



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	0.90 gs ⁻¹
CO	0.02 gs ⁻¹
SO ₂	<0.01 gs ⁻¹
Benzene	<2.0 x 10 ⁻⁴ gs ⁻¹
Vinyl chloride	<1.2 x 10 ⁻⁴ gs ⁻¹
Exhaust gas velocity	10.0 ms ⁻¹

TABLE D7.2 THERMAL OXIDISER STACK CONTINUOUS MONITORING RESULTS

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms ⁻¹) ^(a)
1 Jun 24	897	1223	10.0
2 Jun 24	903	1225	
3 Jun 24	907	1219	
4 Jun 24	Under maintenance		
5 Jun 24	Under maintenance		
6 Jun 24	Under maintenance		
7 Jun 24	Under maintenance		
8 Jun 24	Under maintenance		
9 Jun 24	Under maintenance		
10 Jun 24	Under maintenance		
11 Jun 24	Under maintenance		
12 Jun 24	Under maintenance		
13 Jun 24	Under maintenance		
14 Jun 24	Under maintenance		
15 Jun 24	Under maintenance		
16 Jun 24	Under maintenance		
17 Jun 24	Under maintenance		
18 Jun 24	Under maintenance		
19 Jun 24	Under maintenance		
20 Jun 24	Under maintenance		
21 Jun 24	Under maintenance		
22 Jun 24	Under maintenance		
23 Jun 24	Under maintenance		
24 Jun 24	900	1215	
25 Jun 24	898	1221	
26 Jun 24	897	1217	
27 Jun 24	898	1214	
28 Jun 24	899	1213	
29 Jun 24	900	1210	
30 Jun 24	902	1213	
Average	900	1217	-
Min	897	1210	-
Max	907	1225	-

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	0.02 gs ⁻¹
CO	0.02 gs ⁻¹
SO ₂	0.05 gs ⁻¹
Benzene	<1.21 x 10 ⁻⁴ gs ⁻¹
Vinyl chloride	<9.7 x 10 ⁻⁵ gs ⁻¹
Exhaust gas velocity	9.1 ms ⁻¹

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 Jun 24	839	1106	9.1	In Operation
2 Jun 24	876	1140		In Operation
3 Jun 24	868	1136		In Operation
4 Jun 24	896	1164		In Operation
5 Jun 24	840	1108		In Operation
6 Jun 24	899	1164		In Operation
7 Jun 24	867	1130		In Operation
8 Jun 24	888	1151		In Operation
9 Jun 24	868	1131		In Operation
10 Jun 24	836	1102		In Operation
11 Jun 24	850	1115		In Operation
12 Jun 24	866	1129		In Operation
13 Jun 24	861	1124		In Operation
14 Jun 24	868	1135		In Operation
15 Jun 24	891	1158		In Operation
16 Jun 24	867	1132		In Operation
17 Jun 24	895	1162		In Operation
18 Jun 24	883	1149		In Operation
19 Jun 24	868	1134		In Operation
20 Jun 24	904	1168		In Operation
21 Jun 24	879	1143		In Operation
22 Jun 24	861	1127		In Operation
23 Jun 24	874	1137		In Operation
24 Jun 24	859	1122		In Operation
25 Jun 24	863	1126		In Operation
26 Jun 24	890	1156		In Operation
27 Jun 24	907	1173		In Operation
28 Jun 24	875	1139		In Operation
29 Jun 24	882	1145		In Operation
30 Jun 24	906	1171		In Operation
Average	874	1139	-	
Min	836	1102	-	
Max	907	1173	-	

Date	Gas Combustion Temperature (°C)	Exhaust Temperature (K)	Exhaust Gas Velocity (ms ⁻¹) (a)	Operation Status
Flare 2 – F602				
1 Jun 24	868	1136	9.1	In Operation
2 Jun 24	886	1153		In Operation
3 Jun 24	892	1159		In Operation
4 Jun 24	951	1214		In Operation
5 Jun 24	870	1138		In Operation
6 Jun 24	930	1194		In Operation
7 Jun 24	879	1143		In Operation
8 Jun 24	940	1205		In Operation
9 Jun 24	883	1148		In Operation
10 Jun 24	856	1124		In Operation
11 Jun 24	886	1151		In Operation
12 Jun 24	875	1142		In Operation
13 Jun 24	900	1165		In Operation
14 Jun 24	892	1158		In Operation
15 Jun 24	918	1183		In Operation
16 Jun 24	899	1167		In Operation
17 Jun 24	910	1174		In Operation
18 Jun 24	925	1192		In Operation
19 Jun 24	914	1180		In Operation
20 Jun 24	929	1195		In Operation
21 Jun 24	884	1151		In Operation
22 Jun 24	866	1131		In Operation
23 Jun 24	884	1149		In Operation
24 Jun 24	888	1156		In Operation
25 Jun 24	914	1177		In Operation
26 Jun 24	906	1170		In Operation
27 Jun 24	928	1191		In Operation
28 Jun 24	909	1172		In Operation
29 Jun 24	926	1191		In Operation
30 Jun 24	921	1188		In Operation
Average	901	1167	-	
Min	856	1124	-	
Max	951	1214	-	

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	0.043 gs ⁻¹
CO	0.711 gs ⁻¹
SO ₂	<0.001 gs ⁻¹
Benzene	5.5 x 10 ⁻⁵ gs ⁻¹
Vinyl chloride	<9.6 x 10 ⁻⁶ gs ⁻¹
Exhaust gas velocity	10.2 ms ⁻¹

TABLE D7.6 LANDFILL GAS GENERATOR STACK CONTINUOUS MONITORING RESULTS

Date	Exhaust Temperature (K)	Exhaust Gas Velocity (ms ⁻¹) ^(a)	Operation Status
ENGA			
1 Jun 24	879	10.2	In Operation
2 Jun 24	882		In Operation
3 Jun 24	854		In Operation
4 Jun 24	859		In Operation
5 Jun 24	855		In Operation
6 Jun 24	857		In Operation
7 Jun 24	849		In Operation
8 Jun 24	850		In Operation
9 Jun 24	850		In Operation
10 Jun 24	859		In Operation
11 Jun 24	858		In Operation
12 Jun 24	884		In Operation
13 Jun 24	-		Under Maintenance
14 Jun 24	-		Under Maintenance
15 Jun 24	-		Under Maintenance
16 Jun 24	-		Under Maintenance
17 Jun 24	-		Under Maintenance
18 Jun 24	-		Under Maintenance
19 Jun 24	-		Under Maintenance
20 Jun 24	-		Under Maintenance
21 Jun 24	-		Under Maintenance
22 Jun 24	-		Under Maintenance
23 Jun 24	-		Under Maintenance
24 Jun 24	854		In Operation
25 Jun 24	849		In Operation
26 Jun 24	850		In Operation
27 Jun 24	847		In Operation
28 Jun 24	854		In Operation
29 Jun 24	846		In Operation
30 Jun 24	-		Under Maintenance
Average	858	-	
Min	846	-	
Max	884	-	

Date	Exhaust Temperature (K)	Exhaust Gas Velocity (ms ⁻¹) ^(a)	Operation Status
ENGB			
1 Jun 24	-	10.2	Under Maintenance
2 Jun 24	-		Under Maintenance
3 Jun 24	-		Under Maintenance
4 Jun 24	-		Under Maintenance
5 Jun 24	-		Under Maintenance
6 Jun 24	-		Under Maintenance
7 Jun 24	-		Under Maintenance
8 Jun 24	-		Under Maintenance
9 Jun 24	-		Under Maintenance
10 Jun 24	-		Under Maintenance
11 Jun 24	-		Under Maintenance
12 Jun 24	851		In Operation
13 Jun 24	851		In Operation
14 Jun 24	851		In Operation
15 Jun 24	847		In Operation
16 Jun 24	851		In Operation
17 Jun 24	857		In Operation
18 Jun 24	856		In Operation
19 Jun 24	850		In Operation
20 Jun 24	856		In Operation
21 Jun 24	856		In Operation
22 Jun 24	856		In Operation
23 Jun 24	857		In Operation
24 Jun 24	873		In Operation
25 Jun 24	871		In Operation
26 Jun 24	867		In Operation
27 Jun 24	874		In Operation
28 Jun 24	872		In Operation
29 Jun 24	872		In Operation
30 Jun 24	873		In Operation
Average	860	-	
Min	847	-	
Max	874	-	

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.