendix C.4

Statement of No Conflict of Interest

**STATEMENT OF NO CONFLICT OF INTEREST AS AN INDEPENDENT TESTING
LABORATORY**

(To be completed by authorized source testing firm representative and included in source test report)

The following facility and equipment were tested by my source testing firm and are the subjects of this statement:

Facility ID:	119219
Date(s) Tested:	June 12, 2025
Facility Name:	Chiquita Canyon Landfill
Equipment Address:	29201 Henry Mayo Drive Castaic, California 91384
Equipment Tested:	Leachate and Condensate Sampling System

I state, as its legally authorized representative, that the source testing firm of:

Source Test Firm: Montrose Air Quality Services, LLC
Business Address: 1631 E. St. Andrew Pl.
Santa Ana, California 92705

is an "Independent Testing Laboratory" as defined in **District Rule 304(k)**:

For the purposes of this Rule, when an independent testing laboratory is used for the purposes of establishing compliance with District rules or to obtain a District permit to operate, it must meet all of the following criteria:

- (1) The testing laboratory shall have no financial interest in the company or facility being tested, or in the parent company, or any subsidiary thereof -*
- (2) The company or facility being tested, or parent company or any subsidiary thereof, shall have no financial interest in the testing laboratory;*
- (3) Any company or facility responsible for the emission of significant quantities of pollutants to the atmosphere, or parent company or any subsidiary thereof shall have no financial interest in the testing laboratory; and*
- (4) The testing laboratory shall not be in partnership with, own or be owned by, in part or in full, the contractor who has provided or installed equipment (basic or control), or monitoring systems, or is providing maintenance for installed equipment or monitoring systems, for the company being tested.*

Furthermore, I state that any contracts or agreements entered into by my source testing firm and the facility referenced above, or its designated contractor(s), either verbal or written, are not contingent upon the outcome of the source testing, or the source testing information provided to the SCAQMD.

Signature: _____

Date: 7/11/2025

Pete SanJuan

Client Project Manager

(714) 279-6777

7/11/2025

(Name)

(Title)

(Phone)

(Date)

APPENDIX D FACILITY PERMIT



**FACILITY PERMIT TO OPERATE
CHIQUITA CANYON LLC**

PERMIT TO CONSTRUCT/OPERATE

Permit No. G66132
A/N 613131

Equipment Description:

Modification of an existing Landfill Gas Condensate and Leachate Collection/Storage System consisting of:

1. Condensate storage tank, 5,000-gallon capacity, at Canyon B.
2. Condensate storage tank, 10,000-gallon capacity, at Primary Canyon.
3. Condensate storage tanks, three (3), each 6,650-gallon capacity, at flare station.
4. Leachate collection tanks, up to (4), each 10,000-gallon capacity, and one 1,600-gallon capacity, with associated sump pump and transfer pumps.

By removal of:

1. One 1,600-gallon capacity leachate collection tank [under Item 4].

By addition of:

1. One 10,000-gallon capacity leachate collection tank [to Item 4].

Conditions:

1. Operation of this equipment shall be conducted in accordance with all data and specifications submitted with the application under which this permit is issued unless otherwise noted below.
[Rule 204]
2. This equipment shall be properly maintained and kept in good operating condition at all times.
[Rule 204]
3. This equipment shall be operated and maintained by personnel properly trained in its operation.
[Rule 204]
4. This equipment shall be vented to air pollution control equipment which is in full operation and has been issued a valid Permit to Construct or Operate by the South Coast AQMD.
[Rule 1303(a)(1)-BACT]
5. This equipment shall be used only for the storage of landfill gas condensate and leachate collection.
[Rule 204]
6. All connectors, valves and openings shall be properly sealed or closed at all times to prevent landfill gas condensate vapors from entering into the atmosphere unless disposal of the condensate/leachate is taking place or during maintenance or repairs.
[Rule 204]



FACILITY PERMIT TO OPERATE CHIQUITA CANYON LLC

7. Any breakdown or malfunction of the landfill gas condensate/leachate storage system shall be reported to South Coast AQMD within one hour after occurrence, or within one hour of the time personnel knew or reasonably should have known of its occurrence, per Rule 430 requirements, and remedial measures shall be undertaken to correct the problem and prevent further emissions into the atmosphere in a timely manner.
[Rule 430]
8. The operator shall keep and maintain adequate records for this equipment to verify compliance with the conditions of this permit. These records shall be prepared in a format which is acceptable to the South Coast AQMD. Records shall be kept for at least five years and made available to South Coast AQMD personnel upon request.
[Rule 204]
9. This permit shall expire if construction of this equipment is not complete within one year from the date of issuance of this permit unless an extension is granted by the Executive Officer.
[Rule 204]

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If you have any questions, please contact one of the following individuals by email or phone.

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