

**TABLE G-1
GREENHOUSE GAS AIR POLLUTANTS CALCULATIONS
LANDFILL GAS METHANE EMISSIONS**

Project	Peak Year of GHG Emissions	CH4 Generation tons/yr	CH4 Mitigated tons/yr	Fugitive CH4 Emitted	
				tons/yr	tons CO2e/yr
Existing Permitted Landfill	2017	37,230	29,784	7,446	156,366
Proposed Expansion Landfill	2029	52,612	42,090	10,522	220,971
Proposed - Existing		15,382	12,306	3,076	64,605
Cumulative Peak Year (Expansion LFG + Remaining Permitted Landfill LFG)	2029	68,793	55,034	13,759	288,930

Calculation Inputs:

Control Efficiency (CH4) =	100%	
Modeled CH4 Generation Rate (Existing Permitted) =	3,403	scfm
Modeled CH4 Generation Rate (Proposed Expansion) =	4,809	scfm
Modeled CH4 Generation Rate (Peak Year) =	6,288	scfm
Collection Efficiency =	80%	
Methane Oxidation =	0%	

Sample Calculations

CH4 Generation (ton/yr) = [(Modeled CH4 Generation Rate (scfm) * 525,600 minutes/yr * 16.04 lb.CH4/mol) / (385.3 ft3/mol)] * 1 ton/2000 lb]

CH4 Mitigated (ton/yr) = [(CH4 Generation ton/yr * Methane Oxidation + CH4 Generation * (1 - Methane Oxidation) * Collection Efficiency

Fugitive CH4 Emitted (ton/yr) = CH4 Generation - CH4 Mitigated

Fugitive CH4 Emitted (ton CO2e/yr) = Fugitive CH4 Emitted ton/yr * Methane Global Warming Potential (21)

Notes:

1. All collected methane is assumed to be converted to and emitted as CO2
2. CH4 and CO2 are the only GHGs typically found in LFG
3. LFG CO2 emissions are considered biogenic emissions that have been classified as carbon neutral by several EPA and DOE publications/regulations