



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 <sub>2</sub>	0.97 gs <sup>-1</sup>
CO	0.03 gs <sup>-1</sup>
SO <sub>2</sub>	<0.01 gs <sup>-1</sup>
Benzene	<2.0 x 10 <sup>-4</sup> gs <sup>-1</sup>
Vinyl chloride	<1.6 x 10 <sup>-4</sup> gs <sup>-1</sup>
Exhaust gas velocity	8.1 ms <sup>-1</sup>

TABLE D7.2 THERMAL OXIDISER STACK CONTINUOUS MONITORING RESULTS

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) <sup>(a)</sup>	
1 Dec 24	903	1183	8.1	
2 Dec 24	897	1184		
3 Dec 24	900	1185		
4 Dec 24	906	1184		
5 Dec 24	900	1184		
6 Dec 24	900	1186		
7 Dec 24	904	1185		
8 Dec 24	901	1182		
9 Dec 24	900	1183		
10 Dec 24	Under Maintenance			
11 Dec 24	914	1169		
12 Dec 24	903	1173		
13 Dec 24	903	1188		
14 Dec 24	901	1192		
15 Dec 24	901	1192		
16 Dec 24	901	1196		
17 Dec 24	901	1199		
18 Dec 24	900	1199		
19 Dec 24	900	1195		
20 Dec 24	899	1182		
21 Dec 24	901	1195		
22 Dec 24	902	1198		
23 Dec 24	901	1197		
24 Dec 24	903	1197		
25 Dec 24	902	1200		
26 Dec 24	900	1199		
27 Dec 24	899	1197		
28 Dec 24	916	1192		
29 Dec 24	901	1196		
30 Dec 24	897	1192		
31 Dec 24	898	1198		
<b>Average</b>	902	1190	-	
<b>Min</b>	897	1169	-	
<b>Max</b>	916	1200	-	

**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**

<b>Parameters</b>	<b>Monitoring Results</b>
NO <sub>2</sub>	0.02 gs <sup>-1</sup>
CO	0.02 gs <sup>-1</sup>
SO <sub>2</sub>	0.05 gs <sup>-1</sup>
Benzene	1.68 x 10 <sup>-4</sup> gs <sup>-1</sup>
Vinyl chloride	<1.07 x 10 <sup>-4</sup> gs <sup>-1</sup>
Exhaust gas velocity	8.4 ms <sup>-1</sup>

TABLE D7.4 LANDFILL GAS FLARE STACK CONTINUOUS MONITORING RESULTS

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) (a)	Operation Status
<b>Flare 1 – F601</b>				
1 Dec 24	831	1089	8.4	In Operation
2 Dec 24	826	1087		In Operation
3 Dec 24	855	1112		In Operation
4 Dec 24	846	1106		In Operation
5 Dec 24	851	1111		In Operation
6 Dec 24	857	1112		In Operation
7 Dec 24	862	1118		In Operation
8 Dec 24	880	1138		In Operation
9 Dec 24	845	1102		In Operation
10 Dec 24	-	-		Under Maintenance
11 Dec 24	876	1133		In Operation
12 Dec 24	837	1094		In Operation
13 Dec 24	859	1114		In Operation
14 Dec 24	865	1122		In Operation
15 Dec 24	878	1139		In Operation
16 Dec 24	822	1079		In Operation
17 Dec 24	828	1083		In Operation
18 Dec 24	862	1118		In Operation
19 Dec 24	845	1101		In Operation
20 Dec 24	850	1107		In Operation
21 Dec 24	862	1120		In Operation
22 Dec 24	873	1134		In Operation
23 Dec 24	848	1105		In Operation
24 Dec 24	859	1115		In Operation
25 Dec 24	881	1141		In Operation
26 Dec 24	836	1095		In Operation
27 Dec 24	856	1112		In Operation
28 Dec 24	865	1121		In Operation
29 Dec 24	882	1139		In Operation
30 Dec 24	825	1086		In Operation
31 Dec 24	831	1089		In Operation
<b>Average</b>	853	1111	-	
<b>Min</b>	822	1079	-	
<b>Max</b>	882	1141	-	

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) (a)	Operation Status
<b>Flare 2 – F602</b>				
1 Dec 24	903	1162	8.4	In Operation
2 Dec 24	842	1105		In Operation
3 Dec 24	854	1116		In Operation
4 Dec 24	886	1144		In Operation
5 Dec 24	869	1132		In Operation
6 Dec 24	872	1131		In Operation
7 Dec 24	884	1146		In Operation
8 Dec 24	895	1154		In Operation
9 Dec 24	878	1140		In Operation
10 Dec 24	-	-		Under Maintenance
11 Dec 24	905	1167		In Operation
12 Dec 24	859	1117		In Operation
13 Dec 24	886	1147		In Operation
14 Dec 24	894	1154		In Operation
15 Dec 24	907	1169		In Operation
16 Dec 24	846	1107		In Operation
17 Dec 24	882	1144		In Operation
18 Dec 24	875	1137		In Operation
19 Dec 24	879	1138		In Operation
20 Dec 24	887	1148		In Operation
21 Dec 24	894	1156		In Operation
22 Dec 24	868	1127		In Operation
23 Dec 24	879	1139		In Operation
24 Dec 24	903	1165		In Operation
25 Dec 24	866	1124		In Operation
26 Dec 24	879	1138		In Operation
27 Dec 24	885	1148		In Operation
28 Dec 24	907	1167		In Operation
29 Dec 24	851	1114		In Operation
30 Dec 24	857	1115		In Operation
31 Dec 24	868	1126		In Operation
<b>Average</b>	879	1139	-	
<b>Min</b>	842	1105	-	
<b>Max</b>	907	1169	-	

**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**

<b>Parameters</b>	<b>Monitoring Results</b>
NO <sub>2</sub>	0.063 gs <sup>-1</sup>
CO	0.77 gs <sup>-1</sup>
SO <sub>2</sub>	<0.001 gs <sup>-1</sup>
Benzene	4.8 x 10 <sup>-5</sup> gs <sup>-1</sup>
Vinyl chloride	<8.6 x 10 <sup>-6</sup> gs <sup>-1</sup>
Exhaust gas velocity	8.8 ms <sup>-1</sup>

TABLE D7.6 LANDFILL GAS GENERATOR STACK CONTINUOUS MONITORING RESULTS

Date	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) <sup>(a)</sup>	Operation Status
<b>ENGA</b>			
1 Dec 24	-	8.8	Under Maintenance
2 Dec 24	-		Under Maintenance
3 Dec 24	-		Under Maintenance
4 Dec 24	-		Under Maintenance
5 Dec 24	-		Under Maintenance
6 Dec 24	-		Under Maintenance
7 Dec 24	-		Under Maintenance
8 Dec 24	-		Under Maintenance
9 Dec 24	-		Under Maintenance
10 Dec 24	-		Under Maintenance
11 Dec 24	-		Under Maintenance
12 Dec 24	-		Under Maintenance
13 Dec 24	-		Under Maintenance
14 Dec 24	-		Under Maintenance
15 Dec 24	-		Under Maintenance
16 Dec 24	-		Under Maintenance
17 Dec 24	-		Under Maintenance
18 Dec 24	-		Under Maintenance
19 Dec 24	-		Under Maintenance
20 Dec 24	-		Under Maintenance
21 Dec 24	-		Under Maintenance
22 Dec 24	-		Under Maintenance
23 Dec 24	-		Under Maintenance
24 Dec 24	-		Under Maintenance
25 Dec 24	-		Under Maintenance
26 Dec 24	-		Under Maintenance
27 Dec 24	-		Under Maintenance
28 Dec 24	-		Under Maintenance
29 Dec 24	-		Under Maintenance
30 Dec 24	-		Under Maintenance
31 Dec 24	-		
<b>Average</b>	-	-	
<b>Min</b>	-	-	
<b>Max</b>	-	-	



Date	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) <sup>(a)</sup>	Operation Status
<b>ENGB</b>			
1 Dec 24	865	8.8	In Operation
2 Dec 24	867		In Operation
3 Dec 24	868		In Operation
4 Dec 24	868		In Operation
5 Dec 24	869		In Operation
6 Dec 24	869		In Operation
7 Dec 24	870		In Operation
8 Dec 24	869		In Operation
9 Dec 24	879		In Operation
10 Dec 24	-		Under Maintenance
11 Dec 24	-		Under Maintenance
12 Dec 24	869		In Operation
13 Dec 24	861		In Operation
14 Dec 24	860		In Operation
15 Dec 24	860		In Operation
16 Dec 24	861		In Operation
17 Dec 24	863		In Operation
18 Dec 24	863		In Operation
19 Dec 24	862		In Operation
20 Dec 24	861		In Operation
21 Dec 24	861		In Operation
22 Dec 24	862		In Operation
23 Dec 24	863		In Operation
24 Dec 24	864		In Operation
25 Dec 24	866		In Operation
26 Dec 24	869		In Operation
27 Dec 24	869		In Operation
28 Dec 24	866		In Operation
29 Dec 24	867		In Operation
30 Dec 24	868		In Operation
31 Dec 24	870		
<b>Average</b>	866	-	
<b>Min</b>	860	-	
<b>Max</b>	879	-	

**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.