

Monthly Operating Reports

January 2024

The following January 2024 operating report was sent to the Ministry of Environment and Climate Change Strategy on March 12, 2024.



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

January 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	35.3	35.5	36.4
SO ₂	200	24 hr	102.8	72.8	65.1
NOx	190	24 hr	151.4	132.2	149.5
THC	10	24 hr	0.26	0.06	3.41
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			0.82	0.50	1.94
CO			27.1	29.1	28.7
THC			0.11	0.02	0.65
SO ₂			43.1	46.9	40.7
NOx			126.3	127.6	130.0

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
2-Jan 08:00	30 min	111.8	Started gas burners, adjusted airflow, modified feed rate.
9-Jan 19:00	30 min	143.6	Adjusted airflow, modified feed rate.
11-Jan 11:30	30 min	100.6	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
3-Jan 09:00	30 min	182.1	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate.
8-Jan 19:00	30 min	108.1	Started gas burners, adjusted airflow, modified feed rate.
9-Jan 03:30	30 min	139.0	Started gas burners, adjusted airflow, modified feed rate.
16-Jan 22:30	30 min	117.8	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
23-Jan 08:30	30 min	152.2	Started gas burners, adjusted airflow, modified feed rate.
23-Jan 17:30	30 min	112.5	Started gas burners, adjusted airflow, modified feed rate.
26-Jan 10:30	30 min	151.9	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-Jan 19:30	30 min	143.0	Started gas burners, adjusted airflow, modified feed rate.
8-Jan 14:00	30 min	103.6	Started gas burners, adjusted airflow, modified feed rate.
11-Jan 17:30	30 min	115.2	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
17-Jan 04:00	30 min	137.0	Adjusted airflow.
18-Jan 16:00	30 min	254.2	Started gas burners, adjusted airflow, modified feed rate.
18-Jan 21:30	30 min	186.2	Started gas burners, adjusted airflow.
30-Jan 05:30	30 min	128.5	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. 3

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
26-Jan 21:00	30 min	387.9	Checked aqueous ammonia flow, checked low NOx system air flow, checked aqueous ammonia spray nozzle pattern, 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

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	99	99	98
CO	90	Hour	99	99	98
SO ₂	90	Hour	99	99	98
NOx	90	Hour	99	99	98
THC	90	Hour	99	99	98
Stack Flow	90	Hour	100	100	100

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
29.53	Boiler wash	January 3-5
0.25	Fabric filter baghouse inspection	January 11
2.00	Ash discharger plug	January 13-14
14.62	Boiler wash	January 22
0.88	Boiler inspection	January 25
1.23	Forced draft fan trip	January 27
29.43	Boiler wash	January 28-30

Unit 2

Duration in Hours	Reason	Date
4.77	Ash discharger plug	January 17
0.47	BC Hydro power interruption	January 18
0.25	Forced draft fan trip	January 25
1.87	Forced draft fan trip	January 29

Unit 3

Duration in Hours	Reason	Date
30.42	Fabric filter baghouse change	January 2-3
14.13	Boiler wash	January 5
0.80	Forced draft fan trip	January 11
7.15	Fabric filter baghouse bridged	January 11
0.50	High opacity	January 12
9.75	Boiler wash	January 13
1.17	BC Hydro power interruption	January 18
1.15	Ash discharger plug	January 18
1.17	CEMS maintenance	January 26
0.93	CEMS maintenance	January 27

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/day	21,234		
Waste Processed	tonnes/day	183	233	227
Maximum Waste Processed	tonnes/day	272	255	260
		Units 1, 2, and 3		
Natural Gas Consumed	m ³ /day	5,151		
	m ³ /month	159,680		
Fly ash disposed	tonnes	674		
Bottom ash disposed	tonnes	3,296		

7. Complaints and Responses

Date/Time	Complaint	Action Taken

January 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
1/1/24	148	10.9	11.5	123.3	28.8	0.10	0.85	924	150	10.8	46.5	124.7	28.4	0.03	0.46	920	154	9.3	29	128.7	22.5	0.55	1.75	917
1/2/24	145	11.2	9.6	124.8	35.3	0.00	0.78	916	148	10.6	46.3	129.2	20.5	0.00	0.46	923								
1/3/24	144	11	13.8	123.5	26.4	0.20	0.72	927	147	11	44.1	129	28.9	0.04	0.41	899								
1/4/24									149	11.1	53.3	130.2	30.8	0.00	0.45	903	152	9.9	39.2	129.1	24.7	0.00	2.13	898
1/5/24	153	10.4	67.4	128.9	34.6	0.12	0.70	935	151	10.8	57.7	130.4	28.3	0.01	0.49	900								
1/6/24	153	10.3	73.7	128	25.5	0.08	0.81	944	150	10.3	72.8	128.4	28.3	0.01	0.53	931	157	9.8	65.1	133.2	32.2	0.53	2.19	899
1/7/24	153	10.3	55.4	126	19.7	0.11	0.82	954	150	10.1	55.4	127.4	20.1	0.00	0.52	935	157	9.9	50.8	129	21.7	1.03	2.33	916
1/8/24	154	9.9	39.2	125.3	22.9	0.08	0.81	971	155	10.5	41.8	127.9	31	0.04	0.54	918	157	9.8	27.8	128.5	33.3	0.21	2.38	887
1/9/24	154	10.5	68.6	128.2	25.9	0.13	0.76	962	158	10.6	61.7	129.5	26.3	0.01	0.49	904	157	9.2	60.9	141.1	27.3	0.66	2.38	916
1/10/24	151	10.6	34.9	126.1	21.9	0.09	0.71	957	158	10.5	47.6	131.5	25.9	0.03	0.49	906	159	9.4	34.5	135.9	25.6	0.74	2.34	911
1/11/24	147	11	39.1	124.5	24.4	0.08	0.72	949	155	10.8	54	130.2	24.8	0.00	0.54	913								
1/12/24	151	10.6	30.5	126	23.2	0.00	1.03	967	153	10.5	48.7	127.8	31.1	0.00	0.71	923	157	10	36.9	131.2	35.5	0.00	2.85	897
1/13/24	151	10.1	44.4	127.8	21.5	0.03	1.10	990	151	10.6	45.3	131.1	32.3	0.03	0.76	922								
1/14/24	154	10.6	41.4	125.9	24.1	0.07	1.05	958	153	10.5	40.4	130.3	23.3	0.00	0.71	921	158	9.6	47.6	133.4	25	0.98	2.26	915
1/15/24	156	10.2	34.4	125.4	23.6	0.09	1.04	976	157	10.6	33.3	129.5	25.8	0.02	0.67	923	160	10.3	30.5	131.1	32.5	1.80	2.18	900
1/16/24	151	10.6	52.7	125.1	33.5	0.17	0.94	945	151	10.8	44.2	127.6	35	0.01	0.60	913	154	9.6	41	129.5	26.2	0.28	2.36	913
1/17/24	150	10.7	32.2	123.6	25.6	0.09	0.90	935	152	10.9	36.8	123.8	28.2	0.01	0.58	906	158	10	36.9	128.5	33.6	1.52	2.45	887
1/18/24	154	11.2	22.6	124.4	30.6	0.13	0.94	922	153	10.9	31.7	123.1	25	0.01	0.58	914	165	10.1	34.1	127.8	35.6	0.79	1.61	888
1/19/24	149	11.3	32.9	124.4	28.2	0.15	0.90	936	150	10.8	40.1	125.7	26.4	0.00	0.51	909	164	10.3	34.8	127.6	36.4	3.41	1.24	860
1/20/24	148	11.2	41.8	121.7	28.2	0.11	0.82	934	153	11	40.9	124	34.3	0.00	0.49	901	160	9.1	47.3	127.2	29.5	0.29	1.44	905
1/21/24	148	11.3	40.2	121.3	33	0.16	0.77	935	153	10.8	45.8	125.8	30.2	0.01	0.45	922	159	8.8	51.6	126.9	23.7	0.44	1.46	932
1/22/24									155	10.8	30.4	125.6	30.6	0.01	0.45	902	158	9.1	25.8	125.5	30.3	0.76	1.50	910
1/23/24	155	11.1	71.1	125.9	28.2	0.26	0.73	919	158	10.4	60.5	129.9	35.5	0.04	0.45	920	159	9.6	38.7	128.6	29.2	0.38	1.56	898
1/24/24	157	10.8	33.1	124.7	28.4	0.11	0.73	938	153	10.6	35.9	128.2	33.5	0.02	0.46	904	160	8.9	38.3	128.4	26.6	0.71	1.63	918
1/25/24	154	11.1	36.7	124.1	31.4	0.10	0.74	931	152	10.5	45.7	128.7	32.8	0.03	0.44	923	162	9.4	41.5	130.7	28.8	0.49	1.68	915
1/26/24	154	10.9	43.1	124.8	26	0.09	0.75	940	152	10.4	52.4	128.3	31.9	0.06	0.45	919	162	9.3	43.7	149.5	25.3	0.76	1.76	916
1/27/24	143	11.5	31.5	122.9	27.9	0.12	0.73	917	150	10.3	47.3	132.2	31.1	0.02	0.41	916	161	9.4	34.4	115.4	29.1	0.07	1.78	905
1/28/24	141	11	39.4	110	26.1	0.15	0.73	948	147	10.6	55.3	126.3	29.9	0.01	0.40	908	159	9.2	49.4	125.2	27.4	0.14	1.77	905
1/29/24									141	10.8	38.9	116.2	31.1	0.00	0.36	885	162	9.4	32.9	129.3	26.3	0.00	1.78	911
1/30/24	154	10.4	102.8	151.4	26.6	0.14	0.75	935	143	11.2	52.5	126.1	28.1	0.03	0.34	891	158	9.3	51.3	128.7	31.5	0.40	1.81	906
1/31/24	154	10.3	63.1	148.6	26.5	0.00	0.76	936	150	11.2	45.9	125.7	32.9	0.00	0.42	9.5	156	9.1	35.1	128.7	27.3	0.00	1.82	900
Average	151	10.8	43.1	126.3	27.1	0.11	0.82	943	151.5	10.7	46.9	127.6	29.1	0.02	0.50	883.3	158.7	9.5	40.7	130.0	28.7	0.65	1.94	904.8
Min	141	9.9	9.6	110.0	19.7	0.00	0.70	916	141.0	10.1	30.4	116.2	20.1	0.00	0.34	9.5	152.0	8.8	25.8	115.4	21.7	0.00	1.24	860.0
Max	157	11.5	102.8	151.4	35.3	0.26	1.10	990	158.0	11.2	72.8	132.2	35.5	0.06	0.76	935.0	165.0	10.3	65.1	149.5	36.4	3.41	2.85	932.0
St Dev	4.1	0.42	20.57	7.49	3.96	0.06	0.12	18.5	3.93	0.27	9.38	3.17	3.89	0.02	0.10	162.58	2.99	0.42	9.86	5.88	4.11	0.72	0.40	14.11

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.