

Monthly Operating Reports

February 2018

The following February 2018 operating report was sent to the Ministry of Environment and Climate Change Strategy on April 10, 2018.



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

February 2018

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	31.8	39.7	46.9
SO ₂	200	24 hr	117.8	68.5	72.0
NOx	190	24 hr	131.7	139.4	136.6
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity			0.40	0.60	0.60
CO			24.2	28.4	35.9
SO ₂			64.7	49.7	52.2
NOx			127.6	134.7	131.0

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	Discharge Limit (mg/dscm)	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	98	100
Oxygen	90	Hour	99	98	99
CO	90	Hour	99	98	99
SO ₂	90	Hour	99	98	99
NOx	90	Hour	99	98	99
Stack Flow	90	Hour	100	100	100

4. Shutdown Report

Unit 1

Duration in Hours	Reason	Date
0.38	BC Hydro incoming power interruption	February 2
18.85	Water wash - 2nd pass	February 3-4
1.22	High furnace pressure trip	February 11
1.08	Refuse cranes out of service	February 13
1.63	Refuse cranes out of service	February 14
0.10	Forced draft fan trip	February 22
14.53	Generating bank inlet water wash	February 23
0.33	Forced draft fan trip	February 23
0.43	Visual inspection for fouling	February 25

Unit 2

Duration in Hours	Reason	Date
0.38	BC Hydro incoming power interruption	February 2
2.07	Poor refuse quality	February 5
0.82	Poor refuse quality	February 6
0.75	Poor refuse quality	February 6
2.65	Refuse cranes out of service	February 13
1.38	Refuse cranes out of service	February 14
1.15	Ash discharger plug	February 19
0.92	Refuse cranes out of service	February 22

Unit 3

Duration in Hours	Reason	Date
0.38	BC Hydro incoming power interruption	February 2
0.42	Induced draft fan trip	February 5
0.87	Ash discharger plugged	February 5
0.13	Induced draft fan trip	February 7
0.30	Forced draft fan trip	February 11
0.52	Induced draft fan trip	February 12
1.08	Refuse cranes out of service	February 13
1.38	Refuse cranes out of service	February 14
0.20	Forced draft fan trip	February 15
0.67	Refuse cranes out of service	February 22
0.25	Forced draft fan trip	February 25
1.05	Feed chute hang up	February 28

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	791		
Waste Processed	tonnes/day	256	264	266
Maximum Waste Processed	tonnes/day	279	274	278
		Units 1, 2, and 3		
Natural Gas Consumed	m ³ /day	1,828		
	m ³ /month	51,187		
Fly ash disposed	tonnes	897		
Bottom ash disposed	tonnes	3,632		

7. Complaints and Responses

Date/Time	Complaint	Action Taken

February 2018 - Monthly CEMS 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
2/1/18	157	9.2	40	127.1	25.4	0.35	1008	151	8.8	45.4	131.3	25.9	0.41	1012	144	9.3	48.9	129.1	30	0.53	935
2/2/18	153	9	28.8	126.2	21.2	0.44	1011	148	8.5	37.4	131.3	27.3	0.42	1022	143	9.5	45.6	127.9	35.5	0.51	934
2/3/18								149	8.3	43.2	131.3	29.1	0.43	1015	144	10.2	47.6	131.4	46.9	0.5	920
2/4/18	155	8.7	76.2	128	30.7	0.34	975	150					0.37	1000	145	9.7	58.5	129.2	35	0.49	941
2/5/18	154	9.1	61	126.4	31.8	0.37	979	149	9.1	59.4	133.4	39.7	0.35	1003	143	9.7	52.6	128	30.1	0.5	933
2/6/18	154	8.5	64.7	126.3	27.8	0.33	1001	150	9.1	68.5	138.2	31.8	0.46	1010	145	9.4	58.6	130.3	38.1	0.51	935
2/7/18	155	8.9	66.4	128.1	21.7	0.34	999	146	9.3	51.5	133.2	29.1	0.44	1007	142	9.8	51.4	128.2	31.4	0.52	925
2/8/18	153	8.5	55.5	127	24.8	0.4	1002	146	8.5	46.3	136.6	24.1	0.3	1012	143	9.5	50.5	129.6	28	0.51	937
2/9/18	154	9.3	68.7	127.7	25.1	0.33	983	148	8.7	52.4	138.2	34.7	0.45	988	143	10.1	47.3	130.3	39	0.54	913
2/10/18	154	9.2	68.7	127.9	20.8	0.41	1005	146	9	62.8	133.3	23.6	0.52	1010	141	10.1	51.5	131.8	26.3	0.58	933
2/11/18	154	9.1	79	128.6	21	0.45	1001	147	8.8	60.8	131.2	25.5	0.48	1001	143	10.3	52	130	36.5	0.59	913
2/12/18	154	9.2	59.8	129.2	21.5	0.46	1008	147	8.4	45.4	135.2	36.5	0.52	1003	145	10.2	48.3	131.6	34.3	0.6	933
2/13/18	154	9.1	61.4	129	17.8	0.41	1013	149	8.4	63.3	137.4	24	0.55	1018	145	9.5	72	130.2	32.2	0.6	945
2/14/18	150	8.8	51.4	124.4	30.9	0.4	1009	147	8.6	56.2	132.1	24.9	0.53	1022	146	9.9	63.7	130.5	36.2	0.61	927
2/15/18	152	9	47.5	128.3	20.9	0.38	1032	149	8.9	44.4	135.3	22.3	0.67	1043	145	9.9	50.6	133.9	32	0.59	955
2/16/18	153	8.9	60.7	126.8	27	0.44	1026	148	8.4	54.5	134.8	27.3	0.63	1040	145	9.9	70.8	130	40.4	0.59	955
2/17/18	152	8.6	48.1	126.9	26.9	0.45	1021	149	8.7	37.8	138	24.8	0.55	1038	145	10	50.5	132.5	41	0.61	932
2/18/18	153	8.9	78.4	128.2	21.5	0.39	1029	150	9	48.8	137.6	21.9	0.62	1034	145	10	59.2	131.8	36.9	0.62	946
2/19/18	153	9.1	71.5	125	21.6	0.51	1017	150	9.2	48.5	138.2	27.8	0.8	1015	145	10.5	51.6	130.3	37.3	0.67	929
2/20/18	151	9.6	53.6	124.2	24.6	0.53	1023	150	9.2	45.3	136.6	34.8	0.81	1017	144	10.8	52.9	132.6	34.6	0.7	941
2/21/18	148	10	47.9	128	30.1	0.45	1024	151	10	36.8	139.4	28.4	0.83	1022	144	11.9	35.4	134.7	43.7	0.69	925
2/22/18	147	10	52.5	125.8	21.4	0.57	1028	150	8.9	35.2	134.6	23.9	0.87	1034	147	11	32.6	127	39	0.7	946
2/23/18								147	8.3	37.3	131.3	29.8	0.85	1029	144	9.7	43.9	130.5	35.1	0.7	950
2/24/18	153	9	117.8	130.2	19.7	0.44	1023	149	8.1	55.8	131.9	25.6	0.9	1015	146	9.7	54.6	130.8	32.3	0.63	949
2/25/18	150	9.3	81.7	129	21.7	0.36	1026	148	8.5	49.6	138.3	24.2	1.05	1005	147	9.4	52.3	135.2	33	1.13	944
2/26/18	151	9	81.5	127.7	26.9	0.48	1018	150	8.6	53.5	132.2	35	0.88	1001	146	9.8	44.2	130.9	40.6	0.51	927
2/27/18	153	8.9	84.5	131.7	21.9	0.63	1022	148	8.3	51.2	133.7	29.8	0.96	1011	146	9.6	65.6	131.8	34.3	0.65	943
2/28/18	153	9	75.8	130.4	23.7	0.57	1016	148	8.3	49.5	132.9	33.8	0.95	1022	146	10.3	49.9	136.6	45.5	0.64	916
Average	152.7	9.1	64.7	127.6	24.2	0.4	1011.5	148.6	8.7	49.7	134.7	28.4	0.6	1016.0	144.5	10.0	52.2	131.0	35.9	0.6	935.1
Min	147.0	8.5	28.8	124.2	17.8	0.3	975.0	146.0	8.1	35.2	131.2	21.9	0.3	988.0	141.0	9.3	32.6	127.0	26.3	0.5	913.0
Max	157.0	10.0	117.8	131.7	31.8	0.6	1032.0	151.0	10.0	68.5	139.4	39.7	1.1	1043.0	147.0	11.9	72.0	136.6	46.9	1.1	955.0
St Dev	2.17	0.37	17.73	1.78	3.84	0.08	15.33	1.48	0.42	8.82	2.74	4.77	0.22	13.49	1.45	0.56	8.85	2.23	4.99	0.12	11.74

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.