

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

August 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	38.5	42.6	34.6
SO ₂	200	24 hr	89.4	105.6	99.9
NOx	190	24 hr	134.1	129.1	141.6
THC	10	24 hr	0.27	0.50	3.21
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			0.89	0.78	0.57
CO			30.1	29.8	26.4
THC			0.09	0.08	1.93
SO ₂			65.8	80.7	69.3
NOx			129.5	125.6	135.6

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
1-Aug 11:30	30 min	113.4	Started gas burners, adjusted airflow, modified feed rate.
3-Aug 15:30	30 min	105.9	Adjusted airflow, modified feed rate.
6-Aug 16:00	30 min	120.9	Feeder hang-up. Started gas burners, adjusted airflow, modified feed rate.
13-Aug 09:00	30 min	158.2	Started gas burners, adjusted airflow, modified feed rate.
22-Aug 08:00	30 min	102.3	Started gas burners, adjusted airflow, modified feed rate.
22-Aug 14:30	30 min	331.2	Forced draft fan trip. 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
1-Aug 11:30	30 min	250.1	Started gas burners, adjusted airflow, modified feed rate.
1-Aug 20:30	30 min	104.1	Started gas burners, adjusted airflow, modified feed rate.
15-Aug 23:00	30 min	108.0	Started gas burners, adjusted airflow, modified feed rate.
20-Aug 05:30	30 min	116.4	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-Aug 09:30	30 min	204.4	Online boiler wash. Started gas burners, adjusted airflow, modified feed rate.
22-Aug 16:30	30 min	159.4	Started gas burners, adjusted airflow, modified feed rate.
23-Aug 08:00	30 min	105.7	Started gas burners, adjusted airflow, modified feed rate.
24-Aug 10:00	30 min	165.5	Forced draft fan trip. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
24-Aug 22:00	30 min	346.6	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.

Compliance Parameter: Nitrogen Oxide
Response Limit: 350 mg/dscm 1/2 hour average
Unit No. 1

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
15-Aug 16:00	30 min	351.7	Offloading NH3. Checked instrumentation.

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	100	99	97
CO	90	Hour	100	99	97
SO ₂	90	Hour	100	99	97
NO _x	90	Hour	100	99	97
THC	90	Hour	96	95	93
Stack Flow	90	Hour	100	100	100

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
4.93	Ash crane malfunction	August 9
0.25	Forced draft fan trip	August 15
0.40	Forced draft fan trip	August 23
0.78	BC Hydro power interruption	August 26

Unit 2

Duration in Hours	Reason	Date
34.05	Boiler wash	August 20-22
0.77	BC Hydro power interruption	August 26

Unit 3

Duration in Hours	Reason	Date
0.63	BC Hydro power interruption	August 26
9.57	Economizer leak	August 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	21,526		
Waste Processed	tonnes/day	239	231	247
Maximum Waste Processed	tonnes/day	271	261	268
Natural Gas Consumed	m ³ /day	3,429		
	m ³ /month	106,314		
Fly ash disposed	tonnes	793		
Bottom ash disposed	tonnes	4,013		

7. Complaints and Responses

Date/Time	Complaint	Action Taken

ATTACHMENT 2

August 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
8/1/24	152	9.7	62.4	129.4	36.4	0.09	0.87	951	151	10	67.7	129.1	42.6	0.02	0.65	940	157	9.2	52.1	138.9	25.7	0.91	0.30	933
8/2/24	153	9.6	63.1	130	31.1	0.13	0.89	936	151	10.3	71.1	126.9	30.9	0.02	0.64	920	157	9.1	57.3	136.4	23	1.30	0.46	904
8/3/24	150	9.9	65.5	130	33.2	0.11	0.90	921	151	10.3	74.1	127.5	28.9	0.01	0.67	933	156	9.2	60.4	138	28.3	1.97	0.49	913
8/4/24	153	10.1	74.8	131.7	28.2	0.06	0.93	935	153	10.5	82	128	31.5	0.01	0.68	926	157	8.8	73	141.6	22.5	3.17	0.49	923
8/5/24	153	9.8	55.2	132.7	28.7	0.09	0.84	940	153	10.5	58.9	127.2	33.5	0.03	0.69	924	156	9.3	43.1	133.8	29.8	2.33	0.51	906
8/6/24	156	10.1	65.2	133.9	30.3	0.03	0.87	930	153	10.9	72.9	126.2	31.9	0.01	0.82	930	156	9.3	64	134.5	25.4	1.60	0.55	904
8/7/24	152	9.5	66.9	134.1	27.4	0.06	0.88	953	152	10.3	77.3	127.8	30.3	0.02	0.73	958	156	8.9	76	135.4	26.2	1.52	0.56	938
8/8/24	149	9.3	62.6	130.8	23.2	0.07	0.86	959	148	10.3	70.9	127.1	25.4	0.00	0.68	955	154	9.2	69.9	134.8	27.9	1.37	0.50	935
8/9/24	149	9.9	66.5	128.2	23	0.08	0.83	927	149	10.7	65.1	125.2	25.7	0.02	0.66	941	153	9.8	59.8	133.7	21	3.21	0.48	917
8/10/24	151	10	68.2	129.8	26.5	0.07	0.82	935	151	10.5	85.8	128.1	30.9	0.02	0.69	964	154	10.1	69.6	135.3	21.3	1.23	0.51	926
8/11/24	151	10.2	70.1	131.6	27.1	0.04	0.88	935	149	10.5	78.3	128	26.6	0.01	0.68	979	152	10	68.7	138.2	22.5	1.66	0.54	929
8/12/24	151	9.9	68.7	127.8	31	0.07	0.89	941	149	10.2	69.9	126.8	27.9	0.03	0.70	959	154	9.3	69.3	136.1	25	1.59	0.56	954
8/13/24	150	9.6	89.4	129.4	27.2	0.04	0.84	951	149	9.5	78.4	124.9	26	0.01	0.79	975	156	9.7	90.4	140.1	25.6	2.74	0.55	926
8/14/24	150	9.5	69.2	128.5	28.9	0.06	0.88	937	149	10.3	76.3	127.2	21.1	0.00	0.82	943	156	10	60.5	135.7	24.4	2.08	0.57	896
8/15/24	150	9.9	67.3	129.6	26.8	0.08	0.87	929	149	10.4	85.4	124.7	23.7	0.01	0.84	944	157	10	78.6	136.1	23.1	1.58	0.56	921
8/16/24	151	9.7	77.1	129.2	28.7	0.05	0.88	943	150	10.2	84.2	122.6	27.5	0.01	0.88	937	156	9.4	94.7	135.6	30.3	1.63	0.61	923
8/17/24	152	9.4	80.9	128.1	32.7	0.06	0.87	952	150	10.1	89.1	123.7	23.3	0.00	0.85	966	156	9.7	99.9	131	26	2.37	0.59	906
8/18/24	153	10	49.3	122.6	32.9	0.10	0.87	903	151	10.3	64	115.3	21.6	0.06	0.90	933	156	10.9	51.4	130.8	27.5	2.14	0.59	900
8/19/24	153	9.8	38.7	131.6	29.4	0.07	0.90	923	150	10.7	53	112.9	34.3	0.06	0.84	938	156						0.61	927
8/20/24	153	9.7	74.6	128.5	30.1	0.08	0.89	946									155	9.4	88	136.5	28.8	2.63	0.66	943
8/21/24	152	9.9	87.7	130.1	33.1	0.11	0.89	948									154	8.6	94.5	138.6	25	1.30	0.66	956
8/22/24	150	9.9	70.9	131.6	37.6	0.27	0.90	941	151					0.80	964	154	9.2	83.9	140.1	34.6	2.75	0.64	923	
8/23/24	149	9	56	127.5	29.7	0.06	0.85	956	150	9.7	95	126.5	35.3	0.05	0.80	960	154	8.9	62.9	132.2	29.1	3.04	0.66	921
8/24/24	152	9.9	55.7	124.4	32	0.06	0.87	923	149	9.6	100.3	123.9	32.7	0.03	0.84	955	154	8.8	69.6	134.2	26.1	1.15	0.67	928
8/25/24	153	10	63.6	129.1	25.4	0.00	0.93	916	150	10	105.5	123.2	26.6		0.86	936	154	9.5	72	135.4	27.6		0.64	903
8/26/24	154	10.4	47	128.3	30.8	0.17	0.89	906	151	10.2	78.8	127.3	28		0.80	930	154	9.6	52.1	133.3	28.6		0.63	899
8/27/24	156	10.6	59.8	128.8	38.5	0.17	0.93	909	154	10.5	82.1	127.3	37.7	0.19	0.88	912	154	9.6	65	132.6	30.3	0.90	0.70	897
8/28/24	156	10	59.4	127	33.4	0.08	0.99	935	153	9.8	89	126.7	36.6	0.50	0.93	948	155	9.3	61.3	132.2	28.1	2.79	0.67	900
8/29/24	156	10	60.5	129.2	30.7	0.10	0.97	939	154	10	99	127.5	33.6	0.40	0.91	938	156	9.1	67.1	134.2	26.7	1.75	0.66	915
8/30/24	155	10.5	74.3	129.4	31	0.15	0.96	931	153	10.4	105.6	127.6	29.2	0.24	0.88	943	150	9.5	55.4	136.7	24.5	1.27	0.60	908
8/31/24	154	9.8	68.7	132.1	27.3	0.12	0.86	945	153	10	98.9	126.5	30	0.30	0.73	955								
Average	152	9.9	65.8	129.5	30.1	0.09	0.89	935	150.9	10.2	80.7	125.6	29.8	0.08	0.78	945.0	155.0	9.4	69.3	135.6	26.4	1.93	0.57	919.1
Min	149	9.0	38.7	122.6	23.0	0.00	0.82	903	148.0	9.5	53.0	112.9	21.1	0.00	0.64	912.0	150.0	8.6	43.1	130.8	21.0	0.90	0.30	896.0
Max	156	10.6	89.4	134.1	38.5	0.27	0.99	959	154.0	10.9	105.6	129.1	42.6	0.50	0.93	979.0	157.0	10.9	99.9	141.6	34.6	3.21	0.70	956.0
St Dev	2.1	0.33	10.83	2.40	3.67	0.05	0.04	14.4	1.74	0.33	13.72	3.63	5.00	0.13	0.09	16.55	1.61	0.48	14.29	2.72	3.05	0.70	0.08	16.33

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.