ANNEX D7 THERMAL OXIDIZER, LANDFILL GAS FLARE AND LANDFILL GAS GENERATOR STACK EMISSION MONITORING RESULTS

TABLE D7.1 THERMAL OXIDISER STACK EMISSION MONITORING RESULTS

Parameters	Monitoring Results
NO_2	1.23 gs^{-1}
CO	0.02 gs^{-1}
SO_2	<0.01 gs^{-1}
Benzene	3.0×10^{-4} gs^{-1}
Vinyl chloride	$<1.2 \times 10^{-4}$ gs^{-1}
Exhaust gas velocity	7.0 ms^{-1} (a)

Notes:

(a) The exhaust gas velocity was calculated based on the cross-section area of the stack and the gas flow and combustion temperature data measured during the stack emission monitoring.

TABLE D7.2 THERMAL OXIDISER STACK CONTINUOUS MONITORING RESULTS

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms^{-1}) [(a)]
1 Apr 25	Under Maintenance		7.0
2 Apr 25	900	1204	
3 Apr 25	899	1201	
4 Apr 25	902	1203	
5 Apr 25	901	1202	
6 Apr 25	897	1202	
7 Apr 25	900	1200	
8 Apr 25	901	1202	
9 Apr 25	903	1203	
10 Apr 25	901	1203	
11 Apr 25	900	1201	
12 Apr 25	895	1200	
13 Apr 25	899	1202	
14 Apr 25	898	1185	
15 Apr 25	898	1203	
16 Apr 25	Under Maintenance		
17 Apr 25	816	1128	
18 Apr 25	898	1201	
19 Apr 25	894	1200	
20 Apr 25	899	1201	
21 Apr 25	Under Maintenance		
22 Apr 25	Under Maintenance		
23 Apr 25	Under Maintenance		
24 Apr 25	Under Maintenance		
25 Apr 25	Under Maintenance		
26 Apr 25	Under Maintenance		
27 Apr 25	Under Maintenance		
28 Apr 25	Under Maintenance		
29 Apr 25	903	1200	
30 Apr 25	900	1203	
Average	895	1197	-
Min	816	1128	-
Max	903	1204	-

Notes:

(a) The exhaust gas velocity was calculated based on the cross-section area of the stack and the gas flow and combustion temperature data measured during the stack emission monitoring.

TABLE D7.3 LANDFILL GAS FLARE STACK EMISSION MONITORING RESULTS

Parameters	Monitoring Results
NO_2	0.03 gs^{-1}
CO	1.23 gs^{-1}
SO_2	<0.01 gs^{-1}
Benzene	5.557×10^{-3} gs^{-1}
Vinyl chloride	$<1.14 \times 10^{-4}$ gs^{-1}
Exhaust gas velocity	7.9 ms^{-1} (a)

Notes:

(a) The exhaust gas velocity was calculated based on the cross-section area of the stack and the gas flow and combustion temperature data measured during the stack emission monitoring.

TABLE D7.4 LANDFILL GAS FLARE STACK CONTINUOUS MONITORING RESULTS

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms^{-1}) [a]	Operation Status
Flare 1 – F601				
1 Apr 25	916	1155		In Operation
2 Apr 25	913	1150		In Operation
3 Apr 25	887	1123		In Operation
4 Apr 25	896	1139		In Operation
5 Apr 25	879	1106		In Operation
6 Apr 25	875	1109		In Operation
7 Apr 25	882	1112		In Operation
8 Apr 25	894	1131		In Operation
9 Apr 25	880	1111		In Operation
10 Apr 25	892	1135		In Operation
11 Apr 25	891	1121		In Operation
12 Apr 25	883	1125		In Operation
13 Apr 25	919	1145		In Operation
14 Apr 25	881	1109		In Operation
15 Apr 25	903	1143		In Operation
16 Apr 25	904	1144	7.9	In Operation
17 Apr 25	904	1130		In Operation
18 Apr 25	920	1161		In Operation
19 Apr 25	902	1140		In Operation
20 Apr 25	873	1102		In Operation
21 Apr 25	911	1150		In Operation
22 Apr 25	870	1105		In Operation
23 Apr 25	881	1116		In Operation
24 Apr 25	882	1116		In Operation
25 Apr 25	873	1115		In Operation
26 Apr 25	901	1126		In Operation
27 Apr 25	896	1123		In Operation
28 Apr 25	909	1138		In Operation
29 Apr 25	906	1145		In Operation
30 Apr 25	905	1146		In Operation
Average	894	1129	-	
Min	870	1102	-	
Max	920	1161	-	

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms^{-1}) [a]	Operation Status
Flare 2 – F602				
1 Apr 25	934	1165		In Operation
2 Apr 25	896	1120		In Operation
3 Apr 25	932	1172		In Operation
4 Apr 25	924	1150		In Operation
5 Apr 25	922	1164		In Operation
6 Apr 25	897	1138		In Operation
7 Apr 25	912	1152		In Operation
8 Apr 25	888	1122		In Operation
9 Apr 25	931	1167		In Operation
10 Apr 25	885	1114		In Operation
11 Apr 25	910	1152		In Operation
12 Apr 25	929	1162		In Operation
13 Apr 25	902	1129		In Operation
14 Apr 25	900	1135		In Operation
15 Apr 25	886	1113		In Operation
16 Apr 25	922	1155	7.9	In Operation
17 Apr 25	891	1132		In Operation
18 Apr 25	928	1169		In Operation
19 Apr 25	926	1166		In Operation
20 Apr 25	918	1157		In Operation
21 Apr 25	903	1146		In Operation
22 Apr 25	909	1144		In Operation
23 Apr 25	886	1115		In Operation
24 Apr 25	887	1126		In Operation
25 Apr 25	930	1163		In Operation
26 Apr 25	904	1139		In Operation
27 Apr 25	902	1131		In Operation
28 Apr 25	887	1113		In Operation
29 Apr 25	904	1137		In Operation
30 Apr 25	892	1116		In Operation
Average	908	1142	-	
Min	885	1113	-	
Max	934	1172	-	

Notes:

(a) The exhaust gas velocity was calculated based on the cross-section area of the stack and the gas flow and combustion temperature data measured during the stack emission monitoring.

TABLE D7.5 LANDFILL GAS GENERATOR STACK EMISSION MONITORING RESULTS

Parameters	Monitoring Results
NO_2	0.056 gs^{-1}
CO	1.051 gs^{-1}
SO_2	<0.001 gs^{-1}
Benzene	1.08 x 10^{-4} gs^{-1}
Vinyl chloride	<1.11 x 10^{-5} gs^{-1}
Exhaust gas velocity	12.9 ms^{-1} (a)

Notes:

(a) The exhaust gas velocity was calculated based on the cross-section area of the stack and the gas flow and combustion temperature data measured during the stack emission monitoring.

TABLE D7.6 LANDFILL GAS GENERATOR STACK CONTINUOUS MONITORING RESULTS

Date	Exhaust Temperature (K)	Exhaust Gas Velocity (ms^{-1}) [a]	Operation Status
ENGA			
1 Apr 25	848	12.9	In Operation
2 Apr 25	862		In Operation
3 Apr 25	869		In Operation
4 Apr 25	866		In Operation
5 Apr 25	866		In Operation
6 Apr 25	866		In Operation
7 Apr 25	868		In Operation
8 Apr 25	869		In Operation
9 Apr 25	865		In Operation
10 Apr 25	866		In Operation
11 Apr 25	873		In Operation
12 Apr 25	865		In Operation
13 Apr 25	866		In Operation
14 Apr 25	861		In Operation
15 Apr 25	862		In Operation
16 Apr 25	870		In Operation
17 Apr 25	872		In Operation
18 Apr 25	874		In Operation
19 Apr 25	873		In Operation
20 Apr 25	873		In Operation
21 Apr 25	872		In Operation
22 Apr 25	873		In Operation
23 Apr 25	874		In Operation
24 Apr 25	873		In Operation
25 Apr 25	875		In Operation
26 Apr 25	864		In Operation
27 Apr 25	865		In Operation
28 Apr 25	870		In Operation
29 Apr 25	870		In Operation
30 Apr 25	885		In Operation
Average	869	-	
Min	848	-	
Max	885	-	

Date	Exhaust Temperature (K)	Exhaust Gas Velocity (ms^{-1}) [(a)]	Operation Status
ENGB			
1 Apr 25	-	12.9	Under Maintenance
2 Apr 25	-		Under Maintenance
3 Apr 25	-		Under Maintenance
4 Apr 25	-		Under Maintenance
5 Apr 25	-		Under Maintenance
6 Apr 25	-		Under Maintenance
7 Apr 25	-		Under Maintenance
8 Apr 25	-		Under Maintenance
9 Apr 25	-		Under Maintenance
10 Apr 25	-		Under Maintenance
11 Apr 25	-		Under Maintenance
12 Apr 25	-		Under Maintenance
13 Apr 25	-		Under Maintenance
14 Apr 25	-		Under Maintenance
15 Apr 25	-		Under Maintenance
16 Apr 25	-		Under Maintenance
17 Apr 25	-		Under Maintenance
18 Apr 25	-		Under Maintenance
19 Apr 25	-		Under Maintenance
20 Apr 25	-		Under Maintenance
21 Apr 25	-		Under Maintenance
22 Apr 25	-		Under Maintenance
23 Apr 25	-		Under Maintenance
24 Apr 25	-		Under Maintenance
25 Apr 25	-		Under Maintenance
26 Apr 25	-		Under Maintenance
27 Apr 25	-		Under Maintenance
28 Apr 25	-		Under Maintenance
29 Apr 25	-		Under Maintenance
30 Apr 25	-		Under Maintenance
Average	-	-	
Min	-	-	
Max	-	-	

Notes:

(a) The exhaust gas velocity was calculated based on the cross-section area of the stack and the gas flow and combustion temperature data measured during the stack emission monitoring.