



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>	0.67 gs <sup>-1</sup>
CO	<0.02 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	<1.4 x 10 <sup>-4</sup> 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 Dec 25	901	1177	9.3
2 Dec 25	899	1181	
3 Dec 25	903	1193	
4 Dec 25	893	1148	
6 Dec 25	900	1197	
7 Dec 25	901	1195	
8 Dec 25	900	1197	
9 Dec 25	898	1194	
10 Dec 25	898	1193	
11 Dec 25	904	1155	
12 Dec 25	899	1182	
13 Dec 25	917	1195	
14 Dec 25	904	1194	
15 Dec 25	905	1189	
16 Dec 25	904	1160	
17 Dec 25	898	1194	
18 Dec 25	904	1188	
19 Dec 25	897	1187	
20 Dec 25	904	1200	
21 Dec 25	902	1199	
22 Dec 25	900	1198	
23 Dec 25	906	1198	
24 Dec 25	897	1191	
25 Dec 25	907	1198	
26 Dec 25	900	1185	
27 Dec 25	899	1186	
28 Dec 25	899	1190	
29 Dec 25	905	1193	
30 Dec 25	901	1196	
31 Dec 25	899	1195	
<b>Average</b>	901	1189	
<b>Min</b>	893	1148	-
<b>Max</b>	917	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	<0.01 gs <sup>-1</sup>
SO <sub>2</sub>	0.01 gs <sup>-1</sup>
Benzene	<1.20 x 10 <sup>-4</sup> gs <sup>-1</sup>
Vinyl chloride	<9.6 x 10 <sup>-5</sup> gs <sup>-1</sup>
Exhaust gas velocity	9.0 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 25	912	1050	9.0	In Operation
2 Dec 25	914	1063		In Operation
3 Dec 25	922	1066		In Operation
4 Dec 25	928	1082		In Operation
5 Dec 25	921	1091		In Operation
6 Dec 25	931	1073		In Operation
7 Dec 25	911	1084		In Operation
8 Dec 25	903	1059		In Operation
9 Dec 25	884	1030		In Operation
10 Dec 25	885	1050		In Operation
11 Dec 25	900	1030		In Operation
12 Dec 25	895	1035		In Operation
13 Dec 25	906	1035		In Operation
14 Dec 25	913	1072		In Operation
15 Dec 25	927	1080		In Operation
16 Dec 25	904	1052		In Operation
17 Dec 25	928	1086		In Operation
18 Dec 25	884	1019		In Operation
19 Dec 25	894	1062		In Operation
20 Dec 25	895	1043		In Operation
21 Dec 25	936	1104		In Operation
22 Dec 25	931	1103		In Operation
23 Dec 25	918	1069		In Operation
24 Dec 25	920	1054		In Operation
25 Dec 25	886	1041		In Operation
26 Dec 25	925	1092		In Operation
27 Dec 25	884	1046		In Operation
28 Dec 25	895	1043		In Operation
29 Dec 25	912	1039		In Operation
30 Dec 25	893	1037		In Operation
31 Dec 25	901	1043		In Operation
<b>Average</b>	908	1059	-	
<b>Min</b>	884	1019	-	
<b>Max</b>	936	1104	-	

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 25	933	1084	9.0	In Operation
2 Dec 25	903	1040		In Operation
3 Dec 25	924	1048		In Operation
4 Dec 25	941	1111		In Operation
5 Dec 25	945	1095		In Operation
6 Dec 25	914	1060		In Operation
7 Dec 25	925	1050		In Operation
8 Dec 25	959	1119		In Operation
9 Dec 25	926	1078		In Operation
10 Dec 25	958	1094		In Operation
11 Dec 25	949	1085		In Operation
12 Dec 25	952	1119		In Operation
13 Dec 25	925	1081		In Operation
14 Dec 25	910	1052		In Operation
15 Dec 25	914	1060		In Operation
16 Dec 25	941	1066		In Operation
17 Dec 25	927	1093		In Operation
18 Dec 25	905	1053		In Operation
19 Dec 25	917	1042		In Operation
20 Dec 25	916	1048		In Operation
21 Dec 25	960	1095		In Operation
22 Dec 25	958	1121		In Operation
23 Dec 25	907	1040		In Operation
24 Dec 25	922	1046		In Operation
25 Dec 25	930	1079		In Operation
26 Dec 25	909	1062		In Operation
27 Dec 25	921	1053		In Operation
28 Dec 25	937	1060		In Operation
29 Dec 25	950	1113		In Operation
30 Dec 25	920	1081		In Operation
31 Dec 25	935	1078		In Operation
<b>Average</b>	930	1075	-	
<b>Min</b>	903	1040	-	
<b>Max</b>	960	1121	-	

**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 CONTINUOUS MONITORING RESULTS**

<b>Date</b>	<b>Gas Combustion Temperature (°C)</b>	<b>Operation Status</b>
<b>ENGA</b>		
1 Dec 25	-	Under Maintenance
2 Dec 25	-	Under Maintenance
3 Dec 25	-	Under Maintenance
4 Dec 25	-	Under Maintenance
5 Dec 25	-	Under Maintenance
6 Dec 25	-	Under Maintenance
7 Dec 25	-	Under Maintenance
8 Dec 25	-	Under Maintenance
9 Dec 25	-	Under Maintenance
10 Dec 25	-	Under Maintenance
11 Dec 25	-	Under Maintenance
12 Dec 25	-	Under Maintenance
13 Dec 25	-	Under Maintenance
14 Dec 25	-	Under Maintenance
15 Dec 25	-	Under Maintenance
16 Dec 25	-	Under Maintenance
17 Dec 25	-	Under Maintenance
18 Dec 25	865	In operation
19 Dec 25	-	Under Maintenance
20 Dec 25	-	Under Maintenance
21 Dec 25	-	Under Maintenance
22 Dec 25	-	Under Maintenance
23 Dec 25	-	Under Maintenance
24 Dec 25	-	Under Maintenance
25 Dec 25	-	Under Maintenance
26 Dec 25	-	Under Maintenance
27 Dec 25	-	Under Maintenance
28 Dec 25	-	Under Maintenance
29 Dec 25	-	Under Maintenance
30 Dec 25	-	Under Maintenance
31 Dec 25	-	Under Maintenance
<b>Average</b>	865	
<b>Min</b>	865	
<b>Max</b>	865	

Date	Gas Combustion Temperature (°C)	Operation Status
<b>ENGB</b>		
1 Dec 25	863	In Operation
2 Dec 25	864	In Operation
3 Dec 25	852	In Operation
4 Dec 25	858	In Operation
5 Dec 25	861	In Operation
6 Dec 25	855	In Operation
7 Dec 25	866	In Operation
8 Dec 25	863	In Operation
9 Dec 25	848	In Operation
10 Dec 25	854	In Operation
11 Dec 25	858	In Operation
12 Dec 25	862	In Operation
13 Dec 25	862	In Operation
14 Dec 25	838	In Operation
15 Dec 25	861	In Operation
16 Dec 25	863	In Operation
17 Dec 25	860	In Operation
18 Dec 25	862	In Operation
19 Dec 25	867	In Operation
20 Dec 25	859	In Operation
21 Dec 25	865	In Operation
22 Dec 25	862	In Operation
23 Dec 25	860	In Operation
24 Dec 25	867	In Operation
25 Dec 25	856	In Operation
26 Dec 25	858	In Operation
27 Dec 25	847	In Operation
28 Dec 25	855	In Operation
29 Dec 25	863	In Operation
30 Dec 25	857	In Operation
31 Dec 25	855	
<b>Average</b>	859	
<b>Min</b>	838	
<b>Max</b>	867	