

**INFORME DE PRUEBA DE ORIGEN
TOMA DE MUESTRAS DE LIXIVIADOS Y DE VAPORES DE
CONDENSADOS EN EL 1° TRIMESTRE DE 2025 EN EL
VERTEDERO DE CHIQUITA CANYON
CÓDIGO DE INSTALACIÓN: 119219**

Elaborado Para:

SCS Engineers – Vertedero de Chiquita Canyon
3900 Kilroy Airport Way, Suite 100 Long
Beach, California 90806

Para Ser Presentado A:

Distrito de Gestión de la Calidad del Aire de la Costa Sur
21865 Copley Drive
Diamond Bar, California 91765-4178

Elaborado Por:

Montrose Air Quality Services, LLC
1631 E. St. Andrew Pl. Santa
Ana, California 92705 (714)
279-6777

Pete San Juan

Fecha del Análisis:	20 de marzo de 2025
Fecha de Producción:	18 de abril de 2025
Número de Documento:	W002AS-053154-RT-7193

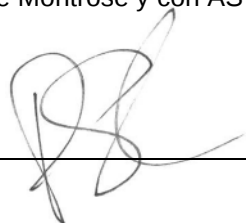


DECLARACIÓN SOBRE LA PRIVACIDAD

Excepto que la ley o las regulaciones indiquen lo contrario, esta información incluida en esta comunicación está prevista exclusivamente para la persona o entidad a la que está dirigida. Esta comunicación podrá contener información que es de propiedad, privilegiada o confidencial o de cualquier manera exenta de divulgación. Si no es el destinatario indicado, no está autorizado a leer, imprimir, guardar, copiar o diseminar este mensaje ni ninguna parte del mismo.

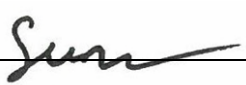
REVISIÓN Y CERTIFICACIÓN

Todo el trabajo, los cálculos y otras actividades y tareas realizadas y presentadas en este documento fueron realizadas por mí o bajo mi dirección y supervisión. Mediante este instrumento certifico, a mi mejor saber y entender, que Montrose operó en cumplimiento con los requerimientos del Sistema de Gestión de la Calidad del Aire de Montrose y con ASTM D7036-04 durante este proyecto de análisis.

Firma:  Fecha: 18/4/2025

Nombre: Pete San Juan Cargo: Gerente de Proyectos de Clientes

He revisado, tanto técnica como editorialmente, los detalles, los cálculos, los resultados, las conclusiones y otros materiales escritos apropiados aquí incluidos. Mediante el presente instrumento certifico que a mi mejor saber y entender, el material presentado es auténtico, preciso y cumple con los requerimientos del Sistema de Gestión de la Calidad del Aire de Montrose y con ASTM D7036-04.

Firma:  Fecha: 18/4/2025

Nombre: Surya Adhikari Cargo: Especialista Sénior en Informes de Control de la Calidad

TABLA DE CONTENIDO

<u>SECCIÓN</u>	<u>PÁGINA</u>
1.0 INTRODUCCIÓN 5	
2.0 INFORMACIÓN SOBRE LAS INSTALACIONES Y LA FUENTE.....	6
2.1 INFORMACIÓN SOBRE LOS EQUIPOS DEL PROCESO	6
3.0 INFORMACIÓN Y METODOLOGÍA PARA REALIZAR LOS ANÁLISIS	7
3.1 MÉTODO 1.1 DEL SCAQMD – TOMA DE MUESTRAS Y TRAZADOS DE LA VELOCIDAD DE FUENTES ESTÁTICAS	7
3.2 MÉTODO 2.1 DEL SCAQMD1 – VELOCIDAD E ÍNDICE DE FLUJO VOLUMÉTRICO	8
3.3 MÉTODO 3.1 DEL SCAQMD - ANÁLISIS DE GASES PARA EL PESO MOLECULAR SECO Y EXCESO DE AIRE	8
3.4 MÉTODO 4.1 DEL SCAQMD - DETERMINACIÓN DEL CONTENIDO DE HUMEDAD EN GASES ACUMULADOS.....	8
3.5 MÉTODO 307-91 DEL SCAQMD – ÁCIDO SULFHÍDRICO Y COMUPUESTOS DE AZUFRE REDUCIDOS	8
3.6 MÉTODO TO-15 DE EPA – VOLÁTILES E HIDROCARBUROS TOMADOS EN EL RECIPIENTE SUMMA.....	8
4.0 RESULTADOS.....	9
LISTA DE APÉNDICES	
A DATOS DE LOS ANÁLISIS	11
A.1 Datos sobre las Ubicaciones de las Muestras	12
A.2 Datos sobre la Velocidad, la Humedad y el índice de Flujo.....	22
A.3 Datos de Campo y de Laboratorio sobre Orgánicos y Azufres.....	42
A.4 Datos de Aseguramiento de la Calidad	86
B CÁLCULOS SOBRE LAS EMISIONES EN GENERAL.....	98
C ASEGURAMIENTO DE LA CALIDAD	101
C.1 Resumen del Programa de Aseguramiento de la Calidad	102
C.2 Certificaciones de SCAQMD y STAC.....	108
C.3 Certificaciones de QI Individuales	111
C.4 Declaración de Sin Conflicto de Intereses	115
D PERMISO DE LAS INSTALACIONES.....	117
LISTA DE TABLAS	
3-1 PROCEDIMIENTOS PARA REALIZAR LOS ANÁLISIS	7
4-1 RESULTADOS DE H ₂ S Y DE AZUFRE TOTAL REDUCIDO.....	9
4-2 RESULTADOS DE ESPECIES DE VESTIGIOS DE COMPUESTOS ORGÁNICOS	10

1.0 INTRODUCCIÓN

Montrose Air Quality Services, LLC (MAQS) fue contratado por SCS Engineers (SCS) para que realice tomas de muestras trimestrales en varios lugares en el sistema de ventilación de vapores en el Vertedero de Chiquita Canyon (Chiquita), en Castaic, California. Los análisis se realizaron para cumplir con la Condición 72 de la Orden de Depuración Estipulada (SOFA) Modificada emitida a Chiquita por el Distrito de Gestión de la Calidad del Aire de la Costa Sur (SCAQMD) el 24 de abril de 2024. Los análisis se realizaron según el protocolo para realizar análisis (MAQS Número de Documento W002AS-056454-PP-1074) y la evaluación del protocolo para realizar análisis en el origen (S/T ID: P24228). El equipo de testeo de Montrose estuvo formado por Pete San Juan y Kyle Thomas. Pete San Juan fue la persona calificada en el sitio para MAQS. MAQS califica como laboratorio independiente para realizar análisis bajo la Regla 304 del SCAQMD (sin conflicto de intereses) y está certificado por el SCAQMD para que conduzca análisis de contaminantes utilizando los Métodos del Distrito.

La información sobre los equipos y las instalaciones se proporciona en la Sección 2.0. La información de los análisis en el origen se detalla en la Sección 3.0. Los resultados de los análisis se proporcionan en la Sección 4.0. En los Apéndices se encuentra información complementaria.

2.0 INFORMACIÓN SOBRE LAS INSTALACIONES Y LA FUENTE

La dirección del centro es:

Dirección Física: Vertedero de Chiquita Canyon
29201 Henry Mayo Drive Castaic,
California 91384

La toma de muestras de lixiviados y vapores condensados se realizó desde los siguientes lugares:

- Las ventilaciones o los colectores de los tanques que sean representativos de un set de tanques;
- El cabezal/colector de cada parque de tanques de lixiviados o colector que incluye el Parque de Tanques No. 2, el Parque de Tanques No. 6, el Parque de Tanques No. 7A, el Parque de Tanques No. 7B, el Parque de Tanques No. 9A y el Parque de Tanques No. 9B, la entrada a la Antorcha Zeeco, el tratamiento previo a H₂S de la Estación de Antorchas y el tratamiento Post H₂S de la Estación de Antorchas. Los análisis se realizaron flujo arriba de la conexión de tuberías hacia el Sistema de Recolección y Transporte de LFG donde el biogás podrá afectar los resultados.

2.1 INFORMACIÓN SOBRE LOS EQUIPOS DEL PROCESO

Los vapores creados por la volatilización de productos químicos en el espacio superior de los tanques de lixiviados en los parques de tanques No. 2, No. 6, No. 7A, No. 7B, No. 9A y No. 9B se transfieren bajo un vacío por el cabezal del pozo hacia el sistema de recolección de biogás y después hacia la estación de antorchas para la combustión. La presión y la temperatura de los vapores en las tuberías varían en base a las temperaturas ambientales durante el funcionamiento normal. El centro opera las 24 horas del día.

3.0 INFORMACIÓN Y METODOLOGÍA PARA REALIZAR LOS ANÁLISIS

Los contaminantes medidos y la metodología utilizada para realizar los análisis se resumen en la Tabla 3-1. Las mediciones del índice de flujo del volumen se realizaron antes de tomar las muestras.

A continuación se describen los procedimientos para tomar las muestras del campo utilizados durante el programa de análisis. Los métodos de referencia publicados proporcionan descripciones más detalladas que en esta sección. El propósito de esta sección es proporcionar un resumen de los métodos para tomar las muestras y cualquier variación. Los procedimientos para tomar las muestras se basan en los Métodos de Referencia del SCAQMD y de EPA.

**TABLA 3-1
PROCEDIMIENTOS PARA
REALIZAR LOS ANÁLISIS
RESUMEN DEL PROGRAMA PARA REALIZAR LOS ANÁLISIS DEL
VERTEDERO DE CHIQUITA CANYON
TOMA DE MUESTRAS DE LIXIVIADOS Y DE VAPORES DE CONDENSADOS**

Parámetro	Medio para la Muestra	Técnica Analítica	Método de Referencia	Cantidad de Réplicas
Índice de Flujo/Temperatura	Tubo Pitot / TC	Presión Diferencial	SCAQMD 2.1	1 para cada ubicación
Humedad	Bulbo Húmedo/Bulbo Seco	Cuadro Psicrométrico	SCAQMD 4.1	1 para cada ubicación
H ₂ S y TRS	Frasco Summa	GC/SCD	SCAQMD 307-91	1 para cada ubicación
TO-15 (Regla 1150.1)	Frasco Summa	GC/MS	EPA TO-15	1 para cada ubicación

3.1 MÉTODO 1.1 DEL SCAQMD – TOMA DE MUESTRAS Y TRAZADOS DE LA VELOCIDAD DE FUENTES ESTÁTICAS

Se realizó una evaluación preliminar de los análisis de la fuente del sitio antes de que se realice el análisis de la fuente, para determinar las ubicaciones de los trazados de los puntos de toma de muestra. Se midieron tanto flujo arriba como flujo abajo del diámetro de la sarta de tuberías y la distancia desde los puertos de toma de muestra hasta las alteraciones (curvaturas, bridas, etc.). Esta información se utiliza para determinar la cantidad mínima de puntos de toma de muestra por trazo y la distancia desde la pare de la pila interior hasta la ubicación de cada punto de toma de muestra. Todas las ubicaciones de toma de muestra se ubicaron según los requerimientos mínimos del Método 1.1 del SCAQMD. Además, este método considera patrones de flujo ciclónico y concentraciones de contaminantes estratificados in-situ. Los análisis del flujo ciclónico se realizaron en lugares donde podía medirse el flujo.

3.2 MÉTODO 2.1 DEL SCAQMD1 – VELOCIDAD E ÍNDICE DE FLUJO VOLUMÉTRICO

La velocidad del flujo de gases se determinó utilizando un tubo Pitot tipo "S" o estándar, un manómetro electrónico de poco flujo y una termocupla de tipo "K" con dispositivo de medición de temperatura digital. El tubo Pilot calibrado se conectó al manómetro electrónico del Multímetro de Datos del Aire (ADM) calibrado y se controló si había fugas. Se obtuvo la temperatura y el diferencial de presión en cada punto de cruce y se midió y registró la presión estática del conducto. El índice del flujo volumétrico seco se determina con los datos de velocidad del gas, la presión de la pila, el contenido de humedad del gas de la pila, el peso molecular del gas de la pila y la zona transversal del conducto.

3.3 MÉTODO 3.1 DEL SCAQMD - ANÁLISIS DE GASES PARA EL PESO MOLECULAR SECO Y EL EXCESO DE AIRE

Los gases de vapores de lixiviados y condensados fueron analizados por GC observar el contenido de O₂ y CO₂.

3.4 MÉTODO 4.1 DEL SCAQMD - DETERMINACIÓN DEL CONTENIDO DE HUMEDAD EN LOS GASES ACUMULADOS

La humedad se midió utilizando un bulbo húmedo/bulbo seco y se calculó con el cuadro psicométrico.

3.5 MÉTODO 307-91 DEL SCAQMD – ÁCIDO SULFÚRICO Y COMPUESTOS DE AZUFRE REDUCIDOS

Se tomaron muestras para determinar el ácido sulfúrico y compuestos de azufre especiados reducidos en recipientes Summa. Las muestras fueron analizadas por GC/SCD de AtmAA, Inc., en Calabasas, California, siguiendo el protocolo del Método 307-91 del SCAQMD. Las muestras se analizaron dentro de las 24 horas desde la toma de muestras.

3.6 MÉTODO TO-15 DE EPA – VOLÁTILES E HIDROCARBUROS TOMADOS EN EL RECIPIENTE SUMMA

Las muestras se tomaron en recipientes Summa revestidos con silicato de vidrio. Las muestras fueron analizadas por AtmAA Inc., ubicado en Calabasas, California, para analizar la presencia de orgánicos volátiles indicados en la lista de la Tabla 1 de la Regla 1150.1 del SCAQMD.

Procedimiento para la Toma de Muestras:

Se llenó un frasco Summa por lugar con gas de muestra utilizando un cilindro evacuado. La sonda de toma de muestras se conectó al frasco con tuberías de Teflón. Las muestras se tomaron en un punto fijo en el medio del tubo para toma de muestras.

4.0 RESULTADOS

Los resultados de las emisiones se presentan en las Tablas 4-1 y 4-2. Los esquemas del sitio se presentan en el Apéndice A.1.

TABLA 4-1
RESULTADOS DE H₂S Y DE AZUFRE TOTAL REDUCIDO EN
EL VERTEDERO DE CHIQUITA CANYON
TOMA DE MUESTRAS DE LIXIVIADOS Y DE VAPORES DE
CONDENSADOS DEL 20 DE MARZO DE 2025

Parámetro/Unidades	Parque de Tanques 6	Parque de Tanques 9A	Parque de Tanques 9B	Parque de Tanques 2	Parque de Tanques 7A	Parque de Tanques 7B	ZEECO	Estación de Antorchas Previas a H ₂ S	Estación de Antorchas Post H ₂ S
N ₂ , %	77.59	74.80	77.27	74.00	76.26	75.93	29.74	17.50	18.76
H ₂ O, %	1.24	0.68	0.76	0.61	0.86	0.86	4.36	2.68	2.64
Índice de Flujo, scfm	230	190	281	58	214	224	1,164	1,761	1,731
Temperatura, °F	81	78	76	77	79	79	165	90	90
O ₂ , %	21.82	21.17	21.88	20.66	21.52	21.29	6.75	4.04	3.64
CO ₂ , %	0.14	2.64	0.14	2.30	0.14	1.92	36.30	42.98	43.53
Compuestos de Azufre									
H ₂ S, ppm	<0.10	10.5	<0.10	<.10	<0.10	0.69	209	301	<0.40
Sulfuro de Carbonilo, ppm	<0.10	<0.10	<0.10	0.12	<0.10	<.10	0.71	1.07	0.98
Metilmercaptano, ppm	0.12	14.60	<0.10	1.46	<0.10	4.45	104	170	<0.40
Etilmercaptano, ppm	<0.10	0.22	<0.10	<.10	<0.10	<.10	1.64	2.43	<0.40
Sulfuro de Dimetilo, ppm	3.54	49.90	1.76	62.30	1.60	28.90	284	502	495
Disulfuro de carbono, ppm	<0.10	<0.10	<0.10	<.10	<0.10	<.10	<0.40	<0.40	0.45
isopropil mercaptano, ppm	<0.10	0.17	<0.10	<.10	<0.10	<.10	1.72	3.28	<0.40
t-butil mercaptano, ppm	<0.10	<0.10	<0.10	<.10	<0.10	<.10	<0.40	<0.40	<0.40
n-propil mercaptano, ppm	<0.10	<0.10	<0.10	0.85	<0.10	0.34	4.31	7.01	7.57
s-butil mercaptano, ppm	<0.10	0.76	<0.10	0.94	<0.10	0.29	4.98	9.24	9.27
i-butil mercaptano, ppm	<0.10	<0.10	<0.10	<.10	<0.10	<.10	<0.40	<0.40	<0.40
Disulfuro de dimetilo, ppm	<0.10	0.30	<0.10	1.33	<0.10	0.34	0.99	2.22	57.0
Tetrahidrotiofeno, ppm	<0.10	0.38	<0.10	0.93	<0.10	0.16	2.07	3.87	4.51
Compuestos S No Identificados, ppm	<0.10	2.18	<0.10	5.14	0.14	1.16	10.3	16.4	87.3
Compuestos de Azufre Total									
Azufre Total, ppm	3.66	79.24	1.76	74.38	1.73	36.64	624.2	1019.7	719.4

SCS Engineers – Vertedero de Chiquita Canyon
Toma de Muestras de Lixiviados y Vapores de Condensados en el 1° Trimestre de 2025

TABLA 4-2
RESULTADOS DE VESTIGIOS DE COMPUESTOS
ORGÁNICOS EN EL VERTEDERO DE CHIQUITA
CANYON
TOMA DE MUESTRAS DE LIXIVIADOS Y DE VAPORES DE
CONDENSADOS DEL 20 DE MARZO DE 2025

Ubicación de la Muestra: Tanques 2	Parque de Tanques 6 Parque de Tanques 7A		Parque de Tanques 9A Parque de Tanques 7B		Parque de Tanques 9B Zeeco		Parque de	Estación de Antorchas Previas a H ₂ S	Estación de Antorchas Post H ₂ S
Análisis No.:	1	1	1	1	1	1	1	1	1
Hora de Inicio:	815	855	855	900	935	935	935	1010	1010
Índice de Flujo, scfm:	230	190	281	58	214	224	1,164	1,761	1,731
Especie	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
Ácido sulfhídrico:	< 100	10,500	< 100	< 100	< 100	685	209,000	300,500	< 400
Benceno:	765	15,400	358	23,650	421	6,500	81,900	127,000	116,000
Cloruro de Bencilo:	< 30	< 30	< 30	< 45	< 45	< 45	< 5,000	< 5,000	< 5,000
Clorobenceno:	< 25	< 25	< 25	53.3	< 40	< 40	< 4,500	< 4,500	< 4,500
Diclorobencenos*:	< 40	< 40	< 40	214	< 60	< 60	< 6,500	< 6,500	< 6,500
1,1-dicloroetano:	< 30	< 30	< 30	< 45	< 45	< 45	< 5,000	< 5,000	< 5,000
1,2-dicloroetano:	< 30	< 30	< 30	51.6	< 45	< 45	< 5,000	< 5,000	< 5,000
1,1-dicloroetileno:	< 30	< 30	< 30	< 45	< 45	< 45	< 5,000	< 5,000	< 5,000
Diclorometano:	< 60	< 60	< 60	< 100	< 100	< 100	< 11,000	< 11,000	< 11,000
1,2-dibromoetano:	< 15	< 15	< 15	< 25	< 25	< 25	< 3,000	< 3,000	< 3,000
Percloroetileno:	< 15	< 15	< 15	< 25	< 25	< 25	< 3,000	< 3,000	< 3,000
Tetracloruro de Carbono:	< 35	< 35	< 35	< 60	< 60	< 60	< 6,000	< 6,000	< 6,000
Tolueno:	58.3	905	59.0	3,190	96.0	409	8,910	12,400	11,800
1,1,1-tricloroetano:	< 20	< 20	< 20	< 35	< 35	< 35	< 4,000	< 4,000	< 4,000
Tricloroeteno:	< 20	< 20	< 20	< 35	< 35	< 35	< 4,000	< 4,000	< 4,000
Cloroformo:	< 20	< 20	< 20	< 35	< 35	< 35	< 4,000	< 4,000	< 4,000
Cloruro de Vinilo:	< 20	< 20	< 20	< 35	< 35	< 35	< 4,000	< 4,000	< 4,000
M+P-xilenos:	36.1	309	49.5	1,535	71.6	156	4,580	5,360	5,440
O-xileno:	< 25	105	< 25	569	< 40	65.4	< 4,500	< 4,500	< 4,500

< - indica que la especie no fue detectada en la muestra por encima del límite de detección analítico para esta especie.

Los valores informados son el límite de detección para la especie y la concentración real es menor.

*Cantidad total que contiene meta, para y orto isómeros.

Debido a la alta concentración de ciertos productos químicos presentes en la muestra (como benceno, etc.), las muestras afectadas se diluyeron para análisis, dando como resultado los límites de detección elevados.

APPENDIX A TEST DATA

Appendix A.1

Sample Location Data

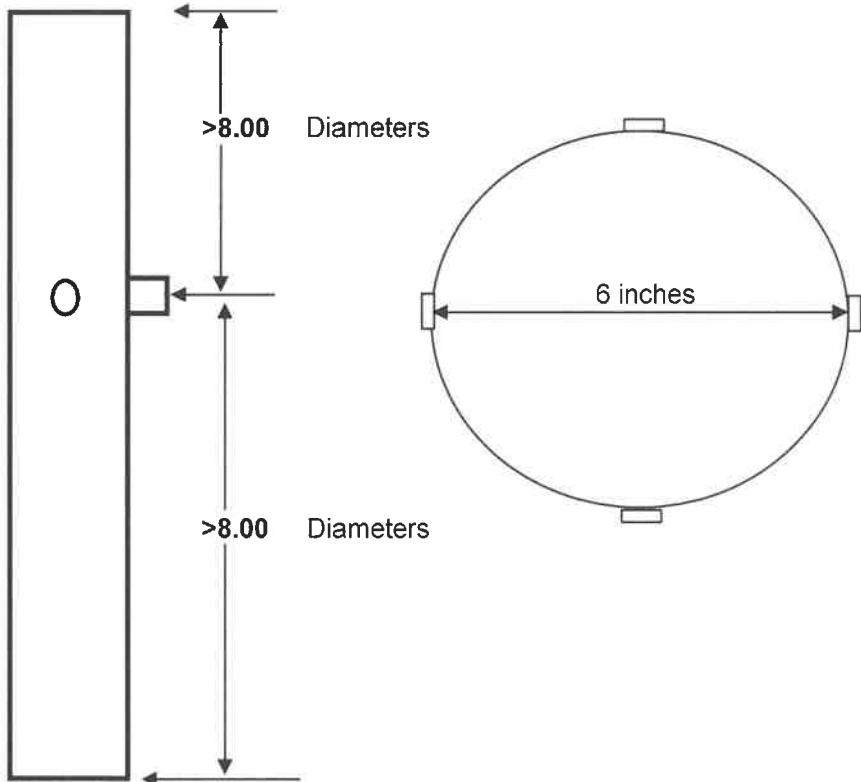
METHOD 1 DATA SHEET INLET SAMPLE LOCATION

Client: SCS Field Services

Date: 3/20/25

Location: Chiquita TF 6

Performed By: SJ, KT



Diameter (inches)	6.00			
Upstream (inches)	48.00	Sample Point	% of Diameter	Dist from Wall (inches)
Downstream (inches)	48.00	1	4.4	0.5
Coupling (in.)	0.00	2	14.6	0.9
Stack Area (ft ²)	0.196	3	29.6	1.8
		4	70.4	4.2
		5	85.4	5.1
		6	95.6	5.5

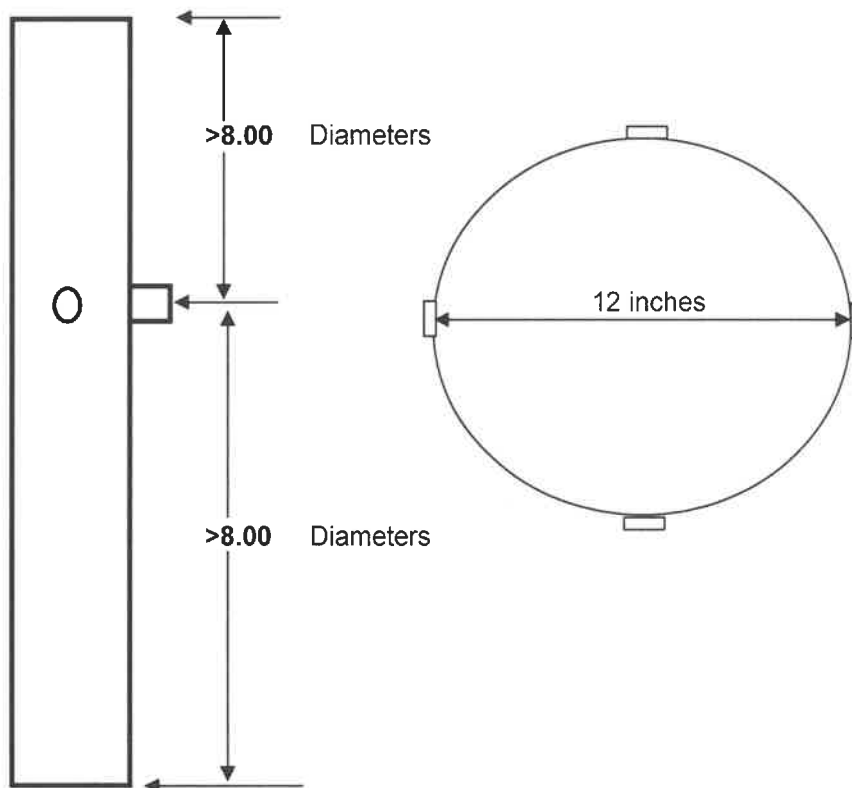
METHOD 1 DATA SHEET INLET SAMPLE LOCATION

Client: SCS Field Services

Date: 3/20/25

Location: Chiquita TF 9A

Performed By: SJ, KT



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

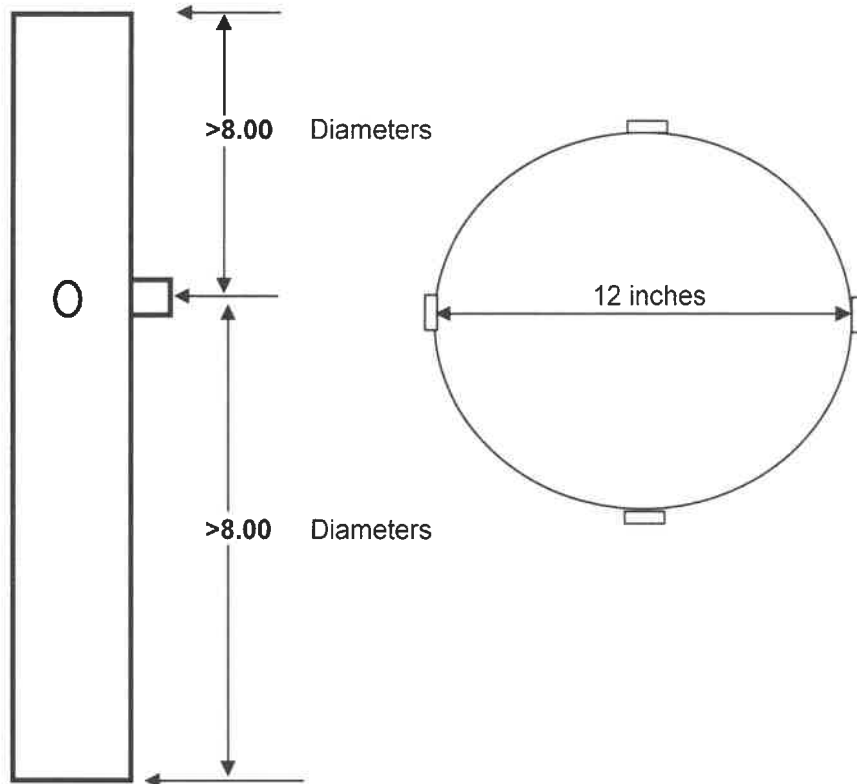


Client: SCS Field Services

Date: 3/20/25

Location: Chiquita TF 9B

Performed By: SJ, KT



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

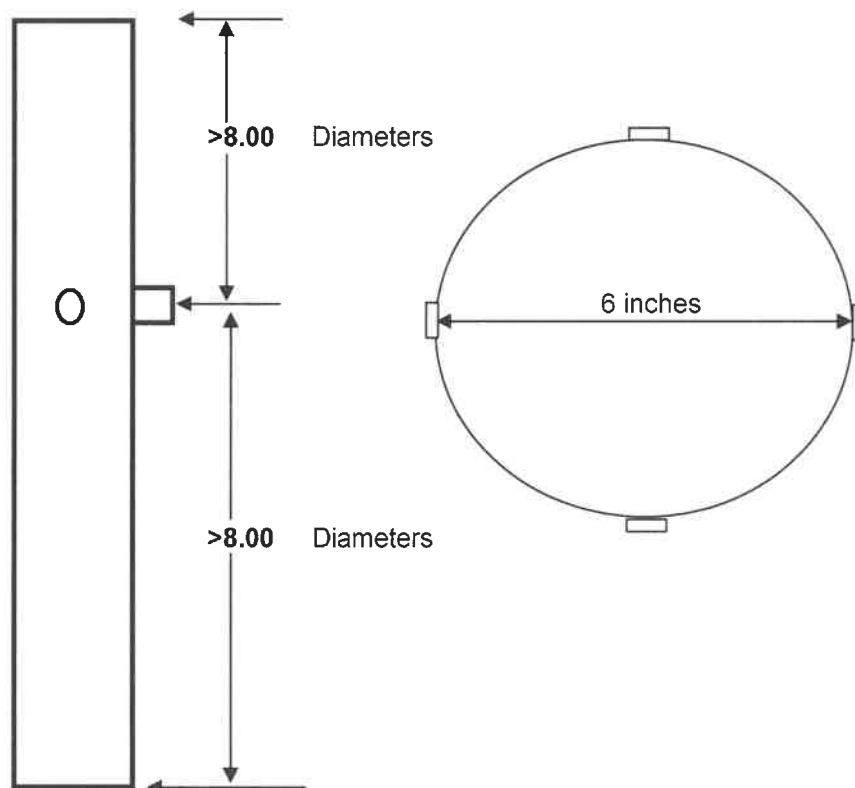
METHOD 1 DATA SHEET INLET SAMPLE LOCATION

Client: SCS Field Services

Date: 3/20/25

Location: Chiquita TF 2

Performed By: SJ, KT



Diameter (inches)	<u>6.00</u>
Upstream (inches)	<u>48.00</u>
Downstream (inches)	<u>48.00</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

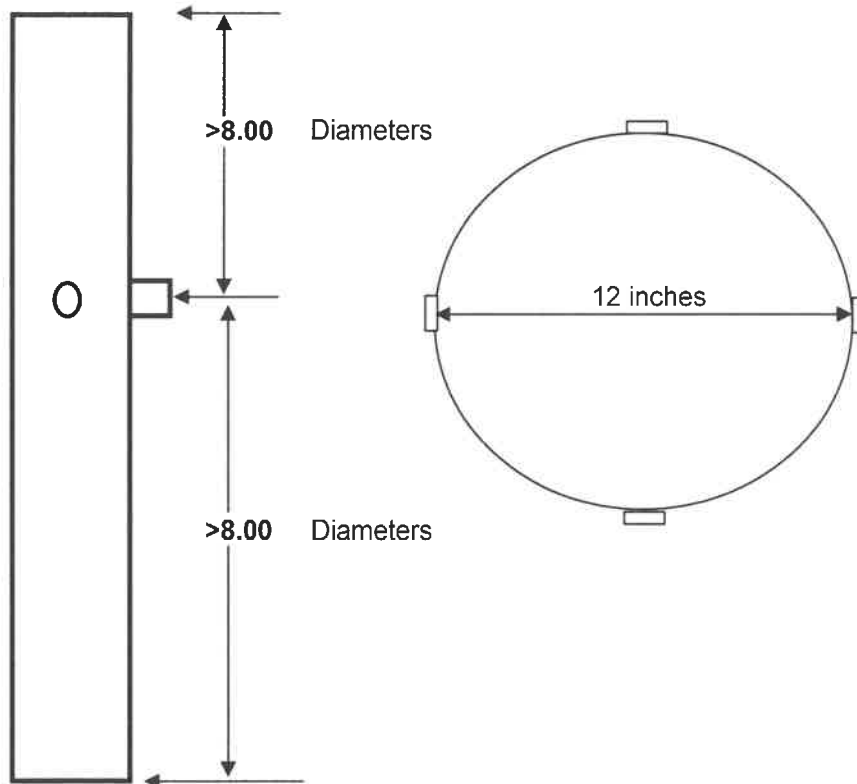


Client: SCS Field Services

Date: 3/20/25

Location: Chiquita TF 7A

Performed By: SJ, KT



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

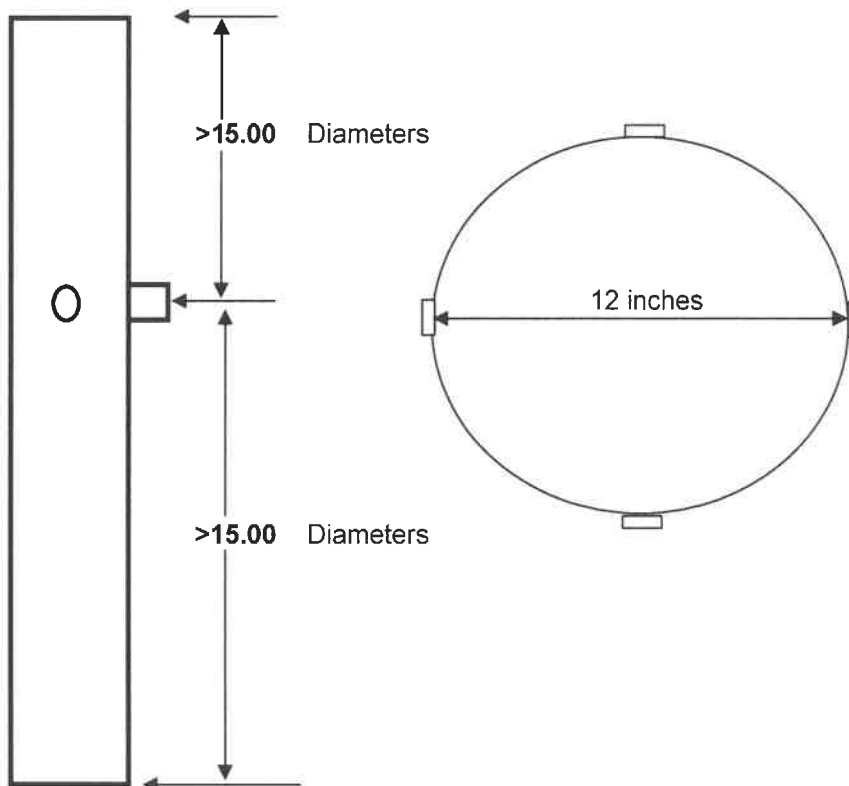
METHOD 1 DATA SHEET INLET SAMPLE LOCATION

Client: SCS Field Services

Date: 3/20/25

Location: Chiquita TF 7B

Performed By: SJ, KT



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

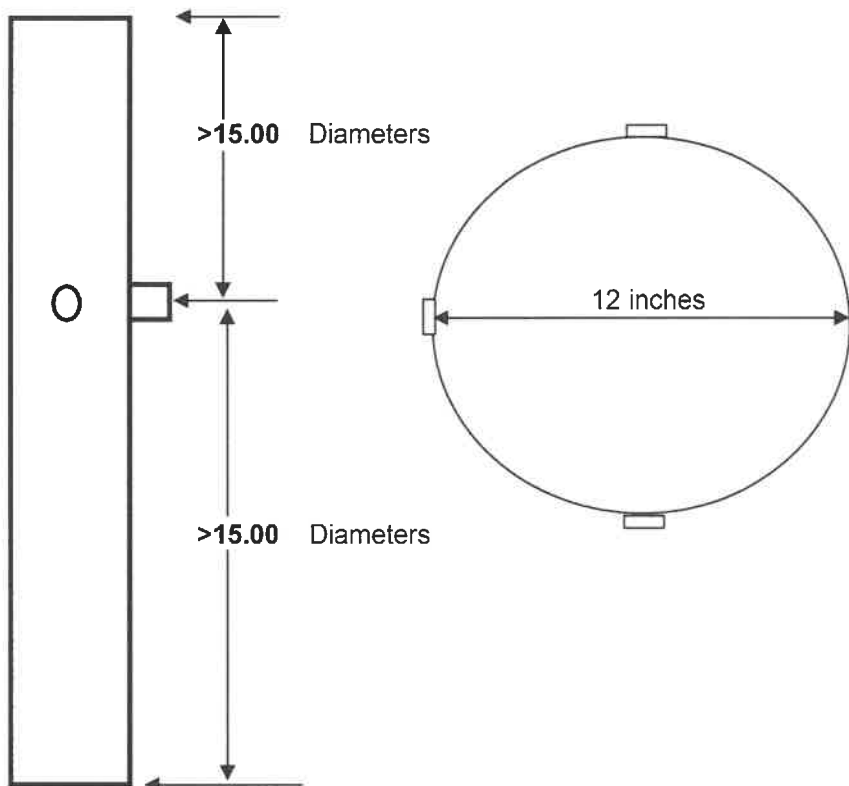


Client: SCS Field Services

Date: 3/20/25

Location: Chiquita Zeeco Flare Inlet

Performed By: SJ, KT



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

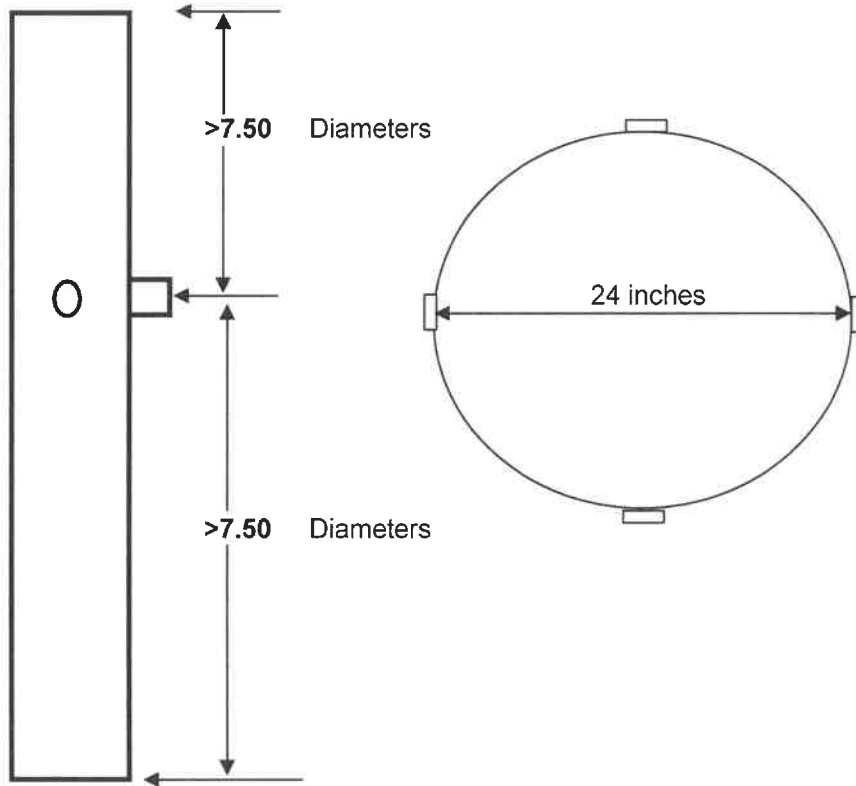


Client: SCS Field Services

Date: 3/20/25

Location: Flare Station Pre-H2S

Performed By: SJ, KT



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

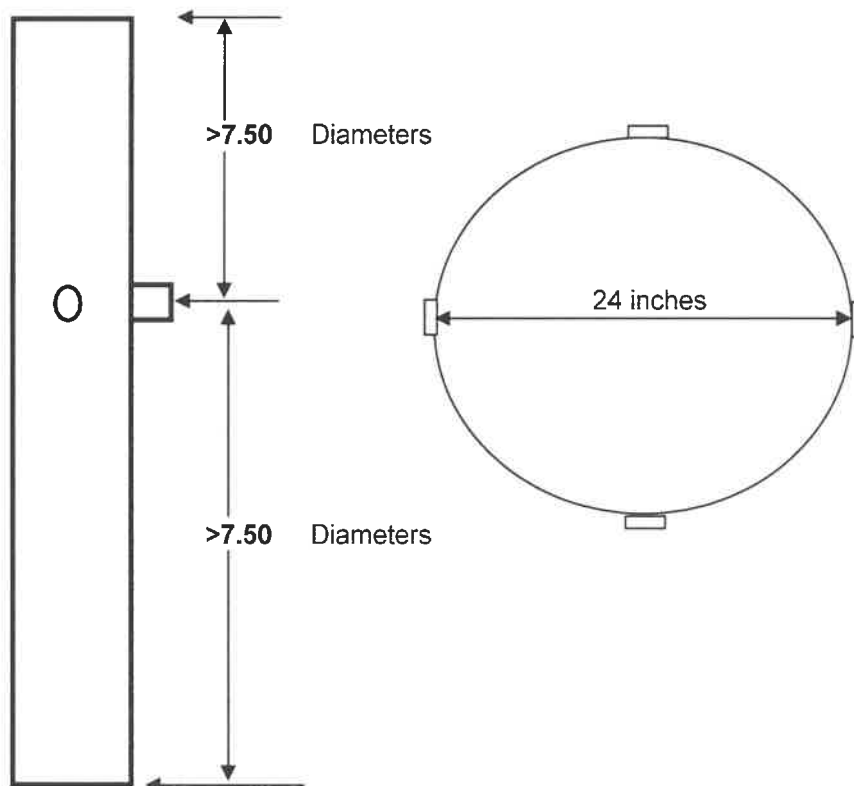


Client: SCS Field Services

Date: 3/20/25

Location: Flare Station Post-H2S

Performed By: SJ, KT



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

Appendix A.2

Velocity, Moisture and Flow Rate Data

MONTROSE AQS
Duct Moisture by Wet bulb/Dry bulb Measurements

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

TEST DATE: March 20, 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	29.03	-4.50	28.7011	81	61	0.3562	1.24	0.56307
Tank Farm 9A	29.03	-0.007	29.0315	78	55	0.198489	0.68	0.439506
Tank Farm 9B	29.03	-0.009	29.0313	76	55	0.219448	0.76	0.439506
Tank Farm 2	29.03	-0.006	29.0316	77	54	0.178052	0.61	0.419127
Tank Farm 7A	29.03	-0.005	29.0316	79	57	0.249873	0.86	0.480303
Tank Farm 7B	29.03	-0.005	29.0316	79	57	0.249873	0.86	0.480303
Zeeco	29.03	-2.800	28.8261	165	100	1.256142	4.36	1.91137
Flare Station Pre	29.03	-0.020	29.0305	90	76	0.778127	2.68	0.923801
Flare Station Post	29.03	5.200	29.4144	90	76	0.776138	2.64	0.923801

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 6				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.196 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 8:15 8:45				
Test Condition: Normal				
Barom. Pressure: 29.03				
Pstack: -4.50 iwg				
Pstack: 28.70 "Hg				
MW Wet: 28.66 lb/lb-mole				
MW Dry: 28.79 lb/lb-mole				
Moisture				
Moisture Content: 1.24 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 21.82 % From canister analysis				
CO ₂ : 0.14 % From canister analysis				
N ₂ : 77.59 % From canister analysis				
CH ₄ : 0.14 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.130	0.3606	81	20.96
2	0.150	0.3873	81	22.52
3	0.100	0.3162	81	18.39
4	0.090	0.3000	81	17.44
5	0.120	0.3464	81	20.14
6	0.110	0.3317	81	19.28
1	0.120	0.3464	81	20.14
2	0.160	0.4000	81	23.26
3	0.150	0.3873	81	22.52
4	0.170	0.4123	81	23.97
5	0.150	0.3873	81	22.52
6	0.160	0.4000	81	23.26
Average	0.1329	0.3646	81	21.20
Flow Rate: 250 wacfm				
Flow Rate: 230 scfm				
Flow Rate: 227 dscfm				

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 9A				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 8:55 9:25				
Test Condition: Normal				
Barom. Pressure: 29.03				
Pstack: -0.007 iwg				
Pstack: 29.03 "Hg				
MW Wet: 28.92 lb/lb-mole				
MW Dry: 29.00 lb/lb-mole				
Moisture				
Moisture Content: 0.68 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 21.17 % From canister analysis				
CO ₂ : 2.64 % From canister analysis				
N ₂ : 74.80 % From canister analysis				
CH ₄ : 0.75 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.005	0.0707	78	4.06
2	0.007	0.0837	78	4.80
3	0.006	0.0775	78	4.45
4	0.006	0.0775	78	4.45
5	0.008	0.0894	78	5.13
6	0.005	0.0707	78	4.06
1	0.005	0.0707	78	4.06
2	0.006	0.0775	78	4.45
3	0.005	0.0707	78	4.06
4	0.007	0.0837	78	4.80
5	0.003	0.0548	78	3.14
6	0.005	0.0707	78	4.06
Average	0.0056	0.0748	78	4.29
Flow Rate: 202 wacfm				
Flow Rate: 190 scfm				
Flow Rate: 188 dscfm				

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 9B				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 8:55 9:25				
Test Condition: Normal				
Barom. Pressure: 29.03				
P _{stack} : -0.009 iwg				
P _{stack} : 29.03 "Hg				
MW Wet: 28.64 lb/lb-mole				
MW Dry: 28.72 lb/lb-mole				
Moisture				
Moisture Content: 0.76 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 21.88 % From canister analysis				
CO ₂ : 0.14 % From canister analysis				
N ₂ : 77.27 % From canister analysis				
CH ₄ : 0.14 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.013	0.1140	76	6.56
2	0.013	0.1140	76	6.56
3	0.013	0.1140	76	6.56
4	0.010	0.1000	76	5.76
5	0.013	0.1140	76	6.56
6	0.012	0.1095	76	6.31
1	0.012	0.1095	76	6.31
2	0.012	0.1095	76	6.31
3	0.013	0.1140	76	6.56
4	0.012	0.1095	76	6.31
5	0.011	0.1049	76	6.04
6	0.012	0.1095	76	6.31
Average	0.0121	0.1102	76	6.34
Flow Rate: 299 wacfm				
Flow Rate: 281 scfm				
Flow Rate: 279 dscfm				

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 2				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.196 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 9:00 9:30				
Test Condition: Normal				
Barom. Pressure: 29.03				
P _{stack} : -0.006 iwg				
P _{stack} : 29.03 "Hg				
MW Wet: 28.30 lb/lb-mole				
MW Dry: 28.37 lb/lb-mole				
Moisture				
Moisture Content: 0.61 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 20.66 % From canister analysis				
CO ₂ : 2.30 % From canister analysis				
N ₂ : 74.00 % From canister analysis				
CH ₄ : 0.14 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.006	0.0775	77	4.49
2	0.007	0.0837	77	4.85
3	0.007	0.0837	77	4.85
4	0.009	0.0949	77	5.50
5	0.010	0.1000	77	5.80
6	0.013	0.1140	77	6.61
1	0.008	0.0894	77	5.18
2	0.009	0.0949	77	5.50
3	0.007	0.0837	77	4.85
4	0.005	0.0707	77	4.10
5	0.009	0.0949	77	5.50
6	0.010	0.1000	77	5.80
Average	0.0082	0.0906	77	5.25
Flow Rate: 62 wacfm				
Flow Rate: 58 scfm				
Flow Rate: 58 dscfm				

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 7A				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 9:35 10:05				
Test Condition: Normal				
Barom. Pressure: 29.03				
Pstack: -0.005 iwg				
Pstack: 29.03 "Hg				
MW Wet: 28.23 lb/lb-mole				
MW Dry: 28.32 lb/lb-mole				
Moisture				
Moisture Content: 0.86 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 21.52 % From canister analysis				
CO ₂ : 0.14 % From canister analysis				
N ₂ : 76.26 % From canister analysis				
CH ₄ : 0.14 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.005	0.0707	79	4.11
2	0.007	0.0837	79	4.86
3	0.006	0.0775	79	4.50
4	0.009	0.0949	79	5.52
5	0.008	0.0894	79	5.20
6	0.007	0.0837	79	4.86
1	0.006	0.0775	79	4.50
2	0.008	0.0894	79	5.20
3	0.006	0.0775	79	4.50
4	0.005	0.0707	79	4.11
5	0.009	0.0949	79	5.52
6	0.008	0.0894	79	5.20
Average	0.0069	0.0833	79	4.84
Flow Rate: 228 wacfm				
Flow Rate: 214 scfm				
Flow Rate: 212 dscfm				

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Tank Farm 7B				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 9:35 10:05				
Test Condition: Normal				
Barom. Pressure: 29.03				
Pstack: -0.005 iwg				
Pstack: 29.03 "Hg				
MW Wet: 28.85 lb/lb-mole				
MW Dry: 28.94 lb/lb-mole				
Moisture				
Moisture Content: 0.86 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 21.29 % From canister analysis				
CO ₂ : 1.92 % From canister analysis				
N ₂ : 75.93 % From canister analysis				
CH ₄ : 0.14 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.007	0.0837	79	4.81
2	0.009	0.0949	79	5.46
3	0.008	0.0894	79	5.14
4	0.009	0.0949	79	5.46
5	0.008	0.0894	79	5.14
6	0.007	0.0837	79	4.81
1	0.006	0.0775	79	4.46
2	0.009	0.0949	79	5.46
3	0.010	0.1000	79	5.75
4	0.011	0.1049	79	6.03
5	0.006	0.0775	79	4.46
6	0.005	0.0707	79	4.07
Average	0.0078	0.0884	79	5.09
Flow Rate: 240 wacfm				
Flow Rate: 224 scfm				
Flow Rate: 222 dscfm				

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Zeeco				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 0.785 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 9:35 10:05				
Test Condition: Normal				
Barom. Pressure: 29.03				
Pstack: -2.80 iwg				
Pstack: 28.83 "Hg				
MW Wet: 31.65 lb/lb-mole				
MW Dry: 32.27 lb/lb-mole				
Moisture				
Moisture Content: 4.36 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 6.75 % From canister analysis				
CO ₂ : 36.30 % From canister analysis				
N ₂ : 29.74 % From canister analysis				
CH ₄ : 36.3 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.270	0.5196	165	30.84
2	0.280	0.5292	165	31.40
3	0.300	0.5477	165	32.50
4	0.300	0.5477	165	32.50
5	0.280	0.5292	165	31.40
6	0.260	0.5099	165	30.26
1	0.280	0.5292	165	31.40
2	0.270	0.5196	165	30.84
3	0.280	0.5292	165	31.40
4	0.240	0.4899	165	29.07
5	0.250	0.5000	165	29.67
6	0.230	0.4796	165	28.46
Average	0.2696	0.5192	165	30.81
Flow Rate: 1,452 wacfm				
Flow Rate: 1,164 scfm				
Flow Rate: 1,113 dscfm				

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Flare Station Pre-H2S				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 3.142 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 10:10 10:40				
Test Condition: Normal				
Barom. Pressure: 29.03				
Pstack: -0.02 iwg				
Pstack: 29.03 "Hg				
MW Wet: 29.39 lb/lb-mole				
MW Dry: 29.71 lb/lb-mole				
Moisture				
Moisture Content: 2.68 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 4.04 % From canister analysis				
CO ₂ : 42.98 % From canister analysis				
N ₂ : 17.50 % From canister analysis				
CH ₄ : 28.78 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.026	0.1612	90	9.28
2	0.025	0.1581	90	9.10
3	0.028	0.1673	90	9.63
4	0.027	0.1643	90	9.46
5	0.029	0.1703	90	9.80
6	0.028	0.1673	90	9.63
7	0.031	0.1761	90	10.13
8	0.030	0.1732	90	9.97
1	0.033	0.1817	90	10.46
2	0.032	0.1789	90	10.30
3	0.033	0.1817	90	10.46
4	0.032	0.1789	90	10.30
5	0.037	0.1924	90	11.07
6	0.035	0.1871	90	10.77
7	0.038	0.1949	90	11.22
8	0.039	0.1975	90	11.37
Average	0.0313	0.1769	90	10.18
Flow Rate: 1,920 wacfm				
Flow Rate: 1,761 scfm				
Flow Rate: 1,714 dscfm				

**DATA AND WORKSHEET
RUN NUMBER 1**

TEST CONSTANTS				
Station: Chiquita Canyon Landfill				
Unit: Flare Station Post-H2S				
Performed By: 3/20/2025				
Cp: 0.84				
T _{ref} : 60 °F				
Stack Area: 3.142 ft ²				
TEST VARIABLES				
Start Date: 3/20/25				
Start/End Time: 10:10 10:40				
Test Condition: Normal				
Barom. Pressure: 29.03				
P _{stack} : 5.20 iwg				
P _{stack} : 29.41 "Hg				
MW Wet: 29.41 lb/lb-mole				
MW Dry: 29.72 lb/lb-mole				
Moisture				
Moisture Content: 2.64 % From WbDb				
Fuel Gas Composition Data				
O ₂ : 3.64 % From canister analysis				
CO ₂ : 43.53 % From canister analysis				
N ₂ : 18.76 % From canister analysis				
CH ₄ : 25.95 % From canister analysis				
METHOD 2.1 DATA				
Point	dP (in. H ₂ O)	sqrt(dP)	Temp °F	Vel. (fps)
1	0.031	0.1761	90	10.06
2	0.027	0.1643	90	9.39
3	0.025	0.1581	90	9.04
4	0.029	0.1703	90	9.73
5	0.028	0.1673	90	9.57
6	0.027	0.1643	90	9.39
7	0.029	0.1703	90	9.73
8	0.030	0.1732	90	9.90
1	0.025	0.1581	90	9.04
2	0.029	0.1703	90	9.73
3	0.031	0.1761	90	10.06
4	0.034	0.1844	90	10.54
5	0.033	0.1817	90	10.38
6	0.036	0.1897	90	10.85
7	0.034	0.1844	90	10.54
8	0.031	0.1761	90	10.06
Average	0.0299	0.1728	90	9.88
Flow Rate: 1,862 wacfm				
Flow Rate: 1,731 scfm				
Flow Rate: 1,685 dscfm				

CLIENT: W/C SCS FLUE GAS VELOCITY DATA AND WORKSHEET
 PERFORMED BY: SS, KT LOCATION/UNIT: CHUQUITA TANK Farm 6
 BAR. PRESSURE: 29.03 TEST DATE: 3/20/25
 DP INDICATOR ID: ADM 850 #19 TC READOUT ID: PTC 43
 DP INDICATOR TYPE: Electronic PITOT TUBE ID: W/B 58 DB
 ZERO: ☒ LEVEL: ☒ LEAK CHECK PRE- ☒ POST- ☒ Cp: 0.84
 BALANCE CHECK WEIGHT 1

Montrose Air Quality Services 33 of 120 Master Document Storage\Forms\Datasheets\Field Datasheets

CLIENT: W/C SCS FLUE GAS VELOCITY DATA AND WORKSHEET
 PERFORMED BY: ST/K LOCATION/UNIT: CHILQUITA TANK Farm 9A
 BAR. PRESSURE: 29.03 TEST DATE: 3/20/25
 DP INDICATOR ID: ADM 780#2 TC READOUT ID: PTC43
 DP INDICATOR TYPE: Acoustic PITOT TUBE ID: 145 TC ID: PB Cp: 0.84
 ZERO: ☒ LEVEL: ☒ LEAK CHECK PRE- ☒ POST- ☒ BALANCE CHECK WEIGHT 1

W002AS-053154-RT-7193 34 of 120 Master Document Storage\Forms\Datasheets\Field Datasheets

FLUE GAS VELOCITY DATA AND WORKSHEET

CLIENT: <u>W/C SAS</u>	LOCATION/UNIT: <u>CHIOVITA TANK FARM 9B</u>
PERFORMED BY: <u>SS/KT</u>	TEST DATE: <u>3/20/25</u>
BAR. PRESSURE: <u>29.03</u>	TC READOUT ID: <u>PTC43</u>
DP INDICATOR ID: <u>ADM350 #9</u>	TC ID: <u>DB</u>
DP INDICATOR TYPE: <u>Electronic</u>	PITOT TUBE ID: <u>145</u>
Cp: <u>0.84</u>	
ZERO: ☒	LEVEL: ☒
LEAK CHECK PRE- ☒	POST- ☒
BALANCE CHECK WEIGHT <u>1</u>	

Montrose Air Quality Services 35 of 120 Master Document Storage\Forms\Datasheets\Field Datasheets

CLIENT: W/C SCS LOCATION/UNIT: CHIHUITA TANK FARM 2
 PERFORMED BY: SS/KG TEST DATE: 3/20/25
 BAR. PRESSURE: 29.03 TC READOUT ID: PTC 43
 DP INDICATOR ID: ADM 850 #2 TC ID: DB
 DP INDICATOR TYPE: ELECTRONIC PITOT TUBE ID: 145 Cp: 0.84
 ZERO: ☒ LEVEL: ☒ LEAK CHECK PRE- ☒ POST- ☒ BALANCE CHECK WEIGHT 1

W002AS-053154-RT-7193 36 of 120 Master Document Storage\Forms\Datasheets\Field Datasheets

CLIENT: W/C SCS LOCATION/UNIT: CH. QUITA TANK FARM 7A
 PERFORMED BY: SS/KT TEST DATE: 3/20/25
 BAR. PRESSURE: 29.03 TC READOUT ID: PTL 43
 DP INDICATOR ID: ADM 850 H91 TC ID: DB
 DP INDICATOR TYPE: ELECTRONIC PITOT TUBE ID: 145 Cp: 0.84
 ZERO: ☒ LEVEL: ☒ LEAK CHECK PRE- ☒ POST- ☒ BALANCE CHECK WEIGHT 1

W002AS-053154-RT-7193 37 of 120 Master Document Storage\Forms\Datasheets\Field Datasheets

FLUE GAS VELOCITY DATA AND WORKSHEET

CLIENT: <u>W/C SCS</u>	LOCATION/UNIT: <u>CHICUITA TANK FARM 7B</u>
PERFORMED BY: <u>SS/KT</u>	TEST DATE: <u>3/20/25</u>
BAR. PRESSURE: <u>29.03</u>	TC READOUT ID: <u>PTC 43</u>
DP INDICATOR ID: <u>ADM 35049</u>	TC ID: <u>DB</u>
DP INDICATOR TYPE: <u>ELECTRONIC</u>	PITOT TUBE ID: <u>176</u>
Cp: <u>0.84</u>	
ZERO: ☒	LEVEL: ☒
LEAK CHECK PRE- ☒	POST- ☒
BALANCE CHECK WEIGHT ☒	

W002AG-053154-RT-7193 38 of 120 Master Document Storage\Forms\Datasheets\Field Datasheets

FLUE GAS VELOCITY DATA AND WORKSHEET

CLIENT: W/C SCS LOCATION/UNIT: CHLOUITA DEECO

PERFORMED BY: SP/K TEST DATE: 3/22/25

BAR. PRESSURE: 29.03 TC READOUT ID: PTL43

DP INDICATOR ID: CHLOUITA ADMISS TC ID: DB

DP INDICATOR TYPE: CHLOUITA PITOT TUBE ID: 115 Cp: 0.84

ZERO: ☒ LEVEL: ☒ LEAK CHECK PRE- ☒ POST- ☒ BALANCE CHECK WEIGHT 1

W/002AS-053154-RT6 39 of 120 Master Document Storage\Forms\Datasheets\Field Datasheets

CLIENT: W/C SCS

LOCATION/UNIT: CHIVITA PLANE STATION PRE #75

PERFORMED BY: SD/KT

TEST DATE: 3/20/25

BAR. PRESSURE: 29.02

TC READOUT ID: PFL43

DP INDICATOR ID: ADM 850 #9

TC ID:

DP INDICATOR TYPE: E1 E2 N C

PITOT TUBE ID: 176

Cp: 0.84

ZERO: ☒ LEVEL: ☒ LEAK CHECK PRE: ☒ POST: ☒

BALANCE CHECK WEIGHT

W002AS-053154-RT-7193
Date of last revision 12/8/2016

FLUE GAS VELOCITY DATA AND WORKSHEET

CLIENT: <u>W/C SCS</u>	LOCATION/UNIT: <u>CHIVITA FLARE STATION POST H2S</u>
PERFORMED BY: <u>ST/KT</u>	TEST DATE: <u>3/20/25</u>
BAR. PRESSURE: <u>29.03</u>	TC READOUT ID: <u>146</u>
DP INDICATOR ID: <u>ADM 850 #9</u>	TC ID: <u>146</u>
DP INDICATOR TYPE: <u>ELECTRONIC</u>	PITOT TUBE ID: <u>146</u>
Cp: <u>0.87</u>	
ZERO: ☒	LEVEL: ☒
LEAK CHECK PRE- ☒	POST- ☒
BALANCE CHECK WEIGHT	<u>1</u>

Run #:	<u>1</u>	Ps:	<u>9.20</u>	Run #:	<u> </u>	Ps:	<u> </u>	Run #:	<u> </u>	Ps:	<u> </u>
Start:	<u>1010</u>	Stop:	<u>1040</u>	Start:	<u> </u>	Stop:	<u> </u>	Start:	<u> </u>	Stop:	<u> </u>

W/002AS-053154-RTe7193 41 of 120 Master Document Storage\Forms\Datasheets\Field Datasheets

Appendix A.3

Organics and Sulfur Field and Laboratory Data

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CHILQUITA Date: 3/20/25
 Unit/Location: TANK FARM 10 Performed By: ST/KT
 Barometric Pressure 29.03 Ambient Temperature 78°

SUMMA CANISTER DATA

Test No.		1	
Canister ID		51383	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0750	30
Sample Collection	Start	0815	30
	10	0825	21
	20	0835	12
End →	30	0845	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1050	5
Post-Test Leak Check	Stop	1100	5

FLOWRATE DATA

Diameter: 6.0"
 Upstream: 48"
 Downstream: 48"
 Flow Rate: —
 Wet bulb: 61
 Dry bulb: 81

TEDLAR BAG DATA

Start: N/A
 Stop: N/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CHIOJITA Date: 3/20/25
 Unit/Location: TANK FARM 9A Performed By: ST/KT
 Barometric Pressure 29.03 Ambient Temperature 78°

SUMMA CANISTER DATA

Test No.		1	
Canister ID		49442	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0750	30
Sample Collection	Start	0855	30
	10	0905	22
	20	0915	13
→ end	30	0925	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1050	5
Post-Test Leak Check	Stop	1100	5

FLOWRATE DATA

Diameter: 12"
 Upstream: 96"
 Downstream: 96"
 Flow Rate: —
 Wet bulb: 78.55
 Dry bulb: 78

TEDLAR BAG DATA

Start: —
 Stop: N/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CHICQUITA Date: 3/20/25
 Unit/Location: TANK Farm 9B Performed By: ST/K
 Barometric Pressure 29.03 Ambient Temperature 70°

SUMMA CANISTER DATA

Test No.		1	
Canister ID		48469	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0750	30
Sample Collection	Start	0855	30
	10	0905	21
	20	0915	13
end →	30	0925	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1050	5
Post-Test Leak Check	Stop	1100	5

FLOWRATE DATA

Diameter: 12"
 Upstream: 96"
 Downstream: 96"
 Flow Rate: —
 Wet bulb: 55
 Dry bulb: 76

TEDLAR BAG DATA

Start: —
 Stop: N/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CHIRQUITA Date: 3/20/25
 Unit/Location: TANK FARM 2 Performed By: ST/KT
 Barometric Pressure 29.03 Ambient Temperature 78°

SUMMA CANISTER DATA

Test No.		1	
Canister ID		46911	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0750	30
Sample Collection	Start	0700	30
	10	0910	23
	20	0920	14
end →	30	0930	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1050 1040	9
Post-Test Leak Check	Stop	1100 1050	5

60
3/20/25

FLOWRATE DATA

Diameter: 6"
 Upstream: 48"
 Downstream: 48"
 Flow Rate: —
 Wet bulb: 54
 Dry bulb: 77

TEDLAR BAG DATA

Start: N/A
 Stop: N/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CH. QUINN Date: 3/20/25
 Unit/Location: TANK FARM 7A Performed By: ST/KT
 Barometric Pressure 29.03 Ambient Temperature 28°

SUMMA CANISTER DATA

Test No.			
Canister ID		<u>4728</u>	
		Time	Vacuum
Pre-Test Leak Check	Start	<u>0740</u>	<u>30</u>
Pre-Test Leak Check	Stop	<u>0750</u>	<u>30</u>
Sample Collection	Start	<u>0935</u>	<u>30</u>
	<u>10</u>	<u>0945</u>	<u>22</u>
	<u>20</u>	<u>0955</u>	<u>14</u>
<u>ends</u>	<u>30</u>	<u>1005</u>	<u>5</u>
Sample Collection	Stop		
Post -Test Leak Check	Start	<u>1050</u>	<u>5</u>
Post-Test Leak Check	Stop	<u>1100</u>	<u>5</u>

FLOWRATE DATA

Diameter: 12"
 Upstream: 75"
 Downstream: 96"
 Flow Rate: —
 Wet bulb: 57
 Dry bulb: 79

TEDLAR BAG DATA

Start:
 Stop: N/A
 Bag ID:

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CHICUITA Date: 3/20/25
 Unit/Location: TANK FARM 1B Performed By: SS/KT
 Barometric Pressure 29.03 Ambient Temperature 78°

SUMMA CANISTER DATA

Test No.		1	
Canister ID		48864	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0750	30
Sample Collection	Start	0935	30
	10	0945	21
	20	0955	13
	end → 30	1005	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1050	5
Post-Test Leak Check	Stop	1100	5

FLOWRATE DATA

Diameter: 12"
 Upstream: 180'
 Downstream: 180'
 Flow Rate: —
 Wet bulb: 57
 Dry bulb: 79

TEDLAR BAG DATA

Start: —
 Stop: N/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CHIRQUITA Date: 3/20/25
 Unit/Location: ZEELW Performed By: ST/KT
 Barometric Pressure 29.03 Ambient Temperature 78°

SUMMA CANISTER DATA

Test No.		1	
Canister ID		51125	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0750	30
Sample Collection	Start	0935	30
	10	0945	22
	20	0955	14
end →	30	1005	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1050	5
Post-Test Leak Check	Stop	1100	5

FLOWRATE DATA

Diameter: 12"
 Upstream: 180"
 Downstream: 180"
 Flow Rate: —
 Wet bulb: 100
 Dry bulb: 165

TEDLAR BAG DATA

Start: —
 Stop: N/A
 Bag ID: —

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CH. QUITA Date: 3/20/25
 Unit/Location: EVANE STATION PRE H2P Performed By: ST/KT
 Barometric Pressure 29.03 Ambient Temperature 78°

SUMMA CANISTER DATA

Test No.		1	
Canister ID		49439	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0750	30
Sample Collection	Start	1010	30
	10	1020	23
	20	1030	13
END →	30	1040	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1050	5
Post-Test Leak Check	Stop	1100	5

FLOWRATE DATA

Diameter: 24"
 Upstream: 180"
 Downstream: 180"
 Flow Rate: —
 Wet bulb: 76
 Dry bulb: 90

TEDLAR BAG DATA

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

LEACHATE TANK HEADSPACE SAMPLING DATA

Client/Facility: CHIRQUITA Date: 3/20/25
 Unit/Location: FLARE STATION Post #25 Performed By: ST/KT
 Barometric Pressure 29.03 Ambient Temperature 78°

SUMMA CANISTER DATA

Test No.		1	
Canister ID		46611	
		Time	Vacuum
Pre-Test Leak Check	Start	0740	30
Pre-Test Leak Check	Stop	0750	30
Sample Collection	Start	1010	30
	10	1020	23
	20	1030	13
end	30	1040	5
Sample Collection	Stop		
Post -Test Leak Check	Start	1050	5
Post-Test Leak Check	Stop	1100	5

FLOWRATE DATA

Diameter: 24"
 Upstream: 180"
 Downstream: 180"
 Flow Rate: —
 Wet bulb: 76
 Dry bulb: 90

TEDLAR BAG DATA

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



AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

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

Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 21, 2025

ANALYSIS DESCRIPTION

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

AtmAA Lab No.:	20795-31	20795-32	20795-33
Sample I.D.:	Tank Farm 6	Tank Farm 9A	Tank Farm 9B

Components	(Concentration in %,v)		
Nitrogen	77.59	74.80	77.27
Oxygen	21.82	21.17	21.88
Methane	<0.14	0.75	<0.14
Carbon dioxide	<0.14	2.64	<0.14

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: March 20, 2025
Date Analyzed: March 21, 2025

Components	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
(Concentration in %,v)					
Nitrogen	Tank Farm 6	77.98	77.19	77.59	1.0
Oxygen	Tank Farm 6	21.86	21.77	21.82	0.41
Methane	Tank Farm 6	<0.14	<0.14	---	---
Carbon dioxide	Tank Farm 6	<0.14	<0.14	---	---

Three Silco canister samples, laboratory numbers 20795-(31-33), 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 three Silco canister samples is 0.72%.





AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

Speciated Hydrocarbons Analysis in Silco Canister Samples

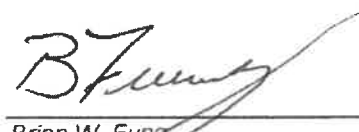
Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 21, 2025
Laboratory Temp: 73.5 °F
Barometric Pressure: 29.95 inHg

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:	20795-31 Tank Farm 6	20795-32 Tank Farm 9A	20795-33 Tank Farm 9B
<u>Component</u>	<i>(Concentration in ppmv, component)</i>		
Methane	300	7500	26.4
Ethene	<0.30	6.48	<0.20
Acetylene	<0.30	<0.30	<0.20
Ethane	<0.30	7.12	<0.20
<u>Non-methane hydrocarbons analysis by carbon number grouping</u>			
C3	<0.10	22.3	<0.10
C4	70.0	75.5	31.9
C5	60.0	71.3	29.5
C6	42.0	96.3	21.7
C7	7.57	36.0	5.18
C8	7.29	29.4	4.69
C9	4.90	29.0	8.17
C10	9.27	26.5	23.1
C11	1.28	5.35	7.17
C12	0.65	3.12	6.87
C13	0.24	2.03	9.36
C14	<0.06	0.51	2.16
	<i>(Concentration in ppmvC)</i>		
TNMHC	1105	2473	1096

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: March 20, 2025
Date Analyzed: March 21, 2025

Component	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Conc. in ppmv, component)			
Methane	Tank Farm 6	254	254	254	0.08
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	70.0	69.9	70.0	0.09
C5	Tank Farm 6	60.0	60.1	60.0	0.17
C6	Tank Farm 6	42.0	41.9	42.0	0.26
C7	Tank Farm 6	7.70	7.45	7.57	3.3
C8	Tank Farm 6	7.44	7.13	7.29	4.2
C9	Tank Farm 6	4.86	4.95	4.90	1.7
C10	Tank Farm 6	9.17	9.37	9.27	2.1
C11	Tank Farm 6	1.08	1.48	1.28	31
C12	Tank Farm 6	0.61	0.69	0.65	12
C13	Tank Farm 6	0.24	0.25	0.24	4.5
C14	Tank Farm 6	<0.06	<0.06	<0.06	---
(Concentration in ppmvC)					
TNMHC	Tank Farm 6	1103	1107	1105	0.32

Three Silco canister samples, laboratory numbers 20795-(31-33), 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 12 repeat measurements from three Silco canister samples is 5.0%.





AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

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

Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 20, 2025

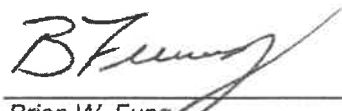
ANALYSIS DESCRIPTION

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

AtmAA Lab No.:	20795-31	20795-32	20795-33
Sample I.D.:	Tank Farm 6	Tank Farm 9A	Tank Farm 9B
Components	(Concentration in ppmv)		
Hydrogen sulfide	<0.10	10.5	<0.10
Carbonyl sulfide	<0.10	<0.10	<0.10
Methyl mercaptan	0.12	14.6	<0.10
Ethyl mercaptan	<0.10	0.22	<0.10
Dimethyl sulfide	3.54	49.9	1.76
Carbon disulfide	<0.10	<0.10	<0.10
i-Propyl mercaptan	<0.10	0.17	<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	0.76	<0.10
i-Butyl mercaptan	<0.10	<0.10	<0.10
Dimethyl disulfide	<0.10	0.30	<0.10
Tetrahydrothiophene	<0.10	0.38	<0.10
Unidentified sulfurs	<0.10	2.18	<0.10

(Concentration in ppmv, as H₂S)

Total Sulfur	3.66	79.24	1.76
--------------	------	-------	------


Brian W. Fung
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Chiquita Landfill

Date Received: March 20, 2025

Date Analyzed: March 20, 2025

Components	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Concentration in ppmv)			
Hydrogen sulfide	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	10.6	10.4	10.5	1.9
	Tank Farm 9B	<0.10	<0.10	---	---
Carbonyl sulfide	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	<0.10	<0.10	---	---
	Tank Farm 9B	<0.10	<0.10	---	---
Methyl mercaptan	Tank Farm 6	0.12	0.12	0.12	0.00
	Tank Farm 9A	14.6	14.5	14.6	0.69
	Tank Farm 9B	<0.10	<0.10	---	---
Ethyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	0.22	0.22	0.22	0.00
	Tank Farm 9B	<0.10	<0.10	---	---
Dimethyl sulfide	Tank Farm 6	3.55	3.52	3.54	0.85
	Tank Farm 9A	50.3	49.5	49.9	1.6
	Tank Farm 9B	1.77	1.74	1.76	1.7
Carbon disulfide	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	<0.10	<0.10	---	---
	Tank Farm 9B	<0.10	<0.10	---	---
i-Propyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	0.17	0.16	0.17	6.1
	Tank Farm 9B	<0.10	<0.10	---	---
t-Butyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	<0.10	<0.10	---	---
	Tank Farm 9B	<0.10	<0.10	---	---
n-Propyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	<0.10	<0.10	---	---
	Tank Farm 9B	<0.10	<0.10	---	---
s-Butyl mercaptan	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	0.76	0.75	0.76	1.3
	Tank Farm 9B	<0.10	<0.10	---	---



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	---	---
	Tank Farm 9A	<0.10	<0.10	---	---
	Tank Farm 9B	<0.10	<0.10	---	---
Dimethyl disulfide	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	0.31	0.29	0.30	6.7
	Tank Farm 9B	<0.10	<0.10	---	---
Tetrahydrothiophene	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	0.38	0.37	0.38	2.7
	Tank Farm 9B	<0.10	<0.10	---	---
Unidentified sulfurs	Tank Farm 6	<0.10	<0.10	---	---
	Tank Farm 9A	2.19	2.16	2.18	1.4
	Tank Farm 9B	<0.10	<0.10	---	---

Three Silco canister samples, laboratory numbers 20795-(31-33), 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 12 repeat measurements from three Silco canister samples is 2.1%.



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

Report Date: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-31
 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).

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	0.00	0.00	Carbon	0.05
Carbon dioxide	0.00	0.00	Hydrogen	0.01
Nitrogen	78.04	75.45	Oxygen	23.21
Oxygen	21.01	23.21	Nitrogen	75.46
Argon	0.93	1.28	Argon	1.28
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.020	0.06		
Specific Volume		13.091		
BTU/ft ³ (Dry @60F, 14.696 psia)		0.8850	(HHV)	0.8189 (LHV)
BTU/ft ³ (Water Saturated @ 0.25636 psia)		0.8695	(HHV)	0.8046 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		11.59	(HHV)	10.72 (LHV)
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		0.8907		
Specific Gravity		0.9871		

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: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-32
 Sample ID: Tank Farm 9A

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).

Component	Mole %	Wt %	C,H,O,N,S, Wt.%	
Methane	0.75	0.41	Carbon	1.50
Carbon dioxide	2.66	3.99	Hydrogen	0.12
Nitrogen	75.25	71.95	Oxygen	25.19
Oxygen	20.39	22.29	Nitrogen	71.95
Argon	0.90	1.24	Argon	1.24
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.041	0.12		
Specific Volume		12.948		
BTU/ft3 (Dry @60F, 14.696 psia)		9.596	(HHV)	8.691 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		9.429	(HHV)	8.540 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		124.25	(HHV)	112.53 (LHV)
F _d (factor)		9895		
F _w (factor)		11805		
F _c (factor)		3874		
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		9.6014		
Specific Gravity		0.9989		

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: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-33
 Sample ID: Tank Farm 9B

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).

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	0.00	0.00	Carbon	0.05
Carbon dioxide	0.00	0.00	Hydrogen	0.01
Nitrogen	77.92	75.31	Oxygen	23.34
Oxygen	21.13	23.34	Nitrogen	75.31
Argon	0.94	1.29	Argon	1.29
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.015	0.05		
Specific Volume		13.088		
BTU/ft3 (Dry @60F, 14.696 psia)		0.8666	(HHV)	0.8034 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		0.8515	(HHV)	0.7894 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		11.34	(HHV)	10.52 (LHV)
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		0.8715		
Specific Gravity		0.9888		

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





AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

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

Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 21, 2025

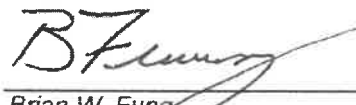
ANALYSIS DESCRIPTION

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

AtmAA Lab No.:	20795-34	20795-35	20795-36
Sample I.D.:	Tank Farm 2	Tank Farm 7A	Tank Farm 7B

Components	(Concentration in %,v)		
Nitrogen	74.00	76.26	75.93
Oxygen	20.66	21.52	21.29
Methane	<0.14	<0.14	<0.14
Carbon dioxide	2.30	<0.14	1.92

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



AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

Speciated Hydrocarbons Analysis in Silco Canister Samples

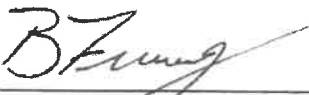
Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 21, 2025
Laboratory Temp: 73.5 °F
Barometric Pressure: 29.95 inHg

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.:	20795-34	20795-35	20795-36
Sample ID:	Tank Farm 2	Tank Farm 7A	Tank Farm 7B
<u>Component</u>	<u>(Concentration in ppmv, component)</u>		
Methane	1015	77.7	695
Ethene	<0.30	<0.30	2.90
Acetylene	<0.30	<0.30	<0.20
Ethane	<0.30	<0.30	2.18
<u>Non-methane hydrocarbons analysis by carbon number grouping</u>			
C3	17.1	<0.10	6.16
C4	167	66.2	91.7
C5	277	99.3	203
C6	301	60.9	132
C7	129	9.66	242
C8	89.1	6.49	18.8
C9	116	8.12	15.0
C10	149	34.4	38.7
C11	24.1	9.50	15.5
C12	14.3	8.33	5.88
C13	5.38	5.18	9.01
C14	<0.06	1.29	0.87
<u>(Concentration in ppmvC)</u>			
TNMHC	8567	1953	4934

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


Brian W. Fung
Laboratory Director



AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

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

Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 20, 2025

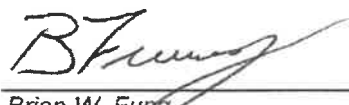
ANALYSIS DESCRIPTION

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

AtmAA Lab No.:	20795-34	20795-35	20795-36
Sample I.D.:	Tank Farm 2	Tank Farm 7A	Tank Farm 7B
Components	(Concentration in ppmv)		
Hydrogen sulfide	<0.10	<0.10	0.69
Carbonyl sulfide	0.12	<0.10	<0.10
Methyl mercaptan	1.46	<0.10	4.45
Ethyl mercaptan	<0.10	<0.10	<0.10
Dimethyl sulfide	62.3	1.60	28.9
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	0.85	<0.10	0.34
s-Butyl mercaptan	0.94	<0.10	0.29
i-Butyl mercaptan	<0.10	<0.10	<0.10
Dimethyl disulfide	1.33	<0.10	0.34
Tetrahydrothiophene	0.93	<0.10	0.16
Unidentified sulfurs	5.14	0.14	1.16

(Concentration in ppmv, as H₂S)

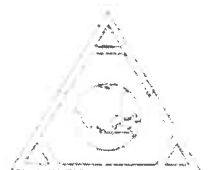
Total Sulfur	74.38	1.73	36.64
--------------	-------	------	-------


Brian W. Fung
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Chiquita Landfill
Date Received: March 20, 2025
Date Analyzed: March 20, 2025

Components	Sample ID	Repeat Analysis		Mean	%
		Run #1	Run #2	Conc.	RPD
(Concentration in ppmv)					
Hydrogen sulfide	Tank Farm 2	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.69	0.68	0.69	1.5
Carbonyl sulfide	Tank Farm 2	0.11	0.12	0.12	8.7
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
Methyl mercaptan	Tank Farm 2	1.43	1.49	1.46	4.1
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	4.49	4.41	4.45	1.8
Ethyl mercaptan	Tank Farm 2	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
Dimethyl sulfide	Tank Farm 2	61.8	62.8	62.3	1.61
	Tank Farm 7A	1.60	1.59	1.60	0.63
	Tank Farm 7B	28.9	28.9	28.9	0.17
Carbon disulfide	Tank Farm 2	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
i-Propyl mercaptan	Tank Farm 2	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
t-Butyl mercaptan	Tank Farm 2	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
n-Propyl mercaptan	Tank Farm 2	0.85	0.85	0.85	0.00
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.34	0.34	0.34	0.00
s-Butyl mercaptan	Tank Farm 2	0.94	0.94	0.94	0.00
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.29	0.29	0.29	0.00



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 2	<0.10	<0.10	---	---
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	<0.10	<0.10	---	---
Dimethyl disulfide	Tank Farm 2	1.32	1.33	1.33	0.75
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.34	0.34	0.34	0.00
Tetrahydrothiophene	Tank Farm 2	0.92	0.94	0.93	2.2
	Tank Farm 7A	<0.10	<0.10	---	---
	Tank Farm 7B	0.17	0.15	0.16	13
Unidentified sulfurs	Tank Farm 2	5.10	5.17	5.14	1.4
	Tank Farm 7A	0.14	0.13	0.14	7.4
	Tank Farm 7B	1.16	1.16	1.16	0.00

Three Silco canister samples, laboratory numbers 20795-(34-36), 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 18 repeat measurements from three Silco canister samples is 2.4%.



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

Report Date: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-34
 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).

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	0.00	0.00	Carbon	1.33
Carbon dioxide	2.37	3.55	Hydrogen	0.07
Nitrogen	76.22	72.62	Oxygen	24.75
Oxygen	20.38	22.18	Nitrogen	72.62
Argon	0.90	1.23	Argon	1.23
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.133	0.43		
Specific Volume		12.900		
BTU/ft3 (Dry @60F, 14.696 psia)		6.949	(HHV)	6.439 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		6.828	(HHV)	6.326 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		89.64	(HHV)	83.06 (LHV)
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		6.941		
Specific Gravity		1.0023		

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: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-35
 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).

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	0.00	0.00	Carbon	0.08
Carbon dioxide	0.00	0.00	Hydrogen	0.02
Nitrogen	77.97	75.34	Oxygen	23.27
Oxygen	21.07	23.27	Nitrogen	75.34
Argon	0.93	1.29	Argon	1.29
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.032	0.10		
Specific Volume		13.086		
BTU/ft3 (Dry @60F, 14.696 psia)		1.576	(HHV)	1.460 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		1.549	(HHV)	1.435 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		20.63	(HHV)	19.11 (LHV)
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		1.586		
Specific Gravity		0.9884		

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: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-36
 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).

Component	Mole %	Wt %	C,H,O,N,S, Wt. %	
Methane	0.00	0.00	Carbon	1.00
Carbon dioxide	1.94	2.91	Hydrogen	0.04
Nitrogen	76.53	73.16	Oxygen	24.56
Oxygen	20.55	22.45	Nitrogen	73.16
Argon	0.91	1.24	Argon	1.24
Hydrogen	0.00	0.00	Sulfur	0.00
(CH ₂) _n	0.079	0.24		
Specific Volume		12.945		
BTU/ft3 (Dry @60F, 14.696 psia)		3.928	(HHV)	3.638 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		3.859	(HHV)	3.575 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		50.84	(HHV)	47.10 (LHV)
Compressibility Factor (@60F, 14.696 psia)		0.9996		
Wobbe Index		3.929		
Specific Gravity		0.9993		

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





AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

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

Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 21, 2025

ANALYSIS DESCRIPTION

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

AtmAA Lab No.:	20795-37	20795-38	20795-39
Sample I.D.:	Zeeco Inlet	Flare Station Pre H2S	Flare Station Post H2S

Components	(Concentration in %,v)		
Nitrogen	29.74	17.50	18.76
Oxygen	6.75	4.04	3.64
Methane	22.39	28.78	25.95
Carbon dioxide	36.30	42.98	43.53
Hydrogen	1.82	2.84	3.38

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: March 20, 2025
Date Analyzed: March 21, 2025

Components	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Concentration in %,v)			
Nitrogen	Zeeco Inlet	29.78	29.69	29.74	0.30
Oxygen	Zeeco Inlet	6.75	6.74	6.75	0.15
Methane	Zeeco Inlet	22.47	22.30	22.39	0.76
Carbon dioxide	Zeeco Inlet	36.30	36.30	36.30	0.00
Hydrogen	Zeeco Inlet	1.78	1.85	1.82	3.9

Three Silco canister samples, laboratory numbers 20795-(37-39), 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 5 repeat measurements from three Silco canister samples is 1.0%.





AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

Speciated Hydrocarbons Analysis in Silco Canister Samples

Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 21, 2025
Laboratory Temp: 73.5 °F
Barometric Pressure: 29.95 inHg

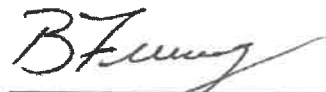
ANALYSIS DESCRIPTION

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.:	20795-37	20795-38	20795-39
Sample ID:	Zeeco Inlet	Flare Station Pre H2S	Flare Station Post H2S
Component	(Concentration in ppmv, component)		
Methane	223900	287800	259500
Ethene	<0.30	<0.30	<0.20
Acetylene	<0.30	<0.30	<0.20
Ethane	48.4	55.9	59.9
Non-methane hydrocarbons analysis by carbon number grouping			
C3	211	223	221
C4	1040	1422	1872
C5	1240	1324	1703
C6	939	952	2251
C7	294	1110	708
C8	211	341	510
C9	221	321	464
C10	227	311	168
C11	47.5	49.1	18.6
C12	17.0	28.9	12.6
C13	10.4	11.2	5.94
C14	1.98	0.68	2.02

	(Concentration in ppmvC)		
TNMHC	25622	36332	45638

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: March 20, 2025
Date Analyzed: March 21, 2025

Component	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Conc. in ppmv, component)			
Methane	Zeeco Inlet	224700	223000	223850	0.76
Ethene	Zeeco Inlet	<0.30	<0.30	<0.30	---
Acetylene	Zeeco Inlet	<0.30	<0.30	<0.30	---
Ethane	Zeeco Inlet	48.2	48.7	48.4	1.0
non-methane hydrocarbons analysis by carbon number grouping					
C3	Zeeco Inlet	215	207	211	3.5
C4	Zeeco Inlet	1106	974	1040	13
C5	Zeeco Inlet	1312	1168	1240	12
C6	Zeeco Inlet	977	901	939	8.2
C7	Zeeco Inlet	295	293	294	0.85
C8	Zeeco Inlet	213	210	211	1.1
C9	Zeeco Inlet	223	220	221	1.2
C10	Zeeco Inlet	233	221	227	5.5
C11	Zeeco Inlet	48.1	47.0	47.5	2.3
C12	Zeeco Inlet	16.6	17.3	17.0	4.3
C13	Zeeco Inlet	10.4	10.3	10.4	0.77
C14	Zeeco Inlet	1.96	2.00	1.98	2.1
(Concentration in ppmvC)					
TNMHC	Zeeco Inlet	26582	24663	25622	7.5

Three Silco canister samples, laboratory numbers 20795-(37-39), 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 15 repeat measurements from three Silco canister samples is 4.2%.





AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

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

Report Date: April 14, 2025
Client: Montrose AQS
Project Location: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 20, 2025

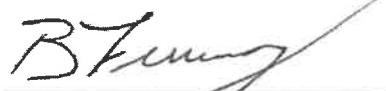
ANALYSIS DESCRIPTION

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

AtmAA Lab No.:	20795-37	20795-38	20795-39
Sample I.D.:	Zeeco Inlet	Flare Station Pre H ₂ S	Flare Station Post H ₂ S
Components	(Concentration in ppmv)		
Hydrogen sulfide	209	301	<0.40
Carbonyl sulfide	0.71	1.07	0.98
Methyl mercaptan	104	170	<0.40
Ethyl mercaptan	1.64	2.43	<0.40
Dimethyl sulfide	284	502	495
Carbon disulfide	<0.40	<0.40	0.45
i-Propyl mercaptan	1.72	3.28	<0.40
t-Butyl mercaptan	<0.40	<0.40	<0.40
n-Propyl mercaptan	4.31	7.01	7.57
s-Butyl mercaptan	4.98	9.24	9.27
i-Butyl mercaptan	<0.40	<0.40	<0.40
Dimethyl disulfide	0.99	2.22	57.0
Tetrahydrothiophene	2.07	3.87	4.51
Unidentified sulfurs	10.3	16.4	87.3

(Concentration in ppmv, as H₂S)

Total Sulfur	624.2	1019.7	719.4
--------------	-------	--------	-------


Brian W. Fung
Laboratory Director

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Location: Chiquita Landfill

Date Received: March 20, 2025

Date Analyzed: March 20, 2025

Components	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
(Concentration in ppmv)					
Hydrogen sulfide	Zeeco Inlet	213	205	209	3.8
	Flare Station Pre H2S	299	302	301	1.0
	Flare Station Post H2S	<0.40	<0.40	---	---
Carbonyl sulfide	Zeeco Inlet	0.70	0.71	0.71	1.4
	Flare Station Pre H2S	1.07	1.07	1.07	0.00
	Flare Station Post H2S	1.00	0.95	0.98	5.1
Methyl mercaptan	Zeeco Inlet	106	102	104	3.8
	Flare Station Pre H2S	169	171	170	1.2
	Flare Station Post H2S	<0.40	<0.40	---	---
Ethyl mercaptan	Zeeco Inlet	1.67	1.61	1.64	3.7
	Flare Station Pre H2S	2.39	2.47	2.43	3.29
	Flare Station Post H2S	<0.40	<0.40	---	---
Dimethyl sulfide	Zeeco Inlet	289	278	284	3.9
	Flare Station Pre H2S	500	503	502	0.60
	Flare Station Post H2S	511	479	495	6.5
Carbon disulfide	Zeeco Inlet	<0.40	<0.40	---	---
	Flare Station Pre H2S	<0.40	<0.40	---	---
	Flare Station Post H2S	0.45	0.44	0.45	2.2
i-Propyl mercaptan	Zeeco Inlet	1.73	1.70	1.72	1.7
	Flare Station Pre H2S	3.28	3.27	3.28	0.31
	Flare Station Post H2S	<0.40	<0.40	---	---
t-Butyl mercaptan	Zeeco Inlet	<0.40	<0.40	---	---
	Flare Station Pre H2S	<0.40	<0.40	---	---
	Flare Station Post H2S	<0.40	<0.40	---	---
n-Propyl mercaptan	Zeeco Inlet	4.40	4.21	4.31	4.4
	Flare Station Pre H2S	6.96	7.06	7.01	1.4
	Flare Station Post H2S	7.80	7.34	7.57	6.1
s-Butyl mercaptan	Zeeco Inlet	5.04	4.92	4.98	2.4
	Flare Station Pre H2S	9.23	9.25	9.24	0.22
	Flare Station Post H2S	9.54	8.99	9.27	5.9



QUALITY ASSURANCE SUMMARY
(Repeat Analyses)
(continued)

Components	Sample ID	Repeat Analysis		Mean	%
		Run #1	Run #2	Conc.	RPD
(Concentration in ppmv)					
i-Butyl mercaptan	Zeeco Inlet	<0.40	<0.40	---	---
	Flare Station Pre H2S	<0.40	<0.40	---	---
	Flare Station Post H2S	<0.40	<0.40	---	---
Dimethyl disulfide	Zeeco Inlet	1.02	0.96	0.99	6.1
	Flare Station Pre H2S	2.20	2.24	2.22	1.8
	Flare Station Post H2S	58.7	55.2	57.0	6.1
Tetrahydrothiophene	Zeeco Inlet	2.07	2.06	2.07	0.48
	Flare Station Pre H2S	3.86	3.88	3.87	0.52
	Flare Station Post H2S	4.56	4.46	4.51	2.2
Unidentified sulfurs	Zeeco Inlet	10.1	10.5	10.3	3.8
	Flare Station Pre H2S	15.9	16.9	16.4	6.4
	Flare Station Post H2S	89.9	84.7	87.3	6.0

Three Silco canister samples, laboratory numbers 20795-(37-39), 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 30 repeat measurements from three Silco canister samples is 3.1%.



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

Report Date: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-37
 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	22.97	11.78	Carbon	24.11
Carbon dioxide	37.25	52.40	Hydrogen	3.28
Nitrogen	30.51	27.32	Oxygen	44.88
Oxygen	6.63	6.78	Nitrogen	27.32
Argon	0.29	0.38	Argon	0.38
Hydrogen	1.86	0.12	Sulfur	0.02
(CH ₂) _n	0.463	1.21		
Specific Volume		12.126		
BTU/ft3 (Dry @60F, 14.696 psia)		259.1	(HHV)	233.5 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		254.5	(HHV)	229.4 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		3141	(HHV)	2831 (LHV)
F _d (factor)		10194		
F _w (factor)		12210		
F _c (factor)		2464		
Compressibility Factor (@60F, 14.696 psia)		0.9978		
Wobbe Index		249.60		
Specific Gravity		1.0772		

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: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-38
 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	29.74	15.19	Carbon	29.85
Carbon dioxide	44.41	62.39	Hydrogen	4.27
Nitrogen	18.08	16.17	Oxygen	49.46
Oxygen	4.00	4.08	Nitrogen	16.17
Argon	0.18	0.23	Argon	0.23
Hydrogen	2.93	0.19	Sulfur	0.03
(CH ₂) _n	0.635	1.72		
Specific Volume		12.100		
BTU/ft3 (Dry @60F, 14.696 psia)		339.8	(HHV)	306.2 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		333.9	(HHV)	300.8 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		4112	(HHV)	3705 (LHV)
F _d (factor)		9907		
F _w (factor)		11910		
F _c (factor)		2330		
Compressibility Factor (@60F, 14.696 psia)		0.9972		
Wobbe Index		327.0		
Specific Gravity		1.0797		

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: April 14, 2025
 Client: Montrose AQS
 Project Location: Chiquita Landfill
 Date Received: March 20, 2025
 Date Analyzed: March 21, 2025
 AtmAA Lab #: 20795-39
 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	27.01	13.63	Carbon	29.17
Carbon dioxide	45.32	62.88	Hydrogen	3.98
Nitrogen	19.53	17.25	Oxygen	49.40
Oxygen	3.63	3.66	Nitrogen	17.25
Argon	0.16	0.20	Argon	0.20
Hydrogen	3.52	0.22	Sulfur	0.00
(CH ₂) _n	0.832	2.15		
Specific Volume		11.95		
BTU/ft3 (Dry @60F, 14.696 psia)		322.0	(HHV)	290.2 (LHV)
BTU/ft3 (Water Saturated @ 0.25636 psia)		316.4	(HHV)	285.2 (LHV)
BTU/lb (Dry @60F, 14.696 psia)		3848	(HHV)	3469 (LHV)
F _d (factor)		10088		
F _w (factor)		12086		
F _c (factor)		2433		
Compressibility Factor (@60F, 14.696 psia)		0.9972		
Wobbe Index		307.8		
Specific Gravity		1.0943		

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





AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Silco Canister Samples

Report Date: April 14, 2025
Client: Montrose AQS
Project Name: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 20-21, 2025

AtmAA Lab No.:	20795-31	20795-32	20795-33
Sample I.D.:	Tank Farm 6	Tank Farm 9A	Tank Farm 9B

(Concentration in ppbv)

Components

Hydrogen sulfide	<100	10500	<100
Benzene	765	15400	358
Benzyl chloride	<30	<30	<30
Chlorobenzene	<25	<25	<25
Dichlorobenzenes*	<40	<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	58.3	905	59.0
1,1,1-trichloroethane	<20	<20	<20
Trichloroethene	<20	<20	<20
Chloroform	<20	<20	<20
Vinyl chloride	<20	<20	<20
m+p-xylenes	36.1	309	49.5
o-xylene	<25	105	<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



AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Silco Canister Samples

Report Date: April 14, 2025
Client: Montrose AQS
Project Name: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 20-21, 2025

AtmAA Lab No.:	20795-34	20795-35	20795-36
Sample I.D.:	Tank Farm 2	Tank Farm 7A	Tank Farm 7B

(Concentration in ppbv)

Components

Hydrogen sulfide	<100	<100	685
Benzene	23650	421	6500
Benzyl chloride	<45	<45	<45
Chlorobenzene	53.3	<40	<40
Dichlorobenzenes*	214	<60	<60
1,1-dichloroethane	<45	<45	<45
1,2-dichloroethane	51.6	<45	<45
1,1-dichloroethylene	<45	<45	<45
Dichloromethane	<100	<100	<100
1,2-dibromoethane	<25	<25	<25
Perchloroethylene	<25	<25	<25
Carbon tetrachloride	<60	<60	<60
Toluene	3190	96.0	409
1,1,1-trichloroethane	<35	<35	<35
Trichloroethene	<35	<35	<35
Chloroform	<35	<35	<35
Vinyl chloride	<35	<35	<35
m+p-xylenes	1535	71.6	156
o-xylene	569	<40	65.4

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



AtmAA Inc.

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

specialized air assessment laboratory
atmaa.com

LABORATORY ANALYSIS REPORT

SCAQMD Rule 1150.1 Components Analysis in Silco Canister Samples

Report Date: April 18, 2025
Client: Montrose AQS
Project Name: Chiquita Landfill
Project No.: PROJ-053154
Date Received: March 20, 2025
Date Analyzed: March 20-21, 2025

AtmAA Lab No.:	20795-37	20795-38	20795-39
Sample I.D.:	Zeeco Inlet	Flare Station Pre H2S	Flare Station Post H2S

(Concentration in ppbv)

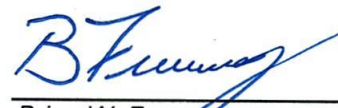
Components

Hydrogen sulfide	209000	300500	<400
Benzene	81900	127000	116000
Benzyl chloride	<5000	<5000	<5000
Chlorobenzene	<4500	<4500	<4500
Dichlorobenzenes*	<6500	<6500	<6500
1,1-dichloroethane	<5000	<5000	<5000
1,2-dichloroethane	<5000	<5000	<5000
1,1-dichloroethylene	<5000	<5000	<5000
Dichloromethane	<11000	<11000	<11000
1,2-dibromoethane	<3000	<3000	<3000
Perchloroethylene	<3000	<3000	<3000
Carbon tetrachloride	<6000	<6000	<6000
Toluene	8910	12400	11800
1,1,1-trichloroethane	<4000	<4000	<4000
Trichloroethene	<4000	<4000	<4000
Chloroform	<4000	<4000	<4000
Vinyl chloride	<4000	<4000	<4000
m+p-xylenes	4580	5360	5440
o-xylene	<4500	<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

QUALITY ASSURANCE SUMMARY
(Repeat Analyses)

Project Name: Chiquita Landfill
Date Received: March 20, 2025
Date Analyzed: March 20-21, 2025

Components	Sample ID	Repeat Analysis		Mean Conc.	% RPD
		Run #1	Run #2		
		(Concentration in ppbv)			
Hydrogen sulfide	Tank Farm 2	<100	<100	---	---
Benzene	Tank Farm 2	24500	22800	23650	7.2
Benzyl chloride	Tank Farm 2	<45	<45	---	---
Chlorobenzene	Tank Farm 2	53.4	53.2	53.3	0.38
Dichlorobenzenes	Tank Farm 2	207	221	214	6.5
1,1-dichloroethane	Tank Farm 2	<45	<45	---	---
1,2-dichloroethane	Tank Farm 2	52.0	51.2	51.6	1.6
1,1-dichloroethylene	Tank Farm 2	<45	<45	---	---
Dichloromethane	Tank Farm 2	<100	<100	---	---
1,2-dibromoethane	Tank Farm 2	<25	<25	---	---
Perchloroethylene	Tank Farm 2	<25	<25	---	---
Carbon tetrachloride	Tank Farm 2	<60	<60	---	---
Toluene	Tank Farm 2	3280	3100	3190	5.6
1,1,1-trichloroethane	Tank Farm 2	<35	<35	---	---
Trichloroethene	Tank Farm 2	<35	<35	---	---
Chloroform	Tank Farm 2	<35	<35	---	---
Vinyl chloride	Tank Farm 2	<35	<35	---	---
m+p-xylenes	Tank Farm 2	1540	1530	1535	0.65
o-xylene	Tank Farm 2	576	562	569	2.5

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%.



821012

CHAIN OF CUSTODY RECORD									
Client/Project Name: MONTROSE AQS			Project Location: CHICOITA LANDFILL			ANALYSES REQUESTED			
Project Number: P005			Purchase Order Number:			TO-15 FICED GASES ASH MYS BS 88 307-91 307-91			
Sampler: (Signature) <i>[Signature]</i>			Turnaround Times: Expedited: 24hr / 48hr / 72hr / 5 day Standard 10 day						
Client Sample Identification	Type of Sample Canister ID	AtmAA Lab Number	Sampling Date	Sampling Time	Special Remarks				
TANK FARM 6	51383	20795-31	3/20/25	0845	X	X	X	X	# 622
TANK FARM 9A	49442	-32		0855	X	X	X	X	# 564
TANK FARM 9B	48469	-33		0855	X	X	X	X	# 548
TANK FARM 2	46911	-34		0900	X	X	X	X	# 507
TANK FARM 7A	47728	-35		0935	X	X	X	X	# 566
TANK FARM 7B	48864	-36		0935	X	X	X	X	# 562
ZEEDO INLET	51125	-37		0935	X	X	X	X	# 601

Relinquished by: (Signature)	Date 3/20/25	Time	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 3/20/25	Time 11:55

Company Info:		Send Report to:		Analytical Laboratory	
Company:	MONTROSE	Company:	MONTROSE	AtmAA Inc.	
Street Address	4631 E. ST. ANDREW	Street Address		23917 Craftsman Rd.	
City/State/Zip:	SANTA ANA	City/State/Zip:		Calabasas, CA 91302	
Telephone No.:	626 607 6313	Project Manager:	ROSE SANDOVAL	TEL: (818) 223-3277	
Email Address:	psandova@montroseenv.com	Co-Email Address:		Email Address: info@atmaa.com	

CHAIN OF CUSTODY RECORD						
Client/Project Name:		Project Location:		ANALYSES REQUESTED		
MONTAGUE AQS		CHICQUITA LANDFILL		ASTM 1945 / 3588 FIXED GAS TO IS RANGE 1150.1 SUCROMO 307-91		
Project Number: PACS-7		Purchase Order Number:				
Sampler: (Signature)		Turnaround Times: Expedited: 24hr / 48hr / 72hr / 5 day				
	Type of Sample Canister ID	AtmAA Lab Number	Sampling Date	Sampling Time		
FLAME STATION PACEH2S	49439	20795-38	3/20/25	1010		
FLAME STATION POST H2S	46611	-39	N	1010		
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date Time
		3/20/25				
Relinquished by: (Signature)		Date	Time	Received by: (Signature)		Date Time
Relinquished by: (Signature)		Date	Time	Received for Laboratory by: (Signature)		Date Time
						3/20/25 11:25
Company Info:		Send Report to:		Analytical Laboratory		
Company:		Company:		AtmAA Inc.		
Street Address		Street Address		23917 Craftsman Rd.		
City/State/Zip:		City/State/Zip:		Calabasas, CA 91302		
Telephone No.:		Project Manager:		TEL: (818) 223-3277		
Email Address:		Email Address:		Email Address: info@atmaa.com		

Appendix A.4

Quality Assurance Data

Barometric Pressure Determination

Date: 03/20/25

Time: 7:30

Data By: SJ, KT

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	
Reference Barometer Actual Pressure	30.03
	1278
	28.75
Test Barometer Location/Site	Chiquita Canyon
Location/Site Elevation	997
Location/Site Barometric Pressure	29.03
Sampling Location Height (above/below site elevation)	1
Sampling Location Barometric Pressure	29.03



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.	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)	
TC-WB												
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: 145
 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)	
145												
T3 (~ 370 F)	PTC-69	368	368	368	368	370	370	370	370	2.0	0.2%	Pass
T2 (~ 212 F)	PTC-69	212	212	212	212	212	212	212	212	0.0	0.0%	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: 146
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	366	366	366	366	370	370	370	370	4.0	0.5%	Pass
T2 (~ 212 F)	PTC-69	212	212	212	212	212	212	212	212	0.0	0.0%	Pass
T1 (~ 32 F)	PTC-69	34	34	34	34	32	32	32	32	2.0	0.4%	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

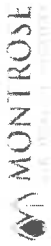
T/C I.D. TC-Cal	Readout I.D.	T/C - Readout °F				Reference Thermometer °F				Difference		
		Reading 1	Reading 2	Reading 3	Average	Reading 1	Reading 2	Reading 3	Average	°F	%, (°R)	
T3 (~ 370 F)	PTC-43	370	370	370	370	370	370	370	370	0.0	0.0%	Pass
T2 (~212 F)	PTC-43	213	213	213	213	212	212	212	212	1.0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

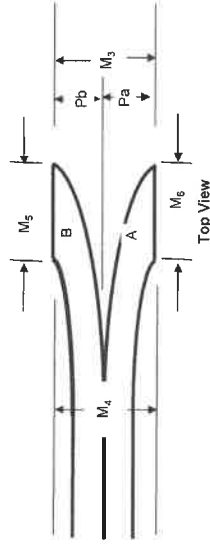
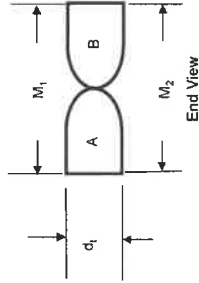
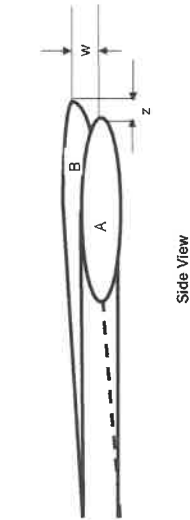
Thermocouple Source Readings

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	n/a	10 degrees	5 degrees	1.05 Dt < P < 1.5 Dt	
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
145	1/3/25	JAC	Y	Y	Y	0.268	0.653	0.650	0.638	0.655	0.349	0.365	0.3	-1.4	1.2	Pass
146	1/3/25	JAC	Y	Y	Y	0.375	1.100	1.100	1.100	1.100	0.290	0.290	0.0	0.0	1.5	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

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		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

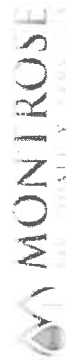
Calibration Range		Run 2		Absolute Value	Individual Run Results % Difference	Pass/ Fail
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)			
Target 20%	0.010	0.010	0.010	0.0000	0.00%	Pass
Target 40%	0.020	0.020	0.020	0.0000	0.00%	Pass
Target 60%	0.030	0.030	0.030	0.0000	0.00%	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		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%	0.020	0.020	0.020	0.0000	0.00%	Pass
Target 40%	0.040	0.040	0.040	0.0000	0.00%	Pass
Target 60%	0.060	0.059	0.060	0.0010	1.67%	Pass
Target 80%	0.080	0.079	0.080	0.0010	1.25%	Pass
Target 100%	0.100	0.100	0.100	0.0000	0.00%	Pass

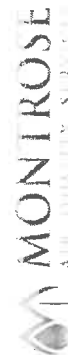
Calibration Range		Run 2		Absolute Value	Individual Run Results % Difference	Pass/Fail
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)			
Target 20%	0.020	0.020	0.020	0.0000	0.00%	Pass
Target 40%	0.040	0.040	0.040	0.0000	0.00%	Pass
Target 60%	0.060	0.059	0.060	0.0010	1.67%	Pass
Target 80%	0.080	0.079	0.080	0.0010	1.25%	Pass
Target 100%	0.100	0.100	0.100	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%	0.020	0.020	0.020	0.0000	0.00%	Pass
Target 40%	0.040	0.040	0.040	0.0000	0.00%	Pass
Target 60%	0.060	0.059	0.060	0.0010	1.67%	Pass
Target 80%	0.080	0.079	0.080	0.0010	1.25%	Pass
Target 100%	0.100	0.100	0.100	0.0000	0.00%	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

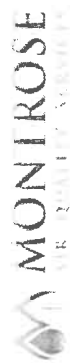
Calibration Range		Run 2		Individual Run Results	
Scale:	inches H ₂ O	Measured Value (inches W.C.)	Reference Value (inches W.C.)	Absolute Value	Pass/Fail
Target 20%	0.200	0.200	0.200	0.0000	Pass
Target 40%	0.400	0.401	0.400	0.0010	Pass
Target 60%	0.600	0.602	0.600	0.0020	Pass
Target 80%	0.800	0.801	0.800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

% Difference	Pass/Fail
0.13%	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: 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	% Difference
Target 20%	2.000	1.955	2.000	0.0450	2.25%
Target 40%	4.000	4.015	4.000	0.0150	0.37%
Target 60%	6.000	6.010	6.000	0.0100	0.17%
Target 80%	8.000	8.045	8.000	0.0450	0.56%
Target 100%	10.000	10.100	10.000	0.1000	1.00%
					Pass
					Pass
					Pass
					Pass
					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	% Difference
Target 20%	2.000	1.995	2.000	0.0050	0.25%
Target 40%	4.000	4.035	4.000	0.0350	0.88%
Target 60%	6.000	6.095	6.000	0.0950	1.58%
Target 80%	8.000	8.055	8.000	0.0550	0.69%
Target 100%	10.000	10.100	10.000	0.1000	1.00%
					Pass
					Pass
					Pass
					Pass
					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	% Difference
Target 20%	2.000	1.990	2.000	0.0100	0.50%
Target 40%	4.000	4.090	4.000	0.0900	2.25%
Target 60%	6.000	6.095	6.000	0.0950	1.58%
Target 80%	8.000	8.040	8.000	0.0400	0.50%
Target 100%	10.000	10.050	10.000	0.0500	0.50%
					Pass
					Pass
					Pass
					Pass
					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>	
 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):	
EPA Methods 3C, TO-8, TO-12 and TO-15	
Certificate Number: <u>002-2023-48</u>	
 Tate Strickler, VP – Quality Systems	DATE OF ISSUE: <u>11/01/2023</u>
	DATE OF EXPIRATION: <u>10/31/2028</u>
	

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:	March 20, 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: 4/18/2025

Pete SanJuan

Client Project Manager

(714) 279-6777

4/18/2025

(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]

THIS IS THE LAST PAGE OF THIS DOCUMENT

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

Name: Mr. Pete SanJuan
Title: Client Project Manager
Region: West
Email: PSanjuan@montrose-env.com
Phone: (714) 279-6777

Name: Mr. Matt McCune
Title: Regional Vice President
Region: West
Email: MMccune@montrose-env.com
Phone: (714) 279-6777