

Monthly Operating Reports

September 2018

The following September 2018 operating report was sent to the Ministry of Environment and Climate Change Strategy on November 7, 2018.

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

September 2018

1. MONTHLY SUMMARY REPORT

Parameter	Discharge Limit (mg/dscm)	Compliance Period	Maximum Measurement (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Carbon Monoxide (CO)	50	24 hr	29.2	35.6	41.8
Sulphur Dioxide (SO ₂)	200	24 hr	48.0	114.6	95.6
Nitrogen Oxides (NO _x)	190	24 hr	130.1	140.1	138.7
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity			0.35	0.56	0.57
Carbon Monoxide (CO)			19.6	25.4	32.0
Sulphur Dioxide (SO ₂)			33.7	57.8	69.8
Nitrogen Oxides (NO _x)			127.2	131.5	132.2

Interim Discharge Limits will apply until and including the following dates, at which point the Discharge Limits and Response Limits will apply

a. THC – December 31, 2018

c. SO₂ – December 31, 2022

b. HCl – December 31, 2022

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

Unit	Compliance Parameter	Response Limit	Date / Time	Exceedance Level
	Reason/Action Taken			

2.c. Transient Conditions - Furnace Temperature Below 800°C

Unit	Duration	Date/Time	Average Temperature (°C)	Cause
Action Taken to Restore Steady State Conditions				

3. ANALYZER 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	96	99
Carbon Monoxide (CO)	90	Hour	99	96	99
Sulphur Dioxide (SO ₂)	90	Hour	99	95	99
Nitrogen Oxides (NO _x)	90	Hour	98	96	99
Stack Flow	NA	Hour	94	92	97

*Stack Flow availability is included, however there is no required availability as per the Operational Certificate

4. SHUTDOWN REPORT

Unit 1

Duration in Hours	Reason	Date
1.13	Refuse cranes out of service	September 4
0.43	BC Hydro power interruption	September 16
0.30	High furnace pressure trip	September 26

Unit 2

Duration in Hours	Reason	Date
5.17	Grate repairs	September 1
1.42	Refuse cranes out of service	September 4
457.65	Annual major maintenance outage	Sept 9-28
4.20	Ash discharger plugged	September 29

Unit 3

Duration in Hours	Reason	Date
0.38	Grate inspection	September 1
2.10	Refuse cranes out of service	September 4
0.83	Feed chute hang up	September 10
0.70	BC Hydro power interruption	September 16
17.18	Boiler generating bank wash	September 16
11.07	Grate drive cylinder failure	September 24
0.65	Induced draft fan trip	September 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	516		
Waste Processed	tonnes/day	234	86	211
Maximum Waste Processed	tonnes/day	247	247	241
		Units 1, 2, and 3		
Natural Gas Consumed	m ³ /day	2,103		
	m ³ /month	63,081		
Fly ash disposed	tonnes	621		
Bottom ash disposed	tonnes	2,405		

7. COMPLAINTS AND RESPONSES

Date/Time	Complaint	Action Taken

September 2018 - Monthly Continuous Emission Monitoring System Data

	Boiler #1							Boiler #2							Boiler #3						
	Stack	O2	SO2	NOx	CO	Opacity	Furnace	Stack	O2	SO2	NOx	CO	Opacity	Furnace	Stack	O2	SO2	NOx	CO	Opacity	Furnace
Date	Temp	(%)	(mg/m³)	(mg/m³)	(mg/m³)	(%)	Temp	Temp	(%)	(mg/m³)	(mg/m³)	(mg/m³)	(%)	Temp	Temp	(%)	(mg/m³)	(mg/m³)	(mg/m³)	(%)	Temp
9/1/18	155	9.3	45.9	129.1	17.4	0.28	1015								147	11.8	82.2	133.3	27.9	0.61	901
9/2/18	151	9.0	38.0	128.7	14.0	0.32	1022	152	9.3	53.5	131.9	20.4	0.68	986	148	11.7	77.4	131.7	20.7	0.62	927
9/3/18	151	8.8	29.0	127.2	18.8	0.30	1027	150	8.9	43.9	129.6	23.3	0.70	1010	148	11.5	63.9	131.0	34.9	0.60	915
9/4/18	154	9.7	16.6	129.7	19.3	0.29	971	152	8.9	39.2	131.0	32.3	0.75	978	147	11.6	48.3	130.9	33.3	0.60	909
9/5/18	154	9.6	32.0	128.9	18.0	0.30	997	152	9.5	46.3	131.5	22.4	0.66	980	148	11.8	67.0	133.0	28.3	0.62	886
9/6/18	153	9.9	30.4	130.1	18.8	0.36	982	152	9.9	40.9	130.3	20.9	0.62	954	146	11.9	65.9	138.7	27.3	0.62	886
9/7/18	153	9.3	28.5	128.4	17.0	0.33	1015	152	8.7	35.6	128.2	25.8	0.84	1002	148	11.5	66.8	133.3	33.7	0.65	908
9/8/18	151	9.4	34.3	127.5	21.8	0.30	990	147	8.3	37.5	128.0	20.3	0.75	1003	147	12.2	85.9	131.2	38.3	0.63	862
9/9/18	151	9.1	35.8	128.2	18.4	0.24	999								146	11.3	73.8	131.8	32.1	0.63	884
9/10/18	149	9.1	34.0	125.6	16.5	0.27	973								141	11.0	58.7	128.8	37.4	0.64	894
9/11/18	148	9.0	21.9	126.2	17.5	0.29	977								144	11.0	47.1	129.7	32.5	0.62	884
9/12/18	149	8.8	33.5	126.2	14.0	0.30	998								143	10.8	66.0	129.2	34.1	0.64	909
9/13/18	150	9.1	41.3	126.7	20.6	0.31	984								143	10.8	67.0	129.3	31.9	0.65	912
9/14/18	145	9.3	32.1	126.3	14.3	0.31	975								146	11.4	67.5	131.3	40.2	0.68	888
9/15/18	147	9.6	35.7	125.7	17.5	0.32	958								146	11.3	65.9	129.1	38.9	0.70	892
9/16/18	152	9.3	40.9	127.4	18.3	0.35	959														
9/17/18	154	9.0	34.0	126.6	19.4	0.34	979								150	10.5	87.0	131.4	31.3	0.71	929
9/18/18	152	9.2	24.8	127.3	19.0	0.40	966								151	10.7	71.8	129.9	41.8	0.76	918
9/19/18	151	9.1	28.9	126.9	21.1	0.41	967								149	10.3	89.2	132.9	30.9	0.76	932
9/20/18	150	9.0	47.0	127.5	22.7	0.17	969								148	10.3	72.2	136.1	32.0	0.55	926
9/21/18	150	8.9	31.2	126.6	17.2	0.01	949								147	10.0	59.5	132.5	25.3	0.36	918
9/22/18	154	9.3	43.9	127.3	24.1	0.00	925								151	10.1	95.6	133.2	30.5	0.33	913
9/23/18	153	9.0	40.3	127.4	17.9	0.00	959								151	10.4	93.4	135.4	29.5	0.35	909
9/24/18	153	9.0	25.8	126.1	22.1	0.04	941														
9/25/18	151	9.1	24.2	126.5	21.6	0.03	941								145	10.5	45.2	133.4	36.2	0.51	890
9/26/18	147	9.6	27.1	126.2	24.4	0.67	918								142	11.0	64.6	134.3	28.0	0.43	869
9/27/18	150	9.2	30.9	127.2	29.2	0.89	924								143					0.44	905
9/28/18	149	9.6	48	126.3	23.5	0.93	920	149	8.9	114.6	140.1	35.6	0.01	876	141	10.6	78.1	133.6	30.3	0.40	901
9/29/18	149	9.2	41.4	124.1	21.7	0.88	931								144	10.3	76.8	132.0	30.8	0.40	913
9/30/18	151	9.8	34.4	127.1	21.8	0.77	916	146	9.0	108.5	132.9	27.4	0.00	915	137	10.6	47.9	133.0	24.7	0.43	908
Average	151	9.2	33.7	127.2	19.6	0.35	968	150	9.0	57.8	131.5	25.4	0.56	967	146	11.0	69.8	132.2	32.0	0.57	903
Min	145	8.8	16.6	124.1	14.0	0.00	916	146	8.3	35.6	128.0	20.3	0.00	876	137	10.0	45.2	128.8	20.7	0.33	862
Max	155	9.9	48.0	130.1	29.2	0.93	1027	152	9.9	114.6	140.1	35.6	0.84	1010	151	12.2	95.6	138.7	41.8	0.76	932
St Dev	2.40	0.29	7.62	1.29	3.35	0.25	31.89	2.39	0.47	30.98	3.61	5.48	0.32	44.97	3.37	0.62	13.78	2.29	4.90	0.13	17.64

Blank days have less than 18 hours of valid data due to unit shut downs.

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.