

Monthly Operating Reports

December 2024

The following December 2024 operating report was sent to the Ministry of Environment and Parks on February 14, 2025

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

December 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	33.7	35.7	30.2
SO ₂	200	24 hr	114.5	100.3	88.7
NOx	190	24 hr	140.3	139.7	154.8
THC	10	24 hr	0.24	0.06	0.27
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			1.03	0.51	1.34
CO			24.5	28.9	23.0
THC			0.05	0.01	0.11
SO ₂			68.6	68.3	59.3
NOx			125.4	129.1	134.0

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
3-Dec 10:30	30 min	148.4	Adjusted airflow, modified feed rate, checked instrumentation.
6-Dec 14:30	30 min	158.9	Tube leak. Started gas burners, adjusted airflow, modified feed rate.
13-Dec 11:00	30 min	137.3	Adjusted airflow.
15-Dec 19:30	30 min	110.0	Feed chute hang up. Modified feed rate.
24-Dec 15:30	30 min	282.7	Started gas burners, adjusted airflow, modified feed rate.
31-Dec 19:30	30 min	145.5	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
9-Dec 17:30	30 min	124.6	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate.
9-Dec 21:30	30 min	201.7	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
11-Dec 22:00	30 min	120.1	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate.
12-Dec 18:30	30 min	237.9	Started gas burners, adjusted airflow, modified feed rate.
14-Dec 10:00	30 min	136.9	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
16-Dec 15:00	30 min	130.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
18-Dec 15:30	30 min	240.5	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
19-Dec 22:00	30 min	115.6	Started gas burners, adjusted airflow, modified feed rate.
21-Dec 04:30	30 min	140.9	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
31-Dec 17:30	30 min	136.1	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
3-Dec 12:30	30 min	106.5	Started gas burners, adjusted airflow, modified feed rate.
4-Dec 09:00	30 min	104.5	Adjusted airflow.
8-Dec 17:00	30 min	197.7	Started gas burners, adjusted airflow, modified feed rate.
9-Dec 21:30	30 min	240.5	Adjusted airflow, modified feed rate.
10-Dec 09:00	30 min	107.0	Feed chute hang up. Adjusted airflow, modified feed rate.
16-Dec 10:00	30 min	108.6	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
16-Dec 19:00	30 min	106.2	Started gas burners, adjusted airflow, modified feed rate.
22-Dec 09:30	30 min	122.5	Feed chute hang up. Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
24-Dec 08:30	30 min	157.8	Volatile fuel. 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	93	98	98
CO	90	Hour	93	98	98
SO ₂	90	Hour	93	98	98
NOx	90	Hour	93	98	98
THC	90	Hour	93	97	96
Stack Flow	90	Hour	100	100	100

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
51.50	Boiler tube leak	December 1-3
1.13	Fabric filter baghouse maintenance	December 3
78.23	Waterwall tube leak	December 6-9
1.62	Fabric filter bag change	December 11
1.30	Ash discharger plugged	December 30

Unit 2

Duration in Hours	Reason	Date
3.17	Fabric filter bag replacement	December 3
0.22	Induced draft fan trip	December 3
1.10	Fabric filter bag replacement	December 5
0.10	Poor refuse quality	December 23
0.50	Poor refuse quality	December 23

Unit 3

Duration in Hours	Reason	Date
1.10	Ash discharger plug	December 21
0.08	Fabric filter bag inspection	December 21
0.50	Ash discharger plug	December 24

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	23,144		
Waste Processed	tonnes/day	221	263	256
Maximum Waste Processed	tonnes/day	290	281	276
Natural Gas Consumed	m ³ /day	8,087		
	m ³ /month	250,697		
Fly ash disposed	tonnes	598		
Bottom ash disposed	tonnes	3,187		

7. Complaints and Responses

Date/Time	Complaint	Action Taken

ATTACHMENT 2

December 2024 - Monthly CEMS Data

Date	Boiler #1								Boiler #2								Boiler #3							
	Stack	O ₂	SO ₂	NO _x	CO	THC	Opacity	Furnace	Stack	O ₂	SO ₂	NO _x	CO	THC	Opacity	Furnace	Stack	O ₂	SO ₂	NO _x	CO	THC	Opacity	Furnace
	Temp	(%)	(mg/m ³)	(mg/m ³)	(mg/m ³)	(mg/m ³)	(%)	Temp	Temp	(%)	(mg/m ³)	(mg/m ³)	(mg/m ³)	(mg/m ³)	(%)	Temp	Temp	(%)	(mg/m ³)	(mg/m ³)	(mg/m ³)	(mg/m ³)	(%)	Temp
12/1/24									150	10.5	100.3	129.5	28.4	0.02	0.49	931	153	10.2	86.5	130.6	28.8	0.22	1.14	926
12/2/24									149	10.4	73.3	126.8	31.0	0.01	0.52	928	153	9.9	55.2	130.9	25.8	0.24	1.10	929
12/3/24	143	11.1	103.4	131.2	26.2	0.08	1.02	927	149	10.7	83.3	127.5	24.5	0.01	1.01	936	153	10.0	82.7	139.8	23.0	0.27	1.14	901
12/4/24	144	10.9	101.1	130.4	16.3	0.20	1.39	926	150	10.8	65.6	130.5	23.8	0.00	0.60	941	153	10.3	59.1	134.9	24.3	0.22	1.08	911
12/5/24	147	10.6	89.3	140.3	13.9	0.17	1.32	972	151	10.5	69.9	134.4	23.8	0.00	0.55	927	153	9.8	62.0	138.9	19.9	0.15	1.22	918
12/6/24									149	10.4	73.2	132.3	27.5	0.00	0.49	923	153	9.4	74.1	138.1	22.4	0.11	1.36	910
12/7/24									151	9.9	90.6	131.0	23.7	0.02	0.45	913	153	9.9	74.4	137.4	19.6		1.37	900
12/8/24									151	10.3	81.1	131.0	23.0	0.02	0.48	912	153	9.8	61.6	139.9	23.0	0.27	1.39	913
12/9/24									151	10.5	58.1	129.1	28.2	0.00	0.47	907	153	10.0	44.6	136.3	29.2	0.00	1.41	919
12/10/24	146						1.11	896	148	10.9	86.0	129.3	30.4	0.00	0.54	897	153	10.2	88.7	134.9	30.2	0.00	1.11	882
12/11/24	153	9.4	114.5	128.2	17.8	0.00	1.26	921	149	10.2	85.7	128.6	24.0	0.00	0.57	931	153	9.4	83.1	136.4	26.1	0.00	1.12	928
12/12/24	152	9.5	89.1	127.8	21.7	0.00	0.86	939	150	10.4	71.4	129.9	28.2	0.00	0.53	920	152	9.4	72.2	152.6	26.5	0.00	1.19	931
12/13/24	154	9.8	91.9	135.2	23.4	0.05	0.84	928	152	10.5	68.7	139.7	25.9	0.02	0.48	908	153	9.4	70.1	154.8	19.6	0.17	1.23	922
12/14/24	154	9.2	90.3	125.0	26.7	0.08	0.79	944	152	10.3	83.4	126.0	33.7	0.01	0.47	919	153	9.1	70.5	106.6	14.9	0.09	1.48	927
12/15/24	154	9.9	66.7	123.3	22.5	0.04	0.80	926	151	10.7	65.3	127.5	25.4	0.02	0.49	898	153	9.7	58.6	139.7	14.0	0.16	1.64	913
12/16/24	154	9.5	60.1	126.5	27.7	0.00	0.89	911	151	11.0	54.9	125.8	31.4	0.01	0.49	898	153	9.4	51.4	118.7	24.4	0.21	1.84	897
12/17/24	154	9.7	65.2	127.5	29.6	0.00	1.14	920	151	11.4	62.0	128.6	29.6	0.00	0.48	906	152	9.3	86.4	125.4	22.7	0.17	2.00	897
12/18/24	155	10.0	62.7	125.8	33.4	0.02	1.47	920	151						0.49	911	153	9.5	50.5	137.1	18.3	0.07	2.05	896
12/19/24	154	10.0	62.8	127.9	26.6	0.10	2.06	922	151	11.3	71.5	128.5	33.1	0.01	0.49	916	153	10.0	52.6	133.9	23.7	0.13	2.40	890
12/20/24	155	9.7	74.4	126.3	27.0	0.05	1.42	947	151						0.45	923	153	9.5	62.3	135.7	23.7	0.10	2.30	900
12/21/24	154	9.6	69.2	127.8	22.3	0.00	0.76	952	150	10.5	71.4	126.5	27.8	0.00	0.47	953	153	9.7	60.7	131.7	25.6	0.00	2.70	899
12/22/24	154	10.0	65.9	126.4	20.4	0.00	0.81	932	151	11.2	63.1	127.1	32.3	0.00	0.48	927	153	9.6	60.8	131.2	29.2	0.20	2.72	887
12/23/24	154	10.1	49.0	119.8	26.0	0.01	0.83	935	152	11.5	46.9	127.3	29.6	0.00	0.48	912	156	10.1	34.9	132.0	25.8	0.07	0.51	880
12/24/24	154	10.2	72.2	123.9	33.7	0.02	0.82	935	150	11.3	77.2	131.6	33.3	0.01	0.49	929	155	10.1	49.3	132.8	24.9	0.11	0.80	869
12/25/24	154	9.7	55.8	117.3	24.8	0.01	0.82	939	149	11.3	61.9	127.5	26.5	0.00	0.46	924	154	9.5	45.3	131.5	17.7	0.05	0.80	877
12/26/24	154	9.8	39.3	112.0	27.1	0.00	0.88	936	148	11.0	49.9	128.0	29.9	0.00	0.48	950	153	8.8	35.8	131.1	19.7	0.10	0.79	905
12/27/24	154	9.6	43.9	122.7	21.8	0.00	0.87	940	151	11.1	53.5	130.5	31.3	0.00	0.46	941	153	9.1	36.6	134.2	21.4	0.00	0.78	882
12/28/24	155	9.7	36.3	120.0	25.3	0.00	0.89	936	151	11.5	50.0	128.0	35.7	0.00	0.50	925	153	9.3	37.5	133.7	20.5	0.00	0.81	878
12/29/24	154	9.8	43.1	123.3	17.6	0.00	0.91	941	150	11.5	55.3	128.2	33.0	0.00	0.51	936	153	9.7	45.2	131.5	23.2	0.00	0.81	891
12/30/24	154	10.8	31.1	114.8	31.5	0.24	0.94	932	150	11.6	44.6	127.3	31.9	0.01	0.48	930	153	9.3	30.0	130.8	23.9	0.06	0.72	906
12/31/24	154						0.96	944	150	11.5	62.4	125.8	32.1	0.06	0.43	933	153	9.8	56.7	132.0	20.0	0.08	0.63	907
Average	153	9.9	68.6	125.4	24.5	0.05	1.03	933	150	10.9	68.3	129.1	28.9	0.01	0.51	923	153	9.7	59.3	134.0	23.0	0.11	1.34	903
Min	143	9.2	31.1	112.0	13.9	0.00	0.76	896	148	9.9	44.6	125.8	23.0	0.00	0.43	897	152	8.8	30.0	106.6	14.0	0.00	0.51	869
Max	155	11.1	114.5	140.3	33.7	0.24	2.06	972	152	11.6	100.3	139.7	35.7	0.06	1.01	953	156	10.3	88.7	154.8	30.2	0.27	2.72	931
St Dev	3.5	0.5	22.9	6.2	5.2	0.07	0.30	14.6	1.1	0.5	13.9	2.9	3.6	0.01	0.10	14.4	0.7	0.4	16.6	8.3	4.0	0.09	0.60	17.3

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.