metrovancouver

Monthly Operating Reports

October 2024

The following October 2024 operating report was sent to the Ministry of Environment and Parks on December 13, 2024.

Metro Vancouver - Waste-to-Energy Facility
CONTINUOUS EMISSION MONITORING SYSTEM
October 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	40.2	36.8	32.8
SO_2	200	24 hr	123.4	101.9	115.4
NOx	190	24 hr	135.1	130.4	146.5
THC	10	24 hr	1.96	0.85	3.15
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			0.98	1.02	0.97
CO			27.4	24.3	21.9
THC			0.23	0.42	0.68
SO_2			72.3	61.1	80.2
NOx			129.6	126.0	133.9

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_2 – 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-Oct 19:00	30 min	130.6	Feeder hang-up. Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
11-Oct 16:00	30 min	167.6	Volatile fuel. Adjusted airflow.
18-Oct 18:00	30 min	107.1	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
23-Oct 04:30	30 min	138.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
23-Oct 08:00	30 min	158.8	Started gas burners, adjusted airflow, modified feed rate.
24-Oct 10:00	30 min	107.1	No action required.
27-Oct 15:00	60 min	252.1	Poor refuse quality. Started gas burners, adjusted airflow, modified feed rate.

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
27-Oct 19:00	60 min	174.8	Poor refuse. Started gas burners, adjusted airflow, modified feed rate.
31-Oct 00:30	30 min	117.2	Started gas burners, adjusted airflow, modified feed rate.
31-Oct 12:00	30 min	119.2	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.

Compliance Parameter: Carbon Monoxide
Response Limit: 100 mg/dscm 1/2 hour average
Unit No. 2

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
5-Oct 18:00	30 min	105.4	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
28-Oct 07:00	30 min	211.0	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
30-Oct 18:30	30 min	118.1	Poor refuse quality. Started gas burners, adjusted airflow, modified feed rate.
31-Oct 15:30	30 min	110.4	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
31-Oct 21:30	60 min	250.8	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.

Compliance Parameter: Carbon Monoxide
Response Limit: 100 mg/dscm 1/2 hour average
Unit No. 3

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
4-Oct 11:00	30 min	178.5	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
4-Oct 15:00	30 min	211.2	Feeder hang-up. Started gas burners, adjusted airflow, modified feed rate.
14-Oct 13:30	30 min	126.1	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
15-Oct 02:30	30 min	109.2	Started gas burners, adjusted airflow.
15-Oct 05:30	30 min	107.9	Started gas burners.
21-Oct 00:00	30 min	401.1	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
27-Oct 17:30	30 min	132.0	Poor refuse quality. Started gas burners, adjusted airflow, modified feed rate.
31-Oct 06:00	30 min	103.2	Feeder hang-up Started gas burners, adjusted airflow, modified feed rate.

Compliance Parameter: Total Hydrocarbons
Response Limit: 20 mg/dscm 1/2 hour average
Unit No. 1

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
27-Oct 14:30	30 min	33.9	Started gas burners, adjusted airflow, modified feed rate, monitored CO, 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	100	100	97
CO	90	Hour	100	100	97
SO_2	90	Hour	100	100	97
NOx	90	Hour	100	100	97
THC	90	Hour	100	99	97
Stack Flow	90	Hour	100	100	100

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
27.15	Secondary economizer leak	October 3-4
9.06	Hopper plugged	October 10-11
2.42	Poor refuse quality	October 12
47.36	Boiler wash	October 21-23
0.37	Poor refuse quality	October 27
1.63	Poor refuse quality	October 27
3.10	Poor refuse quality	October 28

Unit 2

Duration in Hours	Reason	Date
0.40	Poor refuse quality	October 1
0.67	Poor refuse quality	October 2
0.83	Induced draft fan trip	October 5
1.23	Poor refuse quality	October 6
0.50	Poor refuse quality	October 6
1.13	Poor refuse quality	October 7
11.33	Induced draft fan work	October 10
2.32	Poor refuse quality	October 12
0.58	Poor refuse quality	October 12
317.11	Major outage	Oct 14-28
0.50	Poor refuse quality	October 28
3.58	Poor refuse quality	October 28
1.25	Forced draft fan trip	October 28

1.77	Feeder hang-up	October 28
22.35	Main fabric filter screw jammed	Oct 29-30
4.20	Small fabric filter screw jammed	Oct 30-31
0.37	Induced draft fan trip	October 31

Unit 3

Duration in Hours	Reason	Date
0.72	Induced draft fan trip	October 5
0.50	Poor refuse quality	October 6
0.30	Poor refuse quality	October 6
1.12	Poor refuse quality	October 11
0.57	Poor refuse quality	October 12
1.32	Poor refuse quality	October 21
26.35	Boiler wash	October 23
1.56	Induced draft fan trip	October 24
0.77	Induced draft fan trip	October 25
1.28	Poor refuse quality	October 27
0.67	Poor refuse quality	October 27
2.65	Poor refuse quality	October 28
0.98	Poor refuse quality	October 28
0.53	Induced draft fan trip	October 30
0.55	Induced draft fan trip	October 31
0.27	Induced draft fan trip	October 31
0.37	Induced draft fan trip	October 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		18,255	
Waste Processed	tonnes/day	204	101	219
Maximum Waste Processed	tonnes/day	256	227	253
Natural Gas Consumed	m^3/day		12,757	
	m^3/month		395,454	
Fly ash disposed	tonnes		608	
Bottom ash disposed	tonnes		2,316	

7. Complaints and Responses

Date/Time	Complaint	Action Taken

ATTACHMENT 2

October 2024 - Monthly CEMS Data

	Boiler #1								Boiler #2								Boiler #3							
	Stack	O₂	SO₂	NOₓ	CO	THC	Opacity	Furnace	Stack	O₂	SO₂	NOₓ	CO	THC	Opacity	Furnace	Stack	O₂	SO₂	NOₓ	CO	THC	Opacity	Furnace
Date	Temp	(%)	(mg/m³)	(mg/m³)	(mg/m³)	(mg/m³)	(%)	Temp	Temp	(%)	(mg/m³)	(mg/m³)	(mg/m³)	(mg/m³)	(%)	Temp	Temp	(%)	(mg/m³)	(mg/m³)	(mg/m³)	(mg/m³)	(%)	Temp
10/1/24	153	10.0	65.9	128.5	34.4	0.00	0.95	925	150	10.4	67.2	123.6	23.8	0.00	1.05	894	153	10.0	101.1	134.9	27.8	0.00	0.91	884
10/2/24	150	9.5	59.9	134.9	26.0	0.00	0.92	950	150	10.2	56.8	126.7	19.0	0.00	1.04	926	154	10.3	88.9	139.5	24.4	0.00	0.92	881
10/3/24									151	10.4	60.9	128.3	21.2	0.00	1.15	920	154	10.1	99.2	145.3	26.1	0.00	0.96	887
10/4/24									151	10.7	56.0	127.5	24.7	0.55	1.10	896	154	10.0	84.4	146.5	32.8	3.15	0.96	875
10/5/24	153	10.4	76.4	131.0	33.5	0.11	0.96	913	150	10.8	58.0	124.8	22.9	0.52	1.02	887	147	10.3	88.0	140.1	22.5	1.22	0.92	884
10/6/24	153	10.2	85.9	129.3	26.7	0.09	0.94	915	150	11.0	61.9	126.5	22.4	0.38	1.05	879	148	10.4	104.2	134.9	21.3	1.20	0.93	875
10/7/24	152	10.1	64.8	128.7	27.2	0.05	0.93	933	149	10.8	53.4	126.6	24.1	0.79	0.94	900	150	10.1	84.5	134.1	22.4	0.80	0.93	879
10/8/24	153	10.4	81.0	130.0	24.4	0.05	0.91	924	149	10.7	63.5	124.9	28.0	0.25	1.02	915	151	10.4	115.4	132.8	27.2	2.61	0.97	882
10/9/24	153	10.2	46.5	127.6	28.4	0.04	0.92	943	149	10.2	51.1	121.7	24.4	0.21	1.01	930	151	10.1	77.4	133.7	14.3	0.49	0.97	888
10/10/24																	151	9.6	79.9	132.6	18.9	1.53	1.01	906
10/11/24	152	10.1	55.6	131.4	30.2	0.19	1.04	937	151	10.7	41.4	125.5	21.2	0.54	1.13	914	152	9.5	59.6	133.6	21.3	0.83	1.05	907
10/12/24	155	10.2	55.4	129.4	19.7	0.05	1.02	926	151	10.9	51.0	125.0	22.1	0.55	1.13	896	151	9.8	65.4	130.1	14.1	0.78	0.99	890
10/13/24	155	10.3	76.6	130.7	28.6	0.08	1.02	923	151	10.6	75.4	125.9	24.1	0.75	1.01	912	151	9.4	85.1	133.3	20.8	0.72	0.98	896
10/14/24	154	9.8	68.4	134.5	28.2	0.05	0.94	939	151	10.7	57.2	130.4	25.4	0.85	0.92	894	150	9.5	83.6	138.4	15.4	0.73	0.96	893
10/15/24	154	9.8	68.3	128.2	26.1	0.02	0.96	950									151	10.1	63.1	131.6	17.1	0.79	0.92	878
10/16/24	153	9.5	85.2	126.6	25.4	0.04	0.99	950									151	9.9	86.4	131.3	22.2	0.91	0.97	888
10/17/24	153	10.2	89.0	129.2	25.3	0.05	1.01	929									152	10.0	95.2	132.7	17.8	1.09	1.01	882
10/18/24	154	9.9	75.5	127.6	31.6	0.00	1.01	933									151	9.9	90.2	131.1	22.4	0.00	1.03	902
10/19/24	154	9.9	67.5	126.3	28.5	0.00	0.97	907									148	9.6	71.0	129.3	26.6	0.00	0.97	874
10/20/24	154	10.5	52.7	129.4	24.8	0.00	0.94	904									150	9.8	64.0	133.2	23.6	0.00	0.94	866
10/21/24																	152	10.0	69.7	133.1	30.9	0.58	0.92	890
10/22/24																	152	10.1	109.1	133.2	26.0	0.25	0.96	889
10/23/24	158	11.2	62.2	135.1	21.5	1.37	0.97	919																
10/24/24	156	10.1	123.4	127.4	31.8	0.21	0.99	926									153	9.9	99.8	130.6	23.7	0.21	0.99	899
10/25/24	156	10.7	75.5	129.3	26.2	0.25	1.02	913									152	10.1	63.9	129.9	23.5	0.27	1.02	884
10/26/24	156	10.6	82.1	129.1	24.5	0.45	1.02	895									153	10.5	48.8	129.5	17.9	0.22	0.95	859
10/27/24	155	12.2	48.1	131.7	40.2	1.96	0.96	868									154	11.0	37.9	132.0	18.9	0.84	0.92	859
10/28/24	155	11.3	79.1	127.7	11.2	0.18	0.98	929									155	10.8	64.0	131.3	8.1	0.51	0.94	888
10/29/24	155	10.0	82.5	128.3	30.0	0.34	1.00	933									152	9.8	79.9	131.8	22.0	0.14	1.01	907
10/30/24	155	9.9	78.5	129.5	27.0	0.11	1.03	936									153	9.5	73.8	134.4	22.6	0.23	1.01	897
10/31/24	155	10.0	72.7	128.6	32.1	0.21	1.01	916	148.0	10.1	101.9	126.9	36.8	0.44	0.67	891.0	152.0	9.4	72.6	130.7	25.6	0.40	1.00	903.0
Average	154	10.3	72.3	129.6	27.4	0.23	0.98	924	150	10.6	61.1	126.0	24.3	0.42	1.02	904	152	10.0	80.2	133.9	21.9	0.68	0.97	886
Min	150	9.5	46.5	126.3	11.2	0.00	0.91	868	148	10.1	41.4	121.7	19.0	0.00	0.67	879	147	9.4	37.9	129.3	8.1	0.00	0.91	859
Max	158	12.2	123.4	135.1	40.2	1.96	1.04	950	151	11.0	101.9	130.4	36.8	0.85	1.15	930	155	11.0	115.4	146.5	32.8	3.15	1.05	907
St Dev	1.6	0.6	15.8	2.3	5.4	0.45	0.04	18.2	1.0	0.3	14.2	2.1	4.2	0.29	0.12	15.5	1.9	0.4	17.8	4.2	5.2	0.73	0.04	12.8

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.