

Monthly Operating Reports

June 2018

The following June 2018 operating report was sent to the Ministry of Environment and Climate Change Strategy on July 26, 2018.

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

June 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	36.1	26.9	40.2
Sulphur Dioxide (SO ₂)	200	24 hr	55.3	81.3	117.2
Nitrogen Oxides (NO _x)	190	24 hr	130.0	131.6	132.8
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity			1.08	1.07	0.75
Carbon Monoxide (CO)			23.6	20.0	29.9
Sulphur Dioxide (SO ₂)			39.7	52.1	71.1
Nitrogen Oxides (NO _x)			127.8	128.5	131.2

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	99	100	100
Oxygen	90	Hour	98	98	99
Carbon Monoxide (CO)	90	Hour	98	98	99
Sulphur Dioxide (SO ₂)	90	Hour	98	98	99
Nitrogen Oxides (NO _x)	90	Hour	98	98	99
Stack Flow	NA	Hour	76	98	99

*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
0.60	Turbine generator control trip	June 1
0.45	BC Hydro power interruption	June 1
0.52	Turbine generator breaker trip	June 1
0.42	Induced draft fan trip	June 12
1.00	Online wash	June 14
0.47	Induced draft fan drive repair	June 14
1.67	Feed chute plug	June 15
0.87	Fabric filter bag inspection	June 17
0.42	Turbine generator control trip	June 23
0.57	Feed chute hang up	June 25
0.88	Poor refuse quality	June 25

Unit 2

Duration in Hours	Reason	Date
0.58	Turbine generator control trip	June 1
0.42	BC Hydro power interruption	June 1
0.63	Turbine generator breaker trip	June 1
0.68	Under fire air cleaned	June 14
13.58	Economizer elbow wash	June 22
0.42	Turbine generator control trip	June 23

Unit 3

Duration in Hours	Reason	Date
0.63	Turbine generator control trip	June 1
0.47	BC Hydro power interruption	June 1
1.07	Turbine generator breaker trip	June 1
0.55	Under fire air damper jammed	June 7
0.48	Online wash	June 14
19.72	Second pass hopper wash	June 21
0.53	Second pass hopper wash	June 22
0.42	Turbine generator control trip	June 23
0.25	BC Hydro power interruption	June 24

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	716		
Waste Processed	tonnes/day	251	245	243
Maximum Waste Processed	tonnes/day	259	259	260
		Units 1, 2, and 3		
Natural Gas Consumed	m ³ /day	927		
	m ³ /month	27,811		
Fly ash disposed	tonnes	898		
Bottom ash disposed	tonnes	3,979		

7. COMPLAINTS AND RESPONSES

Date/Time	Complaint	Action Taken

June 2018 - Monthly Continuous Emission Monitoring System Data

Date	Boiler #1							Boiler #2							Boiler #3						
	Stack Temp	O2 (%)	SO2 (mg/m³)	NOx (mg/m³)	CO (mg/m³)	Opacity (%)	Furnace Temp	Stack Temp	O2 (%)	SO2 (mg/m³)	NOx (mg/m³)	CO (mg/m³)	Opacity (%)	Furnace Temp	Stack Temp	O2 (%)	SO2 (mg/m³)	NOx (mg/m³)	CO (mg/m³)	Opacity (%)	Furnace Temp
6/1/18	154	8.8	44.3	129.0	33.7	1.27	898	147	8.9	49.2	129.1	26.9	0.97	956	143	9.5	66.9	132.5	37.1	0.79	889
6/2/18	154	8.4	47.3	128.0	30.4	1.34	908	148	8.4	49.7	128.2	19.8	0.98	975	143	8.9	61.1	130.0	32.8	0.74	901
6/3/18	151	8.4	50.0	127.7	32.7	1.25	904	148	8.4	58.3	126.9	20.0	1.74	993	146	8.8	71.5	131.4	25.4	0.76	913
6/4/18	153	8.5	36.3	127.7	26.2	1.24	890	148	8.4	40.2	126.2	22.1	0.60	989	147	9.1	49.7	130.1	34.1	0.77	895
6/5/18	151	8.2	48.3	127.8	36.1	1.25	909	147	8.3	58.0	130.1	22.9	0.44	1008	144	8.8	60.2	132.4	24.9	0.73	903
6/6/18	149	8.8	31.6	127.6	30.4	1.36	887	147	8.5	27.4	128.6	18.2	0.56	1005	146	9.3	51.3	131.4	26.2	0.71	890
6/7/18	151	8.7	40.6	127.6	25.5	1.26	886	150	8.6	43.4	129.9	21.3	1.38	996	147	9.5	79.6	131.5	28.7	0.71	886
6/8/18	150	8.7	44.8	128.1	21.6	1.20	892	149	9.1	47.5	129.5	21.6	1.91	982	144	9.6	65.8	130.6	26.7	0.75	889
6/9/18	150	8.3	32.3	126.1	22.5	1.20	894	149	8.9	42.7	127.5	20.1	1.72	974	139	9.3	48.2	128.3	25.5	0.69	887
6/10/18	147	8.5	30.9	126.1	19.0	1.23	884	149	9.5	45.1	127.7	25.2	1.84	957	143	9.4	55.5	130.4	24.1	0.70	885
6/11/18	152	8.8	30.2	126.6	24.8	1.20	872	149	8.9	41.7	128.5	20.9	1.65	981	147	9.3	45.5	132.5	27.9	0.74	882
6/12/18	150	8.6	36.4	127.1	23.1	1.28	868	147	8.4	47.6	129.4	16.7	1.23	1002	148	9.5	56.6	132.3	24.0	0.74	892
6/13/18	147	8.6	28.1	127.6	25.1	1.36	902	147	8.4	35.6	129.9	13.1	1.44	1020	146	9.4	49.2	132.7	30.6	0.79	895
6/14/18	147	8.5	28.5	128.7	22.2	1.69	887	149	8.8	35.6	128.1	26.9	1.03	978	147	9.5	56.9	132.8	31.4	0.79	871
6/15/18	144	8.4	35.5	126.6	22.2	1.98	885	146	8.4	48.6	127.9	20.5	0.14	991	144	9.3	64.9	130.6	29.1	0.78	885
6/16/18	148	8.4	34.5	130.0	16.8	2.04	879	147	7.9	45.8	128.0	16.3	0.06	1002	145	9.0	74.3	130.9	29.9	0.77	888
6/17/18	149	8.3	38.4	128.6	22.2	1.98	886	148	7.8	44.6	126.0	17.1	0.28	1008	145	8.5	64.8	129.9	27.5	0.72	901
6/18/18	147	8.9	34.3	127.9	18.1	0.65	906	147	8.0	37.6	129.5	17.8	1.41	1010	147	8.7	62.1	131.9	24.9	0.70	912
6/19/18	151	8.3	38.6	128.3	18.8	0.65	905	147	8.1	61.4	127.3	15.5	0.86	1025	145	8.7	62.4	131.2	27.1	0.71	913
6/20/18	151	8.2	41.7	127.7	16.8	0.73	930	147	7.9	53.5	126.5	22.8	0.60	1026	145	8.6	58.4	129.3	30.2	0.71	931
6/21/18	152	8.1	40.4	127.1	24.4	0.72	922	146	8.1	54.9	126.1	18.7	1.16	1011							
6/22/18	149	8.3	52.9	127.5	18.2	0.72	913								146	9.0	117.2	131.2	34.5	0.79	915
6/23/18	151	8.4	39.2	127.8	21.0	0.77	901	153	8.1	64.5	127.5	20.9	1.53	1011	150	8.9	97.0	132.0	31.2	0.79	903
6/24/18	151	8.5	46.0	128.9	17.6	0.72	907	152	8.2	78.6	127.6	21.2	1.56	1002	143	8.8	103.4	130.2	26.5	0.77	914
6/25/18	156	8.5	41.3	128.8	29.4	0.64	894	153	8.3	68.2	128.4	25.5	1.82	974	150	8.8	109.1	131.1	40.2	0.81	891
6/26/18	155	8.3	47.2	127.1	22.7	0.69	929	154	8.6	81.3	130	19.8	1.34	1003	148	8.9	112.6	131.5	34.5	0.80	899
6/27/18	150	8.4	36.7	128.8	22.1	0.65	938	153	8.6	68.4	130.3	15.4	0.82	1018	146	9.0	79.1	131.4	29.1	0.79	904
6/28/18	154	8.4	55.3	128.9	22.9	0.40	932	155	8.7	74.1	131.6	16.6	0.92	1027	147	9.3	94.8	132.2	35.4	0.77	903
6/29/18	152	8.4	43.6	128.1	20.5	0.45	942	154	8.6	64.7	131.4	17.8	0.56	1030	146	9.2	75.9	130.8	33.0	0.71	925
6/30/18	153	8.6	35.0	127.0	21.9	0.39	932	153	8.8	43.3	128.2	17.5	0.51	1022	147	9.3	68.6	130.5	35.1	0.69	904
Average	151	8.5	39.7	127.8	23.6	1.08	903	149	8.5	52.1	128.5	20.0	1.07	999	146	9.1	71.1	131.2	29.9	0.75	899
Min	144	8.1	28.1	126.1	16.8	0.39	868	146	7.8	27.4	126.0	13.1	0.06	956	139	8.5	45.5	128.3	24.0	0.69	871
Max	156	8.9	55.3	130.0	36.1	2.04	942	155	9.5	81.3	131.6	26.9	1.91	1030	150	9.6	117.2	132.8	40.2	0.81	931
St Dev	2.71	0.20	7.19	0.90	5.08	0.46	19.83	2.78	0.39	13.52	1.50	3.46	0.54	20.56	2.27	0.31	20.33	1.08	4.27	0.04	13.59

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.