

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

March 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	40.0	36.0	30.5
SO <sub>2</sub>	200	24 hr	86.7	108.1	96.0
NOx	190	24 hr	130.5	140.8	149.4
THC	10	24 hr	0.22	0.04	1.43
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			0.90	0.69	1.18
CO			29.6	27.3	24.9
THC			0.08	0.01	0.72
SO <sub>2</sub>			50.9	77.6	72.4
NOx			126.9	130.5	136.4

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. SO<sub>2</sub> – 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
10-Mar 16:30	30 min	141.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
19-Mar 17:30	30 min	166.4	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate.
19-Mar 18:30	30 min	114.7	Started gas burners, adjusted airflow, modified feed rate.
20-Mar 05:00	30 min	126.7	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
23-Mar 19:30	30 min	174.5	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
27-Mar 16:00	30 min	130.2	Feed chute hang up. 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
20-Mar 21:00	30 min	107.0	Started gas burners, adjusted airflow.
22-Mar 13:00	30 min	106.5	Volatile fuel. Adjusted airflow, modified feed rate, checked instrumentation.
26-Mar 05:00	30 min	222.9	Started gas burners, adjusted airflow, modified feed rate.
29-Mar 08:00	30 min	109.0	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-Mar 17:00	30 min	107.6	Volatile fuel. Adjusted airflow, modified feed rate.
11-Mar 11:00	30 min	144.2	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
13-Mar 09:00	30 min	109.0	Online wash. 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
<b>Cause</b>			
<b>Action Taken to Restore Steady State Conditions</b>			
<b>Remedial Action Planned and/or Taken</b>			

**3. CEMS Availability**

Analyzer	Required Availability (% hours per quarter)	Averaging Period	Monthly Availability		
			Unit 1	Unit 2	Unit 3
Opacity	90	Hour	100	97	100
Oxygen	90	Hour	100	100	100
CO	90	Hour	100	100	100
SO <sub>2</sub>	90	Hour	100	100	100
NOx	90	Hour	100	100	100
THC	90	Hour	99	100	100
Stack Flow	90	Hour	100	100	100

## 4. Shutdown Report

### Unit 1

Duration in Hours	Reason	Date
14.57	Fabric filter baghouse issues	March 14-15
1.38	Fabric filter baghouse inspection	March 15
0.27	Forced draft fan trip	March 15
1.67	Feeder issues	March 31

### Unit 2

Duration in Hours	Reason	Date
0.50	Boiler inspection	March 20
32.88	Boiler wash	March 27-29

### Unit 3

Duration in Hours	Reason	Date
2.50	Ash discharger plug	March 28

## 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	23,611		
Waste Processed	tonnes/day	250	229	256
Maximum Waste Processed	tonnes/day	267	266	267
		Units 1, 2, and 3		
Natural Gas Consumed	m <sup>3</sup> /day	1,821		
	m <sup>3</sup> /month	56,451		
Fly ash disposed	tonnes	745		
Bottom ash disposed	tonnes	3,877		

## 7. Complaints and Responses

Date/Time	Complaint	Action Taken

# ATTACHMENT 2

## March 2024 - Monthly CEMS Data

Date	Boiler #1								Boiler #2								Boiler #3							
	Stack Temp	O <sub>2</sub> (%)	SO <sub>2</sub> (mg/m <sup>3</sup> )	NO <sub>x</sub> (mg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	THC (mg/m <sup>3</sup> )	Opacity (%)	Furnace Temp	Stack Temp	O <sub>2</sub> (%)	SO <sub>2</sub> (mg/m <sup>3</sup> )	NO <sub>x</sub> (mg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	THC (mg/m <sup>3</sup> )	Opacity (%)	Furnace Temp	Stack Temp	O <sub>2</sub> (%)	SO <sub>2</sub> (mg/m <sup>3</sup> )	NO <sub>x</sub> (mg/m <sup>3</sup> )	CO (mg/m <sup>3</sup> )	THC (mg/m <sup>3</sup> )	Opacity (%)	Furnace Temp
3/1/24	152	9.4	31.9	126.6	28.9	0.05	0.65	973	152	10.2	71.1	127.5	30	0.00	0.53	925	156	8.1	74.7	131.1	25.4	0.64	1.76	933
3/2/24	152	9.9	43.5	127.6	33.1	0.07	0.67	951	152	10.5	78.6	130.7	30.7	0.00	0.56	919	156	8.6	81.9	134.5	23.3	0.73	1.92	919
3/3/24	153	10	47.9	127	33.4	0.11	0.67	941	152	10.3	83.3	131.6	30.1	0.01	0.54	922	157	8.5	85	131.1	25.9	1.23	2.01	922
3/4/24	153	10.1	32.8	128.2	34.3	0.00	0.67	930	151	11	58.2	128.1	34	0.00	0.55	898	157	9.5	65	138.4	26.3	0.00	2.03	890
3/5/24	152	10.1	31	125.4	40	0.00	0.80	932	151	10.4	67.1	129.1	26.4	0.00	0.62	944	157	9.4	73.7	133	26.4	0.00	1.44	924
3/6/24	153	10.5	18.5	127.6	32.6	0.00	0.99	936	151	10.5	54.7	129.9	28.8	0.00	0.63	951	157	10	59	131.2	30.5	0.00	1.00	905
3/7/24	154	10.1	26.9	127.4	23.7	0.00	1.08	974	150	10.5	64.7	129.5	19.9	0.00	0.60	956	157	9.4	70.8	137.6	22.4	0.00	1.18	937
3/8/24	155	10.5	35.5	127.8	28.6	0.07	1.09	930	149	11	74.7	127.2	26	0.00	0.79	932	158	9.6	77.7	141.7	27.7	1.28	1.42	907
3/9/24	154	10.6	67.8	128.2	28.5	0.09	0.98	929	148	11.1	81.1	128.6	24.5	0.00	0.71	939	156	8.9	83.3	142	21.2	0.92	1.27	932
3/10/24	154	10	63.8	126.5	33.3	0.10	0.98	952	148	10.4	94.8	128	21.3	0.00	0.70	968	156	9	82.8	141.1	22.8	1.43	1.28	926
3/11/24	153	9.6	41.8	124.4	30.7	0.14	0.96	965	148	10.5	63.1	126.7	26.5	0.01	0.70	949	156	8.8	61.4	132.6	27.7	0.58	1.34	923
3/12/24	156	9.6	66.2	129	23.7	0.08	1.12	970	151	9.8	75.5	131.8	27	0.01	0.73	959	156	8.5	73.3	131.4	24	1.43	1.32	940
3/13/24	155	9.8	37.6	127.1	30.1	0.04	1.09	966	151	10.1	59.4	129.5	27.2	0.01	0.72	956	156	9.4	58.3	132.1	25.3	1.18	1.34	930
3/14/24									151	10.5	66.4	131.1	26.7	0.01	0.77	955	158	9.2	68.8	133.9	24.3	0.88	1.43	939
3/15/24									159	10.3	69.9	129.3	30.8	0.00	0.77	947	157	8.6	71.9	141.7	23.7	0.65	1.42	934
3/16/24	153	9.8	72.2	130.5	25.4	0.09	0.88	954	152	10.1	92.8	137.9	21.9	0.00	0.74	859	158	8.9	84	140	19.3	0.82	1.39	941
3/17/24	156	9.7	68.5	128.3	21.3	0.05	0.91	961	152	10.4	83.5	132.3	23.2	0.01	0.78	949	159	8.8	74.2	149.4	21.1	0.40	1.43	930
3/18/24	155	9.5	44.6	126.3	24.3	0.08	0.89	977	152	10.9	55.8	128.8	26.4	0.01	0.76	927	158	8.6	57.9	132.9	26.4	1.31	1.43	926
3/19/24	155	9.5	44.4	127	33.1	0.12	0.90	965	151	10.8	67.3	130	26.2	0.00	0.75	935	156	8.5	62.6	136.4	24	1.08	1.03	939
3/20/24	152	9.4	48.7	126.1	27.4	0.19	0.84	970	150	10.6	67.3	138.3	35.7	0.03	0.72	913	158	8.8	65.7	138.8	28.4	0.74	0.73	916
3/21/24	152	9.2	55.8	125.1	27.3	0.08	0.81	983	152	10.2	77.3	129.8	25.7	0.01	0.70	957	156	8.3	74.4	132.4	20.2	0.80	0.72	938
3/22/24	155	9.6	66.3	128.8	22.5	0.00	0.82	960	148	10.6	104.5	128.7	25.5	0.00	0.67	937	156	8.6	70.5	137.4	23.8	0.00	0.71	937
3/23/24	153	9.8	61.4	127.3	33.6	0.00	0.81	959	148	10.4	91.1	128.6	24.6	0.00	0.64	936	157	8.6	79	133.8	25.9	0.00	0.71	937
3/24/24	153	9.7	64.5	126.5	28.1	0.00	0.80	965	146	10.5	88.6	128	29	0.00	0.70	940	157	8.8	80.7	134.4	26.5	0.00	0.72	936
3/25/24	154	9.5	43.7	126	31.1	0.10	0.79	955	146	10.8	63	125.6	36	0.01	0.70	925	157	8.2	60.4	131.8	27	1.22	0.73	938
3/26/24	153	9.5	66.1	124.9	26.6	0.10	0.84	979	143	11	107.3	129	32.6	0.01	0.68	940	157	8.5	87.6	139.6	25.5	0.62	0.78	933
3/27/24	155	10.1	35.7	126.9	39.3	0.22	0.83	931								158	8.9	55.3	133.5	26.6	1.42	0.84	915	
3/28/24	151	10.1	86.7	127.9	27.9	0.20	0.84	952								157	9	96	139.2	24.4	0.33	0.81	920	
3/29/24	152	10.3	64.8	125.7	29.9	0.07	0.86	945	150	10.2	90.5	135.8	31.3	0.04	0.70	920	158	9	71.8	133.8	29.2	0.61	0.79	916
3/30/24	152	9.5	59.9	125.9	25.6	0.11	1.05	974	150	9.8	108.1	140.8	22.2	0.01	0.76	942	158	8.4	74	143	22.6	1.32	0.84	941
3/31/24	153	10.2	46.3	125.2	33.5	0.13	1.36	947	151	9.9	92	133.2	20.6	0.01	0.81	930	160	8.6	61.5	138.9	23.3	0.76	0.89	924
<b>Average</b>	153	9.8	50.9	126.9	29.6	0.08	0.90	956	150.2	10.5	77.6	130.5	27.3	0.01	0.69	935.5	157.1	8.8	72.4	136.4	24.9	0.72	1.18	927.4
<b>Min</b>	151	9.2	18.5	124.4	21.3	0.00	0.65	929	143.0	9.8	54.7	125.6	19.9	0.00	0.53	859.0	156.0	8.1	55.3	131.1	19.3	0.00	0.71	890.0
<b>Max</b>	156	10.6	86.7	130.5	40.0	0.22	1.36	983	159.0	11.1	108.1	140.8	36.0	0.04	0.81	968.0	160.0	10.0	96.0	149.4	30.5	1.43	2.03	941.0
<b>St Dev</b>	1.4	0.37	16.32	1.37	4.62	0.06	0.16	16.5	2.79	0.35	15.45	3.60	4.28	0.01	0.08	21.54	1.01	0.44	10.06	4.51	2.61	0.50	0.40	12.17

Blank days have less than 18 hours of valid data due to unit shut downs or analyzer outage.  
 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.