

Metro Vancouver - Waste-to-Energy Facility CONTINUOUS EMISSION MONITORING SYSTEM

July 2024

1. Monthly Summary Report

Parameter	Compliance Limit (mg/dscm)	Compliance Period	Maximum Measurement (mg/dscm)		
			Unit 1	Unit 2	Unit 3
CO	50	24 hr	42.3	38.2	40.3
SO ₂	200	24 hr	111.7	140.7	110.1
NOx	190	24 hr	139.8	161.7	175.6
THC	10	24 hr	0.22	0.15	3.65
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			1.25	0.66	1.51
CO			28.1	28.3	28.8
THC			0.08	0.02	1.23
SO ₂			69.9	86.5	77.4
NOx			130.3	133.8	149.8

Interim Discharge Limits will apply until and including the following dates, at which point the Discharge Limits and Response Limits will apply

a. HCl – March 3, 2025

b. SO₂ – March 3, 2025

2. Monthly Exceedance Report

2.a. Discharge Limit Exceedances

Unit	Compliance Parameter	Discharge Limit (mg/dscm)	Date	Exceedance Level
	Reason/Action Taken			

2.b. Response Limit Exceedances

Compliance Parameter: Carbon Monoxide

Response Limit: 100 mg/dscm 1/2 hour average

Unit No. 1

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
12-Jul 06:00	30 min	105.2	Started gas burners, adjusted airflow, modified feed rate.
12-Jul 14:30	30 min	107.5	Started gas burners, adjusted airflow, modified feed rate.
18-Jul 14:30	30 min	153.3	Adjusted airflow, modified feed rate.
26-Jul 11:00	30 min	111.5	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
26-Jul 12:30	30 min	111.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
31-Jul 01:00	30 min	100.4	Started gas burners, adjusted airflow, modified feed rate.

Compliance Parameter: Carbon Monoxide
Response Limit: 100 mg/dscm 1/2 hour average
Unit No. 2

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
16-Jul 12:00	60 min	136.0	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
16-Jul 20:30	30 min	110.8	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
19-Jul 14:30	30 min	105.0	Started gas burners, adjusted airflow, modified feed rate.
24-Jul 19:00	30 min	116.6	Induced draft fan trip. Started gas burners, adjusted airflow.

Compliance Parameter: Carbon Monoxide
Response Limit: 100 mg/dscm 1/2 hour average
Unit No. 3

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
6-Jul 19:00	60 min	221.0	Started gas burners, adjusted airflow, modified feed rate.
7-Jul 02:30	30 min	108.1	Started gas burners, adjusted airflow, modified feed rate.
8-Jul 19:00	30 min	162.9	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
12-Jul 10:30	30 min	105.2	Started gas burners, adjusted airflow, modified feed rate.
12-Jul 21:30	60 min	203.1	Started gas burners, adjusted airflow, modified feed rate.
12-Jul 22:30	30 min	100.5	Started gas burners, adjusted airflow, modified feed rate.
13-Jul 02:30	30 min	159.3	Started gas burners, adjusted airflow, modified feed rate.
13-Jul 14:30	30 min	121.8	Started gas burners, adjusted airflow, modified feed rate.
13-Jul 23:30	30 min	117.6	Started gas burners, adjusted airflow, modified feed rate.
15-Jul 15:00	30 min	148.0	Started gas burners, adjusted airflow, modified feed rate.
17-Jul 06:30	30 min	119.7	Started gas burners, adjusted airflow, modified feed rate.
22-Jul 10:00	30 min	109.7	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
30-Jul 05:30	30 min	105.8	Started gas burners, adjusted airflow, modified feed rate.

Compliance Parameter: Opacity
Response Limit: 5% 1/2 hour average
Unit No. 1

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
20-Jul 12:00	30 min	5.5	Inspected fabric filter compartments, checked instrumentation

2.c. Transient Conditions

Gas burners unavailable during shutdown and furnace temperature average below 800C

Unit	Duration	Date	Time	
Cause				
Action Taken to Restore Steady State Conditions				
Remedial Action Planned and/or Taken				

3. CEMS Availability

Analyser	Required Availability (% hours per quarter)	Averaging Period	Monthly Availability		
			Unit 1	Unit 2	Unit 3
Opacity	90	Hour	100	100	100
Oxygen	90	Hour	100	100	99
CO	90	Hour	100	100	99
SO ₂	90	Hour	100	100	99
NOx	90	Hour	100	100	99
THC	90	Hour	100	100	99
Stack Flow	90	Hour	100	100	100

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
0.63	Poor refuse quality	July 5
76.98	Ash crane maintenance	July 8-11
2.58	Fabric filter bag replacement	July 15
0.97	Feed chute plug	July 18
0.80	Boiler inspection	July 20
0.08	Forced draft fan trip	July 22
35.91	Boiler cleaning	July 22 - 24
0.92	BC Hydro power interruption	July 26
0.85	BC Hydro power interruption	July 31

Unit 2

Duration in Hours	Reason	Date
0.65	Poor refuse quality	July 5
87.86	Ash crane maintenance	July 8 - 12
44.18	Boiler cleaning	July 13 - 15
0.40	Forced draft fan trip	July 15
0.25	Forced draft fan trip	July 18
0.92	BC Hydro power interruption	July 26
0.50	Induced draft fan trip	July 26
0.37	Feeder hang up	July 28

Unit 3

Duration in Hours	Reason	Date
0.70	Poor refuse quality	July 5
1.20	Fabric filter bag replacement	July 7
83.93	Ash crane maintenance	July 8 - 12
0.62	Forced draft fan trip	July 16
0.92	BC Hydro power interruption	July 26
0.40	BC Hydro power interruption	July 31

5. Facility Bypass and Emergency/spill Event Report

Date/Time	Cause	Duration
	Action Taken	

6. Other Data

		UNIT 1	UNIT 2	UNIT 3
Waste Received	tonnes	18,648		
Waste Processed	tonnes/day	209	202	226
Maximum Waste Processed	tonnes/day	269	269	271
Natural Gas Consumed	m ³ /day	4,734		
	m ³ /month	146,741		
Fly ash disposed	tonnes	780		
Bottom ash disposed	tonnes	3,355		

7. Complaints and Responses

Date/Time	Complaint	Action Taken

ATTACHMENT 2

July 2024 - Monthly CEMS Data

Date	Boiler #1								Boiler #2								Boiler #3							
	Stack Temp	O ₂ (%)	SO ₂ (mg/m ³)	NO _x (mg/m ³)	CO (mg/m ³)	THC (mg/m ³)	Opacity (%)	Furnace Temp	Stack Temp	O ₂ (%)	SO ₂ (mg/m ³)	NO _x (mg/m ³)	CO (mg/m ³)	THC (mg/m ³)	Opacity (%)	Furnace Temp	Stack Temp	O ₂ (%)	SO ₂ (mg/m ³)	NO _x (mg/m ³)	CO (mg/m ³)	THC (mg/m ³)	Opacity (%)	Furnace Temp
7/1/24	159	10.3	67.8	129	29.3	0.06	1.40	922	154	11.3	46.9	130.1	31.9	0.00	0.59	927	158	9.6	83.9	138.6	27.5	1.92	1.35	913
7/2/24	158	9.9	55.3	127.7	21.4	0.03	1.40	950	153	10.8	48.2	132	24.2	0.00	0.65	961	156	8.8	74.4	154.2	18.2	1.75	1.41	940
7/3/24	158	10.3	66.5	128.4	25.8	0.00	1.53	934	153	10.5	60.8	125.8	32	0.00	0.66	964	157	8.5	93.1	139.1	21.4	0.00	1.43	949
7/4/24	156	10	91.8	129	33.9	0.06	1.50	954	152	10	82.9	132.9	27	0.00	0.62	995	155	8.8	93.3	139.8	33.7	1.13	1.43	951
7/5/24	153	9.9	69	131.1	23.7	0.00	1.56	949	153	10.6	66.7	142	24.7	0.00	0.61	955	155	9.1	94.8	154	26.7	0.00	1.35	917
7/6/24	150	10	90.4	128.1	26	0.00	1.43	954	151	10.5	89.3	140.9	27.1	0.00	0.61	967	155	8.7	110.1	164.6	30.6	0.00	1.34	940
7/7/24	154	10.3	79.4	127.2	25.7	0.00	1.67	921	153	10.4	86.5	134.1	24.4	0.00	0.62	949	155	9.1	107	159.3	32.5	0.00	2.18	905
7/8/24	149	11.1	29.4	120.8	16.6	0.01	1.48	912																
7/9/24																								
7/10/24																								
7/11/24																								
7/12/24	158	10.1	44.6	139.8	42.2	0.08	1.72	930																
7/13/24	155	10.2	37.4	131.1	30.5	0.10	1.66	915									155	10.3	38.5	140.6	40.3	3.65	1.48	855
7/14/24	150	9.5	80.3	129.3	27	0.07	1.70	943									157	9.2	85.3	166	31.4	1.98	1.50	900
7/15/24	150	10.4	49	132.4	29.6	0.11	1.56	916									159	9.4	58.3	164.5	37.6	1.25	1.54	894
7/16/24	154	10.4	87.3	132.4	25.5	0.21	0.90	917	151	10.6	140.7	131	38.2	0.06	0.69	937	158	9	93.8	168	23.7	2.56	1.52	923
7/17/24	152	10.5	48.3	132.3	27.6	0.16	0.86	922	150	10.6	90.3	142.6	31.1	0.01	0.68	946	158	9	68.9	167.2	29.2	1.33	1.49	933
7/18/24	152	10.5	57.2	135	28.9	0.07	0.88	936	152	10.7	96	161.7	28.2	0.15	0.67	940	159	9	71.7	175.6	26.9	1.67	1.50	930
7/19/24	151	10.3	56.3	119.8	29.3	0.13	0.93	929	153	10.8	97.1	144.5	33.5	0.03	0.67	924	157	8.9	73.1	160	27.4	1.95	1.52	928
7/20/24	147	10.7	51.1	120.1	22.8	0.20	1.95	902	153	10.5	97.2	132.4	24.7	0.03	0.70	930	159	8.8	79.3	156.3	22.6	1.67	1.52	938
7/21/24	147	11.5	43.6	118.2	26.1	0.22	1.50	914	152	10.6	89.9	130.2	28.9	0.02	0.65	925	158	9	78.9	165.9	27.4	2.03	1.53	922
7/22/24									152	10.4	79.5	129.7	24.6	0.00	0.66	931	157	9.6	49.8	142	28.8	0.00	1.55	898
7/23/24									151	10.9	108.1	129	28.3	0.00	0.70	930	156	9.1	107	139.3	31.8	0.00	1.59	932
7/24/24	152	11.8	111.7	139.3	32	0.00	0.90	928	150	10.6	119.2	126.5	29.6	0.00	0.71	954	156	9.5	82.4	137.3	28.2	0.00	1.62	904
7/25/24	151	10.7	108	138.4	25.1	0.00	0.87	939	153	10.5	96.1	131.2	24	0.00	0.69	953	156	9.4	68.6	140	24.9	0.00	1.59	917
7/26/24	153	9.8	98.3	136.9	33.9	0.10	0.85	939	151	10.8	86.4	129.5	29.8	0.01	0.70	938	157	9.4	68.7	142	31.6	1.97	1.58	914
7/27/24	151	9.7	100.3	126.8	24.2	0.06	0.85	935	152	10.6	93	128.7	24	0.00	0.66	940	157	9.2	78.7	139.1	23.3	1.32	1.54	922
7/28/24	152	9.6	99	129.6	20.5	0.04	0.88	949	151	10.5	103.1	131.1	23.8	0.01	0.68	936	157	9.1	80.7	136.3	26.6	1.84	1.62	925
7/29/24	153	9.9	71.3	131.4	28.9	0.03	0.85	935	152	10.4	69.2	129.3	30.2	0.01	0.63	937	156	9	61.7	136.5	29	1.77	1.62	939
7/30/24	154	9.9	74.4	134.6	32.2	0.13	0.86	933	151	9.8	83.5	129.3	27	0.01	0.62	936	156	8.8	62	132.9	32.4	0.79	1.55	918
7/31/24	155	10.7	49.8	138.2	42.3	0.14	0.90	892	152	10.5	59.7	131.8	34.6	0.01	0.71	921	156	8.9	49	136.2	34.5	1.41	0.84	914
Average	153	10.3	69.9	130.3	28.1	0.08	1.25	930	152.0	10.6	86.5	133.8	28.3	0.02	0.66	943.3	156.7	9.1	77.4	149.8	28.8	1.23	1.51	920.0
Min	147	9.5	29.4	118.2	16.6	0.00	0.85	892	150.0	9.8	46.9	125.8	23.8	0.00	0.59	921.0	155.0	8.5	38.5	132.9	18.2	0.00	0.84	855.0
Max	159	11.8	111.7	139.8	42.3	0.22	1.95	954	154.0	11.3	140.7	161.7	38.2	0.15	0.71	995.0	159.0	10.3	110.1	175.6	40.3	3.65	2.18	951.0
St Dev	3.2	0.55	23.21	5.97	5.82	0.07	0.37	15.9	1.07	0.29	21.75	7.95	3.94	0.03	0.04	17.28	1.28	0.37	18.17	13.24	4.96	0.98	0.21	20.21

Blank days have less than 18 hours of valid data due to unit shut downs or analyzer outage/maintenance.
 According to standard guidelines used by Metro Vancouver Air Quality Policy and Environment Division, a minimum of 18 hours of valid data is required to generate a valid 24hr average.