

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

May 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	41.3	41.1	38.2
SO ₂	200	24 hr	96.8	93.4	99.4
NOx	190	24 hr	153.6	151.0	161.7
THC	10	24 hr	0.27	0.13	1.99
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			1.18	0.66	0.84
CO			31.6	25.5	30.1
THC			0.10	0.01	0.71
SO ₂			66.6	64.5	53.8
NOx			133.7	134.1	142.3

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
6-May 08:00	30 min	124.1	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate.
15-May 09:00	30 min	126.1	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
22-May 23:00	30 min	135.5	Started gas burners, adjusted airflow, modified feed rate.
23-May 18:00	30 min	110.0	Started gas burners, adjusted airflow, modified feed rate.
28-May 16:00	30 min	109.6	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
2-May 06:00	30 min	125.4	Started gas burners, adjusted airflow, modified feed rate.
4-May 06:30	30 min	115.7	Started gas burners, adjusted airflow, modified feed rate.
7-May 14:00	30 min	117.0	Started gas burners, adjusted airflow, modified feed rate.
30-May 17:00	30 min	125.3	Started gas burners, adjusted airflow, modified feed rate.
30-May 19:30	30 min	100.7	Started gas burners, adjusted airflow, modified feed rate.
31-May 04:30	30 min	190.8	Started gas burners, adjusted airflow, modified feed rate.

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-May 10:00	30 min	100.8	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
9-May 15:00	30 min	106.0	Adjusted airflow.
10-May 15:00	30 min	238.7	Started gas burners, adjusted airflow, modified feed rate.
14-May 19:00	30 min	108.6	Started gas burners, adjusted airflow, modified feed rate.
17-May 00:00	30 min	134.6	Started gas burners, adjusted airflow, modified feed rate.
21-May 23:30	30 min	116.3	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
22-May 18:30	30 min	166.8	Started gas burners, adjusted airflow, modified feed rate.
23-May 05:00	31 min	141.6	Started gas burners, adjusted airflow, modified feed rate.
27-May 06:30	30 min	118.5	Started gas burners, adjusted airflow, modified feed rate.
28-May 05:00	30 min	119.0	Started gas burners, adjusted airflow, modified feed rate.

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

Analyzer	Required Availability (% hours per quarter)	Averaging Period	Monthly Availability		
			Unit 1	Unit 2	Unit 3
Opacity	90	Hour	100	100	100
Oxygen	90	Hour	98	100	99
CO	90	Hour	98	100	99
SO ₂	90	Hour	98	100	99
NOx	90	Hour	98	100	99
THC	90	Hour	98	100	99
Stack Flow	90	Hour	100	100	100

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
21.37	Grate bar repair	May 1
1.00	Fabric filter inspection	May 11
0.13	Forced draft fan trip	May 22
0.18	Induced draft fan trip	May 24
3.58	Carbon feed maintenance	May 29
0.23	Boiler trip	May 30

Unit 2

Duration in Hours	Reason	Date
0.25	Boiler trip	May 7
2.27	CEMS maintenance	May 9
0.28	Boiler inspection	May 28
3.63	Carbon feed maintenance	May 29
9.65	Boiler cleaning	May 29

Unit 3

Duration in Hours	Reason	Date
0.35	Fabric filter inspection	May 12
0.58	Induced draft fan trip	May 22
17.70	Fabric filter bag replacement	May 25-26
3.55	Carbon feed maintenance	May 29

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	24,125		
Waste Processed	tonnes/day	244	231	243
Maximum Waste Processed	tonnes/day	260	250	259
		Units 1, 2, and 3		
Natural Gas Consumed	m ³ /day	1,890		
	m ³ /month	58,596		
Fly ash disposed	tonnes	897		
Bottom ash disposed	tonnes	3,863		

7. Complaints and Responses

Date/Time	Complaint	Action Taken

ATTACHMENT 2

May 2022 - 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
5/1/24								150	10.7	52.6	126.2	29.8	0.00	0.63	930	156	9.4	48.6	131.1	32	0.59	0.82	923	
5/2/24	154	10.4	86.8	138.1	41.3	0.18	1.09	909	151	10.5	53.9	128.9	33.7	0.03	0.67	939	158	8.9	48.4	136.4	26.7	1.20	0.83	945
5/3/24	153	10.2	96.8	128.2	28.5	0.07	1.09	946	152	10.5	65.6	129.5	24.8	0.00	0.64	938	160	9.3	57.4	133.5	29.7	0.95	0.79	948
5/4/24	154	9.9	91.4	129	32.9	0.13	1.04	949	151	10.6	61.6	127.7	30.1	0.02	0.58	911	156	8	57.5	135.1	27.8	0.57	0.74	959
5/5/24	154	10.2	79	129.1	27.9	0.12	0.99	940	149	10.3	49.4	128	23.2	0.01	0.54	940	155	8.3	41	131.2	32.6	1.99	0.78	952
5/6/24	153	10	67.1	136.6	32.4	0.00	1.08	938	149	10.2	43.9	129.3	28.1	0.01	0.57	952	156	8.5	32.9	140.7	31.4	0.32	0.79	939
5/7/24	154	10.3	83.5	135	31.5	0.12	1.11	935	148	10.2	93.4	130.5	27.4	0.13	0.63	969	154	9.1	51.2	139.1	30.6	0.75	0.80	932
5/8/24	155	10.5	74.7	141.4	28.8	0.12	1.14	945	149	10.6	62.4	135	24.1	0.00	0.65	970	156	8.3	48	149	22.6	1.47	0.82	960
5/9/24	155	10.2	77.4	137.7	26.9	0.11	1.23	950	149	10.8	57.2	137.2	23.2	0.03	0.66	958	156	9.6	47.6	145.4	23.9	0.36	0.82	940
5/10/24	153						1.41	949	150	10.6	66.4	148.1	27.1	0.03	0.63	946	156	9.1	56.3	153.2	30.5	0.65	0.79	954
5/11/24	153	9.9	96	134.3	35.5	0.12	1.67	939	152	9.8	59.5	151	18.3	0.01	0.63	996	157	9.7	75.3	142.9	30.9	1.21	0.79	940
5/12/24	155	10	73.7	135.1	34.2	0.12	1.98	926	153	10	74.7	131.9	21.7	0.00	0.59	971	157	8.7	65.6	140.9	36.4	0.92	0.77	938
5/13/24	153	10.1	62.7	127.4	32.6	0.00	1.50	922	152	10.4	61.3	131.9	19.6	0.00	0.61	946	156	9.4	45.9	131.4	31	0.00	0.75	909
5/14/24	152	9.9	75.4	132.1	28.6	0.11	0.99	946	153	10.6	70.2	134.4	19.5	0.01	0.62	966	157	9.5	77.1	145.8	25.7	0.87	0.79	937
5/15/24	153	9.9	52	131	29.6	0.00	1.07	950	153	10	65.3	147.9	20.3	0.00	0.63	989	157	9.1	47.4	154.4	23.1	0.00	0.83	948
5/16/24	152	10.2	50.6	128.9	29.9	0.00	1.02	939	152	10.3	54.5	133	24.2	0.00	0.61	955	155	8.9	43.2	141	28.1	0.00	0.82	946
5/17/24	154	10.1	48.6	127.4	34.3	0.08	1.09	938	153	10.2	56.2	137.9	23.9	0.03	0.62	955	156	9	42.4	144.5	35.2	0.61	0.89	936
5/18/24	155	9.9	58.7	129.8	27.9	0.11	1.25	946	153	10.5	66	138.1	20.3	0.01	0.64	957	156	9.2	49	140	27.4	0.31	0.85	935
5/19/24	156	10.1	59.6	135.1	22.3	0.11	1.24	944	154	10.7	67.2	135	21.4	0.00	0.62	941	157	9.6	54.5	135.2	30.7	0.40	0.81	925
5/20/24	156	9.8	44.6	135.3	22.3	0.11	1.21	933	153	10	53.6	137.5	23.5	0.00	0.61	960	157	8.9	48.5	142.3	29.3	0.70	0.79	941
5/21/24	155	9.8	60.9	132.2	27.9	0.13	1.19	964	152	9.8	78.1	140.3	23.1	0.01	0.59	980	155	8.5	55.1	146.6	33.3	1.44	0.82	944
5/22/24	155	9.6	61.5	130.7	35.6	0.27	1.21	958	152	10.1	50.4	126.8	30.5	0.01	0.63	938	157	8.4	44.9	144.1	35.1	0.74	0.80	919
5/23/24	154	10.2	49.8	135.2	39.9	0.08	1.08	940	151	10.7	52.9	131.5	29.5	0.00	0.60	922	155	9	53.4	152.5	38.2	0.53	0.70	919
5/24/24	153	9.8	56.7	133.4	28.3	0.07	1.01	952	150	9.9	62.6	130.6	22.6	0.00	0.69	956	156	8.7	55.1	161.7	37.8	0.76	0.62	922
5/25/24	153	9.7	82.3	129.7	33.7	0.10	1.05	941	152	10.1	82.5	134.8	27.8	0.00	0.79	927								
5/26/24	155	10	70.5	134.2	27.9	0.08	1.12	945	152	10.2	74.7	131.9	24	0.00	0.84	940								
5/27/24	156	10.3	49.4	134.5	35.5	0.11	1.08	941	153	10.9	53	126.4	28.5	0.00	0.77	913	158	8.3	61.8	132.5	30.4	0.27	0.64	947
5/28/24	155	10.3	73.6	141.9	38	0.11	1.08	947	152	10.5	67.9	139.7	22.5	0.00	0.78	948	157	8.6	99.4	148.4	22.9	1.60	0.67	937
5/29/24	155	10.3	42.2	153.6	35.6	0.11	1.13	934								158	9	48.6	159.6	28.9	1.07	0.71	919	
5/30/24	156	10.3	49.5	132.9	35	0.19	1.13	928	156	10.1	89.1	131.7	41.1	0.03	0.83	927	161	8.6	54.3	132.6	31.3	0.37	0.99	921
5/31/24	158	9.9	55	126.1	32.4	0.00	1.15	921	153	9.7	88.3	129.5	31.9	0.00	0.85	944	159	8.4	51.2	135.2	28.4	0.00	2.25	926
Average	154	10.1	66.6	133.7	31.6	0.10	1.18	941	151.6	10.3	64.5	134.1	25.5	0.01	0.66	949.5	156.7	8.9	53.8	142.3	30.1	0.71	0.84	936.6
Min	152	9.6	42.2	126.1	22.3	0.00	0.99	909	148.0	9.7	43.9	126.2	18.3	0.00	0.54	911.0	154.0	8.0	32.9	131.1	22.6	0.00	0.62	909.0
Max	158	10.5	96.8	153.6	41.3	0.27	1.98	964	156.0	10.9	93.4	151.0	41.1	0.13	0.85	996.0	161.0	9.7	99.4	161.7	38.2	1.99	2.25	960.0
St Dev	1.4	0.22	15.83	5.56	4.61	0.06	0.21	11.3	1.77	0.32	12.52	6.42	4.96	0.02	0.08	20.50	1.51	0.46	12.78	8.49	4.18	0.51	0.28	13.13

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.