metrovancouver

Monthly Operating Reports

October 2022

The following October 2022 operating report was sent to the Ministry of Environment and Climate Change Strategy on December 14, 2022.

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

October 2022

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	43.4	28.7	35.0
SO_2	200	24 hr	150.7	169.9	181.9
NOx	190	24 hr	134.7	132.8	153.7
THC	10	24 hr	0.47	0.75	0.51
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity (%)			0.97	1.45	1.04
CO			21.5	19.2	23.3
THC			0.26	0.03	0.12
SO_2			59.3	116.9	104.5
NOx			123.0	129.2	136.6

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. 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
5-Oct 09:00	90 min	150.0	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate.
5-Oct 11:30	30 min	119.5	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate.
5-Oct 19:00	30 min	101.0	Started gas burners, adjusted airflow, modified feed rate.
13-Oct 20:00	30 min	151.4	Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate.
14-Oct 14:30	30 min	134.2	Volatile fuel. 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
22-Oct 03:30	30 min	153.8	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
8-Oct 18:30	30 min	122.6	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
9-Oct 04:30	30 min	293.7	Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.
21-Oct 20:00	30 min	115.2	Started gas burners, adjusted airflow, modified feed rate.

Compliance Parameter: Opacity
Response Limit: 5% 1/2 hour average
Unit No. 3

Date / Time	Duration	Exceedance (mg/dscm)	Action Taken
29-Oct 08:30	30 min	15.4	Cleaning/calibration of opacity tube.

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	99
CO	90	Hour	99	99	99
SO_2	90	Hour	99	99	99
NOx	90	Hour	99	99	99
THC	90	Hour	99	99	99
Stack Flow	90	Hour	99	99	99

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
0.89	Ash discharger plug	October 3
3.10	Fabric filter baghouse compartment plugged	October 8
0.85	Feed chute plugged	October 13
285.35	Annual major maintenance outage	October 16-28
1.22	Poor refuse quality	October 31
1.23	Poor refuse quality	October 31

Unit 2

Duration in Hours	Reason	Date
0.37	Induced draft fan trip	October 12

Unit 3

Duration in Hours	Reason	Date
82.88	Annual minor maintenance outage	October 2-6
2.00	Fabric filter baghouse maintenance	October 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	**16,689**		
Waste Processed	tonnes/day	**123**	**225**	**206**
Maximum Waste Processed	tonnes/day	**218**	**241**	**249**
		Units 1, 2, and 3		
Natural Gas Consumed	m^3/day	**5,786**		
	m^3/month	**179,379**		
Fly ash disposed	tonnes	**787**		
Bottom ash disposed	tonnes	**3,008**		

7. Complaints and Responses

Date/Time	Complaint	Action Taken

ATTACHMENT 2

October 2022 - 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
10/1/22	155	11.2	58.1	126.1	27	0.22	2.06	908	142	10.3	132.4	131.4	13	0.02	1.43	921	146	9.1	69.3	126.7	16.8	0.01	0.75	911
10/2/22	156	11	60	123.2	26.7	0.30	2.19	916	143	10.6	131.2	129.8	16.4	0.02	1.43	897	144	9.3	73.1	128.8	22.1	0.01	0.73	902
10/3/22	155	10.6	29.8	119	26	0.26	2.12	928	142	9.9	115.1	128.8	16.2	0.00	1.45	936								
10/4/22	153	11	86.5	123.7	33.7	0.29	1.93	922	141	10.4	169.9	128.8	15.2	0.00	1.48	929								
10/5/22	151	10.8	52.9	119.5	43.4	0.27	0.94	945	143	10.2	111	127.8	16.9	0.01	1.48	940								
10/6/22	154	10.7	59	123.4	32.2	0.25	1.05	934	144	10.5	131.3	129.1	17	0.00	1.51	921	150	10.7	93.9	128.6	31.3	0.51	0.76	883
10/7/22	152	10.7	34.3	123.2	15	0.18	1.15	946	145	10.2	108.8	128.6	12.9	0.00	1.54	945	163	11.2	116.4	134.1	35	0.25	0.99	878
10/8/22	152	10.8	33.6	123.4	16.4	0.24	1.13	929	147	10.3	118.3	128.6	12.5	0.01	1.59	940	163	11.3	127.6	135.4	25	0.14	0.98	896
10/9/22	152	10.7	76.1	120.2	14	0.16	1.28	927	144	10.7	160.1	130.3	13.3	0.00	1.74	933	159	11.3	181.9	135.8	23.3	0.23	1.10	890
10/10/22	152	10.5	75.3	108.1	19.8	0.22	1.05	940	140	10.5	158.1	123.2	17	0.01	2.11	934	147	11.2	125.4	132	26.5	0.04	1.07	901
10/11/22	150	10.7	44.5	109.5	25.5	0.20	1.06	962	143	10.7	110	131.4	16	0.01	1.96	925	150	11.1	98.4	140.1	16.3	0.00	1.01	912
10/12/22	153	10.7	20.5	116.7	14.8	0.24	0.77	951	146	10.3	90.8	132.8	13.5	0.00	1.80	928	152	11.7	80.5	153.7	14.4	0.02	1.05	918
10/13/22	149	11	30.7	125.8	16.6	0.28	0.35	932	147	10.3	92.9	130.8	14.3	0.00	1.07	929	151	11.4	79.9	142.6	19.2	0.03	0.96	924
10/14/22	147	11.4	19.7	124.3	17.3	0.47	0.36	928	145	10.3	85.7	127.3	18.3	0.00	1.12	951	151	11.6	81.9	135.9	22	0.00	0.92	916
10/15/22	147	11	27.3	125.2	11.6	0.28	0.45	931	140	9.7	101	127.2	17.2	0.00	1.16	968	148	11.2	104.5	132.8	20.7	0.00	1.00	918
10/16/22	143	10.6	20.3	124.3	15.2	0.20	0.54	932	142	9.9	95.5	129.7	16.7	0.00	1.20	946	149	11.2	104.5	133.6	20.2	0.00	0.99	927
10/17/22									140	10.1	97.2	131.4	22.4	0.01	1.19	922	146	10.7	83.7	139.5	23.7	0.06	0.98	919
10/18/22									141	10.8	146.2	126.6	22.5	0.00	1.22	923	149	11.8	155.9	133.6	22.8	0.00	1.05	907
10/19/22									139	10.5	163.9	129.6	17.5	0.07	1.32	935	149	11.7	159.2	135.6	23.6	0.49	1.31	905
10/20/22									142	11	136.6	132.1	21.5	0.00	1.30	935	153	12	122.3	142.4	25.9	0.44	1.20	905
10/21/22									141						1.31	951	152	11.4	100.7	135.3	28.5	0.12	1.10	928
10/22/22									143	10.3	130.5	129.7	21.1	0.75	1.37	965	152	10.9	117	133.9	21.8	0.11	1.05	940
10/23/22									142	10.6	131.3	130.6	18.7	0.06	1.40	944	155	11.8	109.5	136.5	22.7	0.07	1.19	925
10/24/22									143	10.7	95.6	128.9	27.1	0.01	1.40	923	153	11.3	95.1	136.3	20.7	0.07	1.25	914
10/25/22									142	10.4	115	129.1	24.5	0.00	1.41	944	152	11.5	108.8	138.3	24.7	0.04	1.27	920
10/26/22									143	10.2	83.3	130.2	25.1	0.01	1.45	940	153	11.7	79	135.6	29.8	0.06	1.37	890
10/27/22									143	10.4	99	130.9	28.1	0.03	1.44	924	152	11.4	73.7	137.3	27.8	0.17	1.02	890
10/28/22									143	10.2	84.8	128.9	28.7	0.02	1.43	934	154	11.6	74.4	143.5	26.5	0.14	2.04	885
10/29/22	149	9.5	129.9	133.3	20.9	0.37	0.00	863	143	10.4	104.6	129.4	25.6	0.00	1.46	931	154	11.2	91.4	135.7	17.7	0.05	1.58	914
10/30/22	151	9.6	150.7	132.5	12.2	0.23	0.00	916	141	10.6	126.3	126	20.9	0.00	1.46	933	153	11.6	138	140	13.4	0.23	0.06	916
10/31/22	154	9.9	117.6	134.7	20.1	0.34	0.00	890	142	10.6	79.9	127.3	27.3	0.00	1.78	898	155	11.7	81.2	141.4	28.6	0.20	0.28	878
Average	151	10.7	59.3	123.0	21.5	0.26	0.97	926	142.6	10.4	116.9	129.2	19.2	0.03	1.45	933.7	152.0	11.2	104.5	136.6	23.3	0.12	1.04	907.6
Min	143	9.5	19.7	108.1	11.6	0.16	0.00	863	139.0	9.7	79.9	123.2	12.5	0.00	1.07	897.0	144.0	9.1	69.3	126.7	13.4	0.00	0.06	878.0
Max	156	11.4	150.7	134.7	43.4	0.47	2.19	962	147.0	11.0	169.9	132.8	28.7	0.75	2.11	968.0	163.0	12.0	181.9	153.7	35.0	0.51	2.04	940.0
St Dev	3.2	0.50	38.64	6.83	8.42	0.07	0.71	22.2	1.94	0.28	25.53	1.98	4.99	0.14	0.23	15.21	4.45	0.66	28.67	5.32	5.08	0.15	0.36	16.32

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.