

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
SCIENCE & TECHNOLOGY ADVANCEMENT * SOURCE TEST ENGINEERING BRANCH
SOURCE TEST REPORT EVALUATION

S/T ID: **PR24014A**

FACILITY ID NO. **119219**
COMPANY: **Chiquita Canyon Landfill, Castaic**
EQUIPMENT: **Landfill - Dynamic Flux Chamber**
LOCATION: **29201 Henry Mayo Dr., Castaic**

REQUESTED BY: **Baitong Chen (Memo Dated January 31, 2025)**
TYPE OF TEST: **PERFORMANCE/COMPLIANCE REPORT**
DOCUMENT DATE: **January 2025**

REASON FOR TEST: (TESTING SUBJECT TO THE FOLLOWING RULE, PERMIT, OR SPECIFIED CONDITIONS):

REQUESTED EVAL: **CO, CO2, O2, H2S, TRS, VOC, Speciated Organics**
TEST DATE: **November 19 – 21, 2024**
TEST FIRM: **Environmental Management Consulting**
STE EVALUATOR: **Rodney Davis EXT: 2206** *REVIEW DATE:* **March 25, 2025**

OVERVIEW OF EVALUATION:

OVERALL

*CONFIDENCE IN
REPORTED TEST
RESULTS:*

☐ ACCEPTABLE ☒ **CONDITIONALLY
ACCEPTABLE** ☐ UNACCEPTABLE

*RESTRICTIONS FOR
USE OF REPORTED
RESULTS:*

- **CO2, H2S, TRS, VOC, Speciated Organics** reported emissions may be used for compliance determination and emission calculations.
- **Speciated Organics (Methane)** emissions, as reported, should not be used for compliance determination and/or emission calculations, without the adjustments specified in the next section of this evaluation.

*COMPLIANCE
DETERMINATION:*

- Source Test Engineering (STE) has verified all data analysis and reported results are accurate except where noted below in this evaluation.

(REFER TO NEXT SECTION FOR COMPLETE DISCUSSION OF TEST RESULTS AND CORRECTED EMISSION INFORMATION, IF APPLICABLE)

SOURCE TEST REPORT EVALUATION**DETAILED REVIEW**

This source test report has been reviewed by the Source Test Engineering Branch staff. The following specifically explains the restrictions concerning the treatment of the reported source test information:

- ☐ Completeness of Report
- ☒ Representativeness of Data & Process
- ☒ Rule/Permit Fulfillment
- ☒ Sampling & Analytical Methods
- ☒ Quality Assurance
- ☒ Calculations

REPRESENTATIVENESS OF DATA & PROCESS

- Flux values for representative reaction area cells/grids ID: 174, 184, 152 and one location for grid 209 (maximum) were tested with a covered membrane. Therefore these grids are highlighted purple in Emissions Calculations for each compound) on pg. 43 – 75.
- The installation of the geosynthetic membrane cover changes the approach to data analysis for the reaction area. As part of the processing of data from November 2024 and prior Rule 1150.1 SEM screening event, subsequent reports will process data separately for the covered and non-covered areas of the reaction area rather than combining all test data from the reaction area into one category. Processing data in this way will provide more useful and representative emission estimates of the current and future test areas of the landfill. If all the reaction area is covered with the synthetic membrane in the future, sub-categorization for data evaluation will not be needed. Note that even though the covered and uncovered reaction areas will be considered as separate source areas, their respective emissions will be added together to estimate total reaction area and site-wide emission rates.
- The reported flux rate has been calculated incorrectly for **Methane**, and they have been recalculated. This will affect reported **Methane** mass emissions.

RULE/PERMIT FULFILLMENT

- All required testing has been performed and is properly formatted, except where noted in this evaluation.

SAMPLING & ANALYTICAL METHODS / RESULTS

- All testing and analyses were performed according to approved SCAQMD methods and procedures.

QUALITY ASSURANCE

- All reported testing results were well supported and documented with respect to raw data, calibrations, calculations, and lab analyses.

SOURCE TEST REPORT EVALUATION

CALCULATIONS

- Methane flux emissions in Table 4.1 Summary of Sampling Results were recalculated based on the reported concentration of Methane presented in Attachment C pg. 675-1000.
- The following reported flux have been adjusted for Methane:

Sample ID	Reported Methane Conc. (ppmv)	Reported Methane Flux (mg/m ² -min)	Corrected Methane Flux (mg/m ² -min) ¹
T-401	12100.42	820	1202.31
T-402	4.13	0.43	0.64
T-403	135.39	16.8	24.59
T-404	1.17	0.1	0.08
T-405	122.05	21.4	32.26
T-406	12.17	4.5	6.63
T-407	28.36	3.9	6.09
T-408	1.92	0.2	0.36
T-409	9.31	2.35	3.66
T-410	3863.68	316	496.97
T-411	2.89	0.34	0.53
T-412	5.92	0.91	1.38
T-413	1.01	0.062	0.10
T-414	ND	0.01	0.02
T-415	ND	0.01	0.03
T-416	1.04	0.072	0.11
T-417	1.17	0.15	0.23
T-418	ND	0.01	0.02
T-501	3.42	0.167	0.24
T-502	ND	0.01	0.03
T-503	1.34	0.064	0.09
T-504	ND	0.01	0.03
T-505	1.42	0.066	0.10
T-506	ND	0.01	0.02
T-507	ND	0.01	0.02
T-508	ND	0.01	0.02
T-509	ND	0.01	0.02
T-510	ND	0.01	0.03
T-511	ND	0.01	0.02
T-512	ND	0.01	0.03
T-513	ND	0.01	0.02
T-514	ND	0.01	0.02
T-601	6000.6	446	650.76

¹ Flux = Ppmv x Methane MW (16lb/lbmol) ÷ Molar Volume (24 m³/lbmol) x Total Flow (m³/min) ÷ Flux Chamber Area (0.13 m²)

ND – reporting limits were used in the calculations for flux.

SOURCE TEST REPORT EVALUATION

T-602	1159.41	49	71.35
T-603	1669.88	77.69	112.03
T-604	10.55	0.64	0.93
T-605	28822.91	1567	2340.73
T-606	562.82	45.8	68.42
T-607	5.67	0.51	0.76
T-608	2.78	0.14	0.21
T-609	ND	0.01	0.02
T-610	8.3	0.612	0.92
T-611	ND	0.01	0.04
T-612	ND	0.01	0.04
T-613	ND	0.01	0.03
T-614	ND	0.01	0.02