



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>	0.03 gs <sup>-1</sup>
CO	0.02 gs <sup>-1</sup>
SO <sub>2</sub>	<0.004 gs <sup>-1</sup>
Benzene	<2.0 x 10 <sup>-4</sup> gs <sup>-1</sup>
Vinyl chloride	<9.0 x 10 <sup>-5</sup> gs <sup>-1</sup>
Exhaust gas velocity	9.2 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 Mar 24	927	1214	
2 Mar 24	Under Maintenance		
3 Mar 24	Under Maintenance		
4 Mar 24	Under Maintenance		
5 Mar 24	Under Maintenance		
6 Mar 24	Under Maintenance		
7 Mar 24	Under Maintenance		
8 Mar 24	Under Maintenance		
9 Mar 24	Under Maintenance		
10 Mar 24	Under Maintenance		
11 Mar 24	Under Maintenance		
12 Mar 24	Under Maintenance		
13 Mar 24	Under Maintenance		
14 Mar 24	Under Maintenance		
15 Mar 24	Under Maintenance		
16 Mar 24	Under Maintenance		
17 Mar 24	Under Maintenance		9.2
18 Mar 24	Under Maintenance		
19 Mar 24	Under Maintenance		
20 Mar 24	Under Maintenance		
21 Mar 24	Under Maintenance		
22 Mar 24	Under Maintenance		
23 Mar 24	Under Maintenance		
24 Mar 24	Under Maintenance		
25 Mar 24	Under Maintenance		
26 Mar 24	Under Maintenance		
27 Mar 24	924	1214	
28 Mar 24	928	1226	
29 Mar 24	925	1230	
30 Mar 24	921	1229	
31 Mar 24	922	1231	
<b>Average</b>	925	1224	-
<b>Min</b>	921	1214	-
<b>Max</b>	928	1231	-

Notes:

<b>Date</b>	<b>Gas Combustion Temperature (°C)</b>	<b>Exhaust Temperature (K)</b>	<b>Exhaust Gas Velocity (ms<sup>-1</sup>) (a)</b>
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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.

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**TABLE D7.3 LANDFILL GAS FLARE STACK EMISSION MONITORING RESULTS**

<b>Parameters</b>	<b>Monitoring Results</b>
NO <sub>2</sub>	0.04 gs <sup>-1</sup>
CO	0.04 gs <sup>-1</sup>
SO <sub>2</sub>	0.005 gs <sup>-1</sup>
Benzene	<1.26 x 10 <sup>-4</sup> gs <sup>-1</sup>
Vinyl chloride	<1.01 x 10 <sup>-4</sup> gs <sup>-1</sup>
Exhaust gas velocity	7.2 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 Mar 24	840	1093	7.2	In Operation
2 Mar 24	850	1103		In Operation
3 Mar 24	880	1088		In Operation
4 Mar 24	840	1073		In Operation
5 Mar 24	860	1103		In Operation
6 Mar 24	830	1083		In Operation
7 Mar 24	870	1103		In Operation
8 Mar 24	880	1093		In Operation
9 Mar 24	830	1088		In Operation
10 Mar 24	860	1103		In Operation
11 Mar 24	870	1073		In Operation
12 Mar 24	870	1113		In Operation
13 Mar 24	830	1073		In Operation
14 Mar 24	850	1083		In Operation
15 Mar 24	870	1063		In Operation
16 Mar 24	870	1113		In Operation
17 Mar 24	870	1113		In Operation
18 Mar 24	870	1113		In Operation
19 Mar 24	870	1113		In Operation
20 Mar 24	870	1113		In Operation
21 Mar 24	860	1103		In Operation
22 Mar 24	850	1103		In Operation
23 Mar 24	880	1093		In Operation
24 Mar 24	860	1083		In Operation
25 Mar 24	850	1093		In Operation
26 Mar 24	820	1103		In Operation
27 Mar 24	830	1093		In Operation
28 Mar 24	830	1103		In Operation
29 Mar 24	850	1093		In Operation
30 Mar 24	850	1083		In Operation
31 Mar 24	860	1083		In Operation
<b>Average</b>	856	1096	-	
<b>Min</b>	820	1063	-	
<b>Max</b>	880	1113	-	

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) (a)	Operation Status
<b>Flare 2 – F602</b>				
1 Mar 24	860	1073	7.2	In Operation
2 Mar 24	850	1083		In Operation
3 Mar 24	840	1073		In Operation
4 Mar 24	840	1093		In Operation
5 Mar 24	860	1063		In Operation
6 Mar 24	830	1053		In Operation
7 Mar 24	830	1073		In Operation
8 Mar 24	840	1093		In Operation
9 Mar 24	840	1083		In Operation
10 Mar 24	830	1083		In Operation
11 Mar 24	870	1083		In Operation
12 Mar 24	860	1073		In Operation
13 Mar 24	830	1083		In Operation
14 Mar 24	830	1093		In Operation
15 Mar 24	840	1053		In Operation
16 Mar 24	860	1063		In Operation
17 Mar 24	840	1063		In Operation
18 Mar 24	840	1053		In Operation
19 Mar 24	850	1083		In Operation
20 Mar 24	840	1073		In Operation
21 Mar 24	870	1093		In Operation
22 Mar 24	880	1093		In Operation
23 Mar 24	880	1103		In Operation
24 Mar 24	840	1083		In Operation
25 Mar 24	840	1093		In Operation
26 Mar 24	830	1073		In Operation
27 Mar 24	850	1063		In Operation
28 Mar 24	830	1053		In Operation
29 Mar 24	830	1063		In Operation
30 Mar 24	860	1073		In Operation
31 Mar 24	860	1083		In Operation
<b>Average</b>	846	1076	-	
<b>Min</b>	830	1053	-	
<b>Max</b>	880	1103	-	

**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>	0.058 gs <sup>-1</sup>
CO	0.760 gs <sup>-1</sup>
SO <sub>2</sub>	<0.001 gs <sup>-1</sup>
Benzene	7.1 x 10 <sup>-5</sup> gs <sup>-1</sup>
Vinyl chloride	<1.04 x 10 <sup>-5</sup> 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 Mar 24	875	10.0	In Operation
2 Mar 24	843		In Operation
3 Mar 24	843		In Operation
4 Mar 24	843		In Operation
5 Mar 24	853		In Operation
6 Mar 24	853		In Operation
7 Mar 24	-		Under Maintenance
8 Mar 24	-		Under Maintenance
9 Mar 24	-		Under Maintenance
10 Mar 24	-		Under Maintenance
11 Mar 24	-		Under Maintenance
12 Mar 24	-		Under Maintenance
13 Mar 24	-		Under Maintenance
14 Mar 24	843		In Operation
15 Mar 24	-		Under Maintenance
16 Mar 24	-		Under Maintenance
17 Mar 24	-		Under Maintenance
18 Mar 24	-		Under Maintenance
19 Mar 24	-		Under Maintenance
20 Mar 24	-		Under Maintenance
21 Mar 24	833		In Operation
22 Mar 24	843		In Operation
23 Mar 24	853		In Operation
24 Mar 24	853		In Operation
25 Mar 24	843		In Operation
26 Mar 24	843		In Operation
27 Mar 24	853		In Operation
28 Mar 24	843		In Operation
29 Mar 24	843		In Operation
30 Mar 24	853		In Operation
31 Mar 24	853		In Operation
<b>Average</b>	848	-	
<b>Min</b>	833	-	
<b>Max</b>	875	-	

Date	Exhaust Temperature (K)	Exhaust Gas Velocity (ms <sup>-1</sup> ) <sup>(a)</sup>	Operation Status
<b>ENGB</b>			
1 Mar 24	-	10.0	Under Maintenance
2 Mar 24	-		Under Maintenance
3 Mar 24	-		Under Maintenance
4 Mar 24	-		Under Maintenance
5 Mar 24	-		Under Maintenance
6 Mar 24	-		Under Maintenance
7 Mar 24	843		In Operation
8 Mar 24	853		In Operation
9 Mar 24	853		In Operation
10 Mar 24	843		In Operation
11 Mar 24	843		In Operation
12 Mar 24	853		In Operation
13 Mar 24	843		In Operation
14 Mar 24	-		Under Maintenance
15 Mar 24	853		In Operation
16 Mar 24	853		In Operation
17 Mar 24	853		In Operation
18 Mar 24	843		In Operation
19 Mar 24	853		In Operation
20 Mar 24	853		In Operation
21 Mar 24	-		Under Maintenance
22 Mar 24	-		Under Maintenance
23 Mar 24	-		Under Maintenance
24 Mar 24	-		Under Maintenance
25 Mar 24	-		Under Maintenance
26 Mar 24	-		Under Maintenance
27 Mar 24	-		Under Maintenance
28 Mar 24	-		Under Maintenance
29 Mar 24	-		Under Maintenance
30 Mar 24	-		Under Maintenance
31 Mar 24	-		Under Maintenance
<b>Average</b>	849	-	
<b>Min</b>	843	-	
<b>Max</b>	853	-	

**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.