metrovancouver

Monthly Operating Reports

June 2024

The following June 2024 operating report was sent to the Ministry of Environment and Climate Change Strategy on August 14, 2024.

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

June 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	39.0	36.1	48.7
SO_2	200	24 hr	110.5	97.7	86.4
NOx	190	24 hr	137.0	155.1	172.6
THC	10	24 hr	0.39	0.12	3.76
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			1.4	0.66	1.24
CO			31.4	27.4	34.6
THC			0.14	0.01	1.45
SO_2			68.3	75.2	62.2
NOx			127.5	135.6	146.2

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

* Metro Vancouver has confirmed with Covanta that the equipment is calibrated on a daily basis, and is within range.

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
13-Jun 05:00	30 min	120.9	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
13-Jun 06:00	30 min	104.4	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
13-Jun 09:00	30 min	258.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
15-Jun 20:00	30 min	168.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
16-Jun 12:00	60 min	124.8	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
19-Jun 03:00	30 min	133.9	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
6-Jun 10:00	30 min	113.9	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
12-Jun 18:30	30 min	190.5	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
13-Jun 10:00	30 min	148.5	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
14-Jun 08:00	30 min	120.2	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
17-Jun 15:30	30 min	103.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
21-Jun 05:00	30 min	117.6	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
21-Jun 11:00	30 min	130.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
27-Jun 12:30	30 min	206.3	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
1-Jun 12:30	30 min	110.5	Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
1-Jun 21:00	30 min	134.8	Started gas burners, adjusted airflow, modified feed rate.
3-Jun 09:30	30 min	107.7	Started gas burners, adjusted airflow, modified feed rate.
3-Jun 21:00	30 min	130.6	Started gas burners, adjusted airflow, modified feed rate.
5-Jun 12:30	30 min	115.3	Adjusted airflow, modified feed rate.
5-Jun 23:00	30 min	115.0	Started gas burners, adjusted airflow, modified feed rate.
6-Jun 05:30	30 min	114.6	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
7-Jun 19:30	30 min	138.8	Started gas burners, adjusted airflow, modified feed rate.
9-Jun 07:30	30 min	112.8	Started gas burners, adjusted airflow, modified feed rate.
10-Jun 15:00	30 min	129.6	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
13-Jun 16:00	60 min	150.3	Feed chute hang-up. Started gas burners, adjusted airflow, modified feed rate.
14-Jun 08:30	30 min	112.4	Feed chute hang up. Adjusted airflow, modified feed rate.
17-Jun 19:00	30 min	318.6	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
18-Jun 17:00	60 min	127.5	Feed chute hang up. Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.
24-Jun 12:30	30 min	337.8	Started gas burners, adjusted airflow, modified feed rate.
24-Jun 22:00	30 min	346.3	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
26-Jun 10:30	30 min	197.0	Started gas burners, adjusted airflow, modified feed rate,.
26-Jun 15:00	60 min	232.2	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
27-Jun 14:00	30 min	192.0	Adjusted airflow.

Compliance Parameter: Total Hydrocarbons
Response Limit: 20 mg/dscm 1/2 hour average
Unit No. 3

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
11-Jun 07:30	30 min	53.0	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	97	99	100
CO	90	Hour	97	99	100
SO_2	90	Hour	97	99	100
NOx	90	Hour	97	99	100
THC	90	Hour	96	99	99
Stack Flow	90	Hour	100	99	100

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
1.57	Ash discharger plug	June 2
2.57	Boiler inspection	June 13
0.38	BC Hydro power interruption	June 14
60.96	Boiler wash followed by header leak	June 16-19
0.35	Induced draft fan trip	June 19
19.69	Fabric filter bag replacement	June 25-26
1.07	Fabric filter bag inspection	June 27
0.77	Fabric filter bag inspection	June 30
3.08	Fabric filter bag replacement	June 30

Unit 2

Duration in Hours	Reason	Date
0.98	Induced draft fan trip	June 8
18.65	Boiler wash	June 11
0.33	Boiler inspection	June 13
0.28	BC Hydro power interruption	June 14
0.25	Induced draft fan trip	June 27

Unit 3

Duration in Hours	Reason	Date
0.33	Grate bar failure	June 1
0.47	BC Hydro power interruption	June 14
0.92	Poor refuse quality	June 24
43.08	Boiler wash	June 28-29

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	**20,589**		
Waste Processed	tonnes/day	**210**	**237**	**227**
Maximum Waste Processed	tonnes/day	**256**	**257**	**247**
		Units 1, 2, and 3		
Natural Gas Consumed	m^3/day	**3,383**		
	m^3/month	**101,492**		
Fly ash disposed	tonnes	**731**		
Bottom ash disposed	tonnes	**3,383**		

7. Complaints and Responses

Date/Time	Complaint	Action Taken

June 2024 - Monthly CEMS Data

	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
Date	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
6/1/24	157.3	9.8	50.5	126.4	34.2	0.11	1.17	948	153.9	9.8	61.9	126.8	27.4	0.02	0.83	952	158.8	8.7	49.1	133.8	34.2	0.24	1.53	928
6/2/24	154.5	9.6	58.9	126.7	32	0.14	1.20	955	152.3	9.8	64	128	25.3	0.01	0.80	941	159.5	8.9	59.3	132.7	33.8	0.54	0.56	930
6/3/24	154.6	9.9	43.2	126.9	34.5	0.14	1.15	937	152.5	10.2	54.5	125.5	30.8	0.00	0.82	917	161.4	9	40.3	139.2	40.5	0.78	0.55	911
6/4/24	152.1	10.1	90.3	128.6	32	0.12	1.32	932	151.4	10.1	87.1	126.8	33.5	0.01	0.81	940	160.1	8.8	83	133.3	35.3	0.58	0.57	928
6/5/24	154.1	10.2	60	130.2	36.7	0.13	1.65	930	152.4	10.2	77.1	129.4	26.2	0.00	0.84	932	160.7	9.5	56.9	138.9	39.9	0.49	0.63	902
6/6/24	155.1	10.6	57.3	137	33.7	0.16	2.10	915	152.9	10.3	65	140.9	26.9	0.01	0.83	942	159.4	9.4	57.6	140.6	34.1	0.95	0.63	906
6/7/24	151.9	10.5	60.8	133.1	34	0.11	1.54	922	151.9	10.2	67.2	134.1	27.1	0.00	0.70	932	159.9	9.2	54	149.3	37.5	0.66	1.03	920
6/8/24	148.8	10.1	64.9	124.3	35	0.15	1.08	938	150.3	10	81.6	137.3	30.9	0.00	0.56	944	159.2	9.5	63.7	158.6	30.2	0.90	1.36	913
6/9/24	154.6	10.2	59.6	125.1	32.2	0.16	1.16	930	151.6	10.4	64.3	128.2	26.3	0.00	0.60	921	160.8	9.2	63.6	138.1	39	0.58	1.33	916
6/10/24	154	10.3	44.1	126.6	35.6	0.24	1.19	916	152	10.2	46.6	132.3	30.5	0.01	0.59	934	159.7						1.37	908
6/11/24	149.2	10.5	77.7	126.5	33.7	0.21	1.19	931									160.6	9	73.2	138.5	30.7		1.35	931
6/12/24	147.6	10.9	67.9	125.5	33.3	0.31	1.18	924	152.1	10.2	95.4	131.3	33.7	0.12	0.60	931	159.1	9.2	58.1	147.8	41.9	1.48	1.32	930
6/13/24	138	11.2					1.29	932	150.8	10.2	91	134.3	27.8	0.01	0.65	938	159.2	9.4	65.3	163.5	41.7	0.85	1.37	918
6/14/24	134.4	12.2	75.7	117.9	30.8	0.26	1.18	928	151.4	10.1	91.7	135	24.4	0.01	0.62	936	159.3	9.3	65.7	162.6	32.7	1.91	1.41	930
6/15/24	127.9	12.4	68.6	114.3	39	0.39	1.20	916	152.6	10.3	93.9	135.2	20.7	0.00	0.62	927	160.4	9.4	65.5	153.8	35.5	2.15	1.41	928
6/16/24									152.5	10.2	83.9	131.3	28.5	0.01	0.63	919	162	9.6	57	164.8	33.2	1.95	1.44	907
6/17/24									152.6	10.2	92	130.9	30.5	0.01	0.61	933	162.5	10.3	64.3	143	44.5	2.83	1.38	926
6/18/24									150	10.4	95.6	136.9	34.6	0.00	0.62	938	163	9.4	86	163.1	37.6	1.87	1.36	929
6/19/24	150.8	10.8	95.1	135.6	31.8	0.11	0.92	931	151.8	9.8	81.3	132.8	32.8	0.00	0.65	944	162.3	8.9	62.2	172.6	28.1	1.60	1.39	946
6/20/24	152.5	11	90.5	134.8	30.3	0.11	0.92	951	152.4	10.1	86.6	135.1	30.5	0.01	0.63	956	160.3	9	66.6	144.2	31	1.00	1.39	950
6/21/24	151.5	11.2	94.1	133.2	30.4	0.10	0.92	942	152.2	10	88.1	145.4	36.1	0.01	0.63	958	161.6	9.3	63.7	150.8	26.6	2.14	1.41	942
6/22/24	150.1	11.3	98.6	128.4	25.8	0.06	1.00	944	150.5	9.9	94.3	155.1	24.4	0.00	0.59	974	162.5	9.6	86.4	145	31.4	2.31	1.39	949
6/23/24	151.8						1.05	946	151.5	10.5	97.7	139.1	27	0.00	0.60	956	162.5	9.6	80	139.4	31.1	1.89	1.43	956
6/24/24	152.7						1.68	934	152.5	10.7	58.9	143.2	25.1	0.01	0.65	926	158	9.5	45.1	138.4	48.7	3.76	1.42	922
6/25/24									151	11	60.6	134.1	24.9	0.00	0.64	927	155.2	9.8	72.3	141.8	23.2	1.73	1.45	918
6/26/24	152.3	9.5	45.8	124.3	25.7	0.05	1.71	948	150.8	10.2	47.6	137.5	22	0.01	0.59	967	150.8	9.9	29	138.1	39.1	1.58	1.46	943
6/27/24	151.2	10.1	48.5	127.8	35.6	0.06	1.65	915	152.5	10.4	56.4	145.3	22.6	0.00	0.62	966	146.5	10.3	26.6	132.3	31.8	0.97	1.45	951
6/28/24	153.8	10.1	40.9	127.2	22.7	0.04	2.03	931	153.6	10.6	41	139	20.3	0.00	0.68	951								
6/29/24	152.5	10	110.5	124.1	25.1	0.05	2.57	929	151.8	10.3	93	128.5	23.7	0.01	0.62	956								
6/30/24	157.2	10.3	66.8	128.6	18.6	0.05	2.30	925	154.1	10.6	61.9	153.6	20.2	0.00	0.62	961	155.8	9.1	85.8	143.9	21	1.84	1.37	933
Average	150	10.5	68.3	127.5	31.4	0.14	1.40	933	152.0	10.2	75.2	135.6	27.4	0.01	0.66	942.0	159.3	9.4	62.2	146.2	34.6	1.45	1.24	927.5
Min	128	9.5	40.9	114.3	18.6	0.04	0.92	915	150.0	9.8	41.0	125.5	20.2	0.00	0.56	917.0	146.5	8.7	26.6	132.3	21.0	0.24	0.55	902.0
Max	157	12.4	110.5	137.0	39.0	0.39	2.57	955	154.1	11.0	97.7	155.1	36.1	0.12	0.84	974.0	163.0	10.3	86.4	172.6	48.7	3.76	1.53	956.0
St Dev	6.8	0.73	20.01	5.20	4.86	0.09	0.44	11.4	1.00	0.27	17.46	7.45	4.38	0.02	0.09	15.19	3.58	0.40	15.48	11.28	6.29	0.83	0.32	14.89

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.