

TABLE A-1
PROJECTION OF LANDFILL GAS GENERATION AND RECOVERY UNDER MID-RANGE SCENARIO
SAN CRISTOBAL LANDFILL, DOMINICAN REPUBLIC

Year	Disposal Rate (Mg/yr)	Refuse In-Place (Mg)	LFG Generation			MID-RANGE RECOVERY SCENARIO				
						System Efficiency (%)	Predicted LFG Recovery			Power Plant Capacity* (MW)
			(m3/hr)	(cfm)	(mmBtu/hr)		(m3/hr)	(cfm)	(mmBtu/hr)	
2020	75,950	112,528	0	0	0.0	0%	0	0	0.0	0.0
2021	77,470	267,468	248	146	4.4	0%	0	0	0.0	0.0
2022	79,020	425,508	496	292	8.9	40%	198	117	3.5	0.3
2023	80,600	529,373	678	399	12.1	50%	339	200	6.1	0.6
2024	82,210	611,583	743	437	13.3	55%	409	241	7.3	0.7
2025	83,850	695,433	764	449	13.6	55%	420	247	7.5	0.7
2026	85,530	780,963	791	465	14.1	55%	435	256	7.8	0.7
2027	87,240	868,203	822	484	14.7	55%	452	266	8.1	0.7
2028	64,430	932,633	855	503	15.3	55%	470	277	8.4	0.8
2029	0	932,633	826	486	14.8	58%	479	282	8.6	0.8
2030	0	932,633	640	377	11.4	60%	384	226	6.9	0.6
2031	0	932,633	504	297	9.0	60%	302	178	5.4	0.5
2032	0	932,633	412	242	7.4	60%	247	145	4.4	0.4
2033	0	932,633	348	205	6.2	60%	209	123	3.7	0.3
2034	0	932,633	302	178	5.4	60%	181	107	3.2	0.3
2035	0	932,633	268	158	4.8	60%	161	95	2.9	0.3
2036	0	932,633	243	143	4.3	60%	146	86	2.6	0.2
2037	0	932,633	222	131	4.0	60%	133	78	2.4	0.2
2038	0	932,633	205	121	3.7	60%	123	72	2.2	0.2
2039	0	932,633	191	112	3.4	60%	114	67	2.0	0.2
2040	0	932,633	178	105	3.2	60%	107	63	1.9	0.2

MODEL INPUT PARAMETERS:

Assumed Methane Content of LFG:

50%

Decay Rate Constant (k):

Category 1 0.450

Category 2 0.073

Category 3 0.038

CH4 Recovery Pot. (Lo) (ft3/ton):

Category 1 2,385

Category 2 5,723

Category 3 5,935

Metric Equivalent Lo (m3/Mg):

Category 1 74

Category 2 179

Category 3 185

NOTES:

* Maximum power plant capacity assumes a gross heat rate of 10,800 Btus per kW-hr (hhv).

TABLE A-2
PROJECTION OF LANDFILL GAS RECOVERY UNDER HIGH AND LOW RECOVERY SCENARIOS
SAN CRISTOBAL LANDFILL, DOMINICAN REPUBLIC

Year	HIGH RECOVERY SCENARIO					LOW RECOVERY SCENARIO				
	System Efficiency (%)	Predicted LFG Recovery			Power Plant Capacity* (MW)	System Efficiency (%)	Predicted LFG Recovery			Power Plant Capacity* (MW)
		(m3/hr)	(cfm)	(mmBtu/hr)			(m3/hr)	(cfm)	(mmBtu/hr)	
2020	0%	0	0	0.0	0.0	0%	0	0	0.0	0.0
2021	0%	0	0	0.0	0.0	0%	0	0	0.0	0.0
2022	50%	248	146	4.4	0.4	25%	124	73	2.2	0.2
2023	60%	407	240	7.3	0.7	35%	237	140	4.2	0.4
2024	65%	483	284	8.6	0.8	40%	297	175	5.3	0.5
2025	65%	496	292	8.9	0.8	40%	305	180	5.5	0.5
2026	65%	514	303	9.2	0.9	40%	316	186	5.7	0.5
2027	65%	534	314	9.5	0.9	40%	329	193	5.9	0.5
2028	65%	556	327	9.9	0.9	40%	342	201	6.1	0.6
2029	68%	562	331	10.0	0.9	43%	355	209	6.3	0.6
2030	70%	448	264	8.0	0.7	45%	288	169	5.1	0.5
2031	70%	353	208	6.3	0.6	45%	227	133	4.1	0.4
2032	70%	288	170	5.2	0.5	45%	185	109	3.3	0.3
2033	70%	243	143	4.4	0.4	45%	157	92	2.8	0.3
2034	70%	212	124	3.8	0.3	45%	136	80	2.4	0.2
2035	70%	188	111	3.4	0.3	45%	121	71	2.2	0.2
2036	70%	170	100	3.0	0.3	45%	109	64	2.0	0.2
2037	70%	155	91	2.8	0.3	45%	100	59	1.8	0.2
2038	70%	144	85	2.6	0.2	45%	92	54	1.6	0.2
2039	70%	134	79	2.4	0.2	45%	86	51	1.5	0.1
2040	70%	125	73	2.2	0.2	45%	80	47	1.4	0.1

NOTES:

* Maximum power plant capacity assumes a gross heat rate of 10,800 Btus per kW-hr (hhv).

Figure A-1. LFG Generation and Recovery Projections
San Cristobal Landfill, Dominican Republic

