



ANNEX D7

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

**TABLE D7.1 THERMAL OXIDISER STACK EMISSION MONITORING RESULTS**

<b>Parameters</b>	<b>Monitoring Results</b>
NO <sub>2</sub>	1.18 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	<1.3 x 10 <sup>-4</sup> gs <sup>-1</sup>
Non-Methane Organic Carbons	<0.003 gs <sup>-1</sup>
Ammonia	0.0232 gs <sup>-1</sup>
Exhaust gas velocity	9.3 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 May 24	900	1226	9.3
2 May 24	896	1227	
3 May 24	903	1228	
4 May 24	906	1224	
5 May 24	898	1213	
6 May 24	899	1222	
7 May 24	900	1225	
8 May 24	903	1227	
9 May 24	897	1224	
10 May 24	900	1225	
11 May 24	899	1228	
12 May 24	904	1230	
13 May 24	900	1214	
14 May 24	897	1226	
15 May 24	900	1229	
16 May 24	899	1228	
17 May 24	899	1232	
18 May 24	896	1226	
19 May 24	895	1225	
20 May 24	900	1227	
21 May 24	897	1227	
22 May 24	901	1227	
23 May 24	903	1232	
24 May 24	902	1225	
25 May 24	903	1224	
26 May 24	900	1225	
27 May 24	907	1229	
28 May 24	903	1224	
29 May 24	901	1220	
30 May 24	900	1217	
31 May 24	894	1221	
<b>Average</b>	900	1225	-
<b>Min</b>	894	1213	-
<b>Max</b>	907	1232	-

Notes:

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) (a)
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(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 <sub>2</sub>	0.02 gs <sup>-1</sup>
CO	0.02 gs <sup>-1</sup>
SO <sub>2</sub>	0.06 gs <sup>-1</sup>
Benzene	6.73 x 10 <sup>-4</sup> gs <sup>-1</sup>
Vinyl chloride	<1.01 x 10 <sup>-4</sup> gs <sup>-1</sup>
Non-Methane Organic Carbons	<0.002 gs <sup>-1</sup>
Exhaust gas velocity	8.9 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 May 24	826	1087	8.9	In Operation
2 May 24	862	1126		In Operation
3 May 24	860	1131		In Operation
4 May 24	886	1157		In Operation
5 May 24	843	1105		In Operation
6 May 24	897	1147		In Operation
7 May 24	855	1118		In Operation
8 May 24	891	1156		In Operation
9 May 24	854	1125		In Operation
10 May 24	832	1100		In Operation
11 May 24	845	1101		In Operation
12 May 24	860	1102		In Operation
13 May 24	857	1124		In Operation
14 May 24	857	1124		In Operation
15 May 24	877	1125		In Operation
16 May 24	869	1130		In Operation
17 May 24	880	1142		In Operation
18 May 24	878	1141		In Operation
19 May 24	872	1125		In Operation
20 May 24	895	1159		In Operation
21 May 24	873	1120		In Operation
22 May 24	848	1105		In Operation
23 May 24	860	1120		In Operation
24 May 24	862	1104		In Operation
25 May 24	864	1126		In Operation
26 May 24	884	1140		In Operation
27 May 24	898	1126		In Operation
28 May 24	872	1138		In Operation
29 May 24	885	1151		In Operation
30 May 24	893	1151		In Operation
31 May 24	845	1105		In Operation
<b>Average</b>	867	1126	-	
<b>Min</b>	826	1087	-	
<b>Max</b>	898	1159	-	

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) (a)	Operation Status
<b>Flare 2 – F602</b>				
1 May 24	857	1109	8.9	In Operation
2 May 24	881	1142		In Operation
3 May 24	895	1159		In Operation
4 May 24	936	1189		In Operation
5 May 24	874	1137		In Operation
6 May 24	925	1181		In Operation
7 May 24	879	1136		In Operation
8 May 24	931	1188		In Operation
9 May 24	877	1132		In Operation
10 May 24	856	1117		In Operation
11 May 24	872	1128		In Operation
12 May 24	878	1122		In Operation
13 May 24	893	1157		In Operation
14 May 24	881	1151		In Operation
15 May 24	909	1137		In Operation
16 May 24	895	1153		In Operation
17 May 24	909	1172		In Operation
18 May 24	911	1157		In Operation
19 May 24	899	1144		In Operation
20 May 24	916	1179		In Operation
21 May 24	888	1150		In Operation
22 May 24	869	1130		In Operation
23 May 24	885	1141		In Operation
24 May 24	890	1131		In Operation
25 May 24	901	1159		In Operation
26 May 24	901	1152		In Operation
27 May 24	914	1158		In Operation
28 May 24	905	1171		In Operation
29 May 24	926	1179		In Operation
30 May 24	914	1173		In Operation
31 May 24	904	1169		In Operation
<b>Average</b>	896	1152	-	
<b>Min</b>	856	1109	-	
<b>Max</b>	936	1189	-	

**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>	0.084 gs <sup>-1</sup>
CO	0.808 gs <sup>-1</sup>
SO <sub>2</sub>	<0.001 gs <sup>-1</sup>
Benzene	5.6 x 10 <sup>-5</sup> gs <sup>-1</sup>
Vinyl chloride	<1.04 x 10 <sup>-5</sup> gs <sup>-1</sup>
Non-Methane Organic Carbons	0.0037 gs <sup>-1</sup>
Exhaust gas velocity	10.0 ms <sup>-1</sup>

(a) The Landfill Gas Generator was under maintenance in the reporting period

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 May 24	849	10.0	In Operation
2 May 24	854		In Operation
3 May 24	855		In Operation
4 May 24	-		Under Maintenance
5 May 24	-		Under Maintenance
6 May 24	-		Under Maintenance
7 May 24	-		Under Maintenance
8 May 24	-		Under Maintenance
9 May 24	-		Under Maintenance
10 May 24	-		Under Maintenance
11 May 24	-		Under Maintenance
12 May 24	-		Under Maintenance
13 May 24	858		In Operation
14 May 24	876		In Operation
15 May 24	-		Under Maintenance
16 May 24	-		Under Maintenance
17 May 24	-		Under Maintenance
18 May 24	859		In Operation
19 May 24	861		In Operation
20 May 24	867		In Operation
21 May 24	880		In Operation
22 May 24	868		In Operation
23 May 24	869		In Operation
24 May 24	-		Under Maintenance
25 May 24	-		Under Maintenance
26 May 24	-		Under Maintenance
27 May 24	882		In Operation
28 May 24	876		In Operation
29 May 24	875		In Operation
30 May 24	879		In Operation
31 May 24	881		In Operation
<b>Average</b>	868	-	
<b>Min</b>	849	-	
<b>Max</b>	882	-	



Date	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) <sup>(a)</sup>	Operation Status
<b>ENGB</b>			
1 May 24	870	10.0	In Operation
2 May 24	869		In Operation
3 May 24	870		In Operation
4 May 24	869		In Operation
5 May 24	871		In Operation
6 May 24	871		In Operation
7 May 24	870		In Operation
8 May 24	867		In Operation
9 May 24	864		In Operation
10 May 24	868		In Operation
11 May 24	847		In Operation
12 May 24	848		In Operation
13 May 24	869		In Operation
14 May 24	849		In Operation
15 May 24	862		In Operation
16 May 24	867		In Operation
17 May 24	868		In Operation
18 May 24	870		In Operation
19 May 24	-		Under Maintenance
20 May 24	-		Under Maintenance
21 May 24	-		Under Maintenance
22 May 24	-		Under Maintenance
23 May 24	869		In Operation
24 May 24	869		In Operation
25 May 24	870		In Operation
26 May 24	871		In Operation
27 May 24	873		In Operation
28 May 24	-		Under Maintenance
29 May 24	-		Under Maintenance
30 May 24	-		Under Maintenance
31 May 24	-		Under Maintenance
<b>Average</b>	866	-	
<b>Min</b>	847	-	
<b>Max</b>	873	-	

**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.