

## Monthly Operating Reports

May 2018

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The following May 2018 operating report was sent to the Ministry of Environment and Climate Change Strategy on July 4, 2018.



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

May 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	36.5	27.7	46.5
Sulphur Dioxide (SO <sub>2</sub> )	200	24 hr	103.9	157.5	149.7
Nitrogen Oxides (NO <sub>x</sub> )	190	24 hr	133.0	132.0	136.2
			Monthly Average (mg/dscm)		
			Unit 1	Unit 2	Unit 3
Opacity			1.38	0.85	0.76
Carbon Monoxide (CO)			25.5	20.6	31.7
Sulphur Dioxide (SO <sub>2</sub> )			53.9	67.5	83.6
Nitrogen Oxides (NO <sub>x</sub> )			128.4	129.3	132.4

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
- b. HCl – December 31, 2022

- c. SO<sub>2</sub> – 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	99	98
Carbon Monoxide (CO)	90	Hour	99	99	98
Sulphur Dioxide (SO <sub>2</sub> )	90	Hour	99	99	98
Nitrogen Oxides (NO <sub>x</sub> )	90	Hour	99	99	98
Stack Flow	90	Hour	73.9*	100	100

\*Required availability of 90% over the quarter will be reported for Q2 (April, May and June) in the June report.

### 4. SHUTDOWN REPORT

#### Unit 1

Duration in Hours	Reason	Date
2.13	Underfire air plug	May 2
0.08	High pressure trip	May 2
0.13	Turbine generator trip	May 3
0.70	Boiler feed chute plug	May 4
4.05	Fabric filter plug	May 4
0.47	Fabric filter inspection	May 8
1.74	Underfire air plug	May 10
0.15	Forced draft fan trip	May 22
0.38	BC Hydro power interruption	May 23
0.17	Induced draft fan trip	May 28
0.22	Induced draft fan trip	May 29

#### Unit 2

Duration in Hours	Reason	Date
0.13	Turbine generator trip	May 3
0.07	Forced draft fan trip	May 5
1.16	Fabric filter bag inspection and replacement	May 6 - 7
1.55	Fabric filter bag replacement	May 10
0.38	BC Hydro power interruption	May 23
0.40	Induced draft fan trip	May 31

#### Unit 3

Duration in Hours	Reason	Date
0.63	Turbine generator trip	May 3
0.75	Fabric filter bag inspection and replacement	May 5 - 6
1.70	Poor refuse quality	May 8
0.67	Poor refuse quality	May 19
1.00	Fabric filter bag inspection and replacement	May 22
1.13	Fabric filter bag inspection and replacement	May 22
25.06	Fabric filter bag replacement	May 23 - 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	754		
Waste Processed	tonnes/day	266	265	256
Maximum Waste Processed	tonnes/day	273	271	273
		Units 1, 2, and 3		
Natural Gas Consumed	m <sup>3</sup> /day	67		
	m <sup>3</sup> /month	2,070		
Fly ash disposed	tonnes	866		
Bottom ash disposed	tonnes	4,251		

## 7. COMPLAINTS AND RESPONSES

Date/Time	Complaint	Action Taken

May 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
5/1/18	151	7.7	91.8	130.0	36.5	1.36	924	148	8.2	98.7	130.6	27.7	0.74	963	146	10.2	138.3	134.0	45.0	0.75	848
5/2/18	151	8.3	97.8	131.7	30.8	1.35	934	151	8.8	97.4	132.0	20.5	0.56	967	146	10.5	126.9	135.1	46.5	0.79	859
5/3/18	159	8.9	96.9	130.9	26.1	1.37	916	149	8.5	99.7	130.2	17.2	0.30	974	147	10.5	130.8	134.4	36.8	0.76	868
5/4/18	153	8.3	76.6	129.8	17.4	1.36	965	149	8.8	70.3	128.6	16.0	0.45	971	146	10.2	105.7	133.2	23.3	0.79	871
5/5/18	154	8.2	63.0	129.1	22.0	1.37	944	149	8.8	70.9	129.8	18.6	0.40	957	150	10.4	106.7	132.7	29.5	0.79	873
5/6/18	148	8.2	60.2	129.0	26.9	1.44	947	146	8.4	70.1	129.4	18.1	0.15	986	140	10.2	81.0	131.9	28.2	0.73	887
5/7/18	153	8.5	59.0	133.0	17.7	1.36	917	153	8.7	69.0	128.6	21.5	0.55	944	144	10.5	76.9	133.5	28.0	0.76	873
5/8/18	147	8.3	46.6	129.2	18.9	1.40	939	150	8.7	72.3	128.5	19.6	0.86	948	140	10.5	81.3	134.6	24.5	0.74	876
5/9/18	147	8.3	44.6	128.0	22.2	1.37	949	148	8.6	69.1	128.8	20.8	1.34	954	138	10.4	73.0	133.2	23.9	0.71	876
5/10/18	148	8.7	39.7	129.9	25.4	1.34	930	147	8.9	50.6	128.7	22.1	1.68	954	143	10.4	72.6	132.8	33.7	0.75	867
5/11/18	148	8.5	59.0	128.5	19.0	1.38	945	149	8.7	70.3	128.7	19.2	1.49	951	142	10.1	81.7	131.2	25.2	0.75	865
5/12/18	148	8.5	44.3	128.7	21.2	1.40	925	150	8.6	51.5	127.8	21.0	0.87	971	144	10.2	73.4	131.2	26.4	0.78	864
5/13/18	148	8.6	50.2	128.9	19.9	1.49	908	150	8.6	68.4	129.3	19.4	0.52	973	146	10.3	86.4	131.3	27.4	0.72	860
5/14/18	152	8.7	37.5	129.6	23.7	1.53	904	150	8.4	42.3	128.8	21.4	0.65	982	146	9.8	64.0	132.8	35.8	0.70	861
5/15/18	148	8.9	51.1	129.5	30.2	1.40	896	151	8.7	59.1	129.4	22.3	1.26	971	144	10.4	71.8	131.1	28.8	0.70	865
5/16/18	145	8.2	31.6	128.5	28.6	1.37	938	148	8.4	54.5	129.8	22.5	1.24	993	141	10.2	63.9	132.9	24.5	0.74	863
5/17/18	149	8.3	46.1	125.9	30.8	1.37	914	149	8.7	60.6	130.1	25.9	1.35	982	142	10.0	65.3	128.8	33.3	0.76	874
5/18/18	150	8.5	40.4	127.4	32.7	1.38	883	149	8.8	57.2	129.7	26.3	0.31	962	143	10.2	61.1	130.9	38.7	0.75	854
5/19/18	148	8.2	103.9	128.1	32.5	1.43	889	147	8.6	157.5	128.0	26.0	0.14	971	142	10.0	149.7	130.6	33.1	0.73	856
5/20/18	147	8.4	69.7	126.9	21.4	1.36	895	148	8.4	103.0	130.7	14.1	0.13	988	141	10.2	107.6	130.8	29.8	0.70	862
5/21/18	150	8.2	46.2	126.0	30.2	1.46	899	148	8.2	54.5	127.6	21.5	0.53	1000	142	9.8	64.5	129.4	32.4	0.71	866
5/22/18	151	8.0	44.9	125.2	27.0	1.37	904	149	8.4	56.3	128.0	21.7	0.96	991	140	9.9	61.0	128.6	38.1	1.24	850
5/23/18	149	8.4	47.9	127.7	28.7	1.40	890	150	8.6	66.2	129.9	25.4	0.97	966							
5/24/18	147	8.1	56.0	126.2	27.9	1.35	905	151	8.6	66.1	128.9	19.2	1.05	992							
5/25/18	146	8.3	44.3	126.2	22.9	1.37	901	151	8.8	64.4	130.1	18.5	1.39	985	142	10.4	72.4	134.0	37.9	0.72	875
5/26/18	152	8.8	39.1	127.3	26.3	1.32	864	152	8.6	52.2	128.9	21.8	1.41	976	149	10.3	79.1	136.2	38.8	0.77	868
5/27/18	151	8.6	40.2	128.9	24.3	1.41	873	151	8.4	53.9	129.2	15.7	0.82	1002	147	10.3	80.6	136.0	37.3	0.76	875
5/28/18	149	8.4	33.9	126.4	22.8	1.34	908	150	8.5	40.4	129.4	18.8	0.85	993	145	9.8	65.1	132.6	37.7	0.76	889
5/29/18	147	8.8	31.4	129.0	29.0	1.32	887	148	8.7	45.0	128.7	23.3	1.23	969	146	10.2	74.9	132.1	28.7	0.77	880
5/30/18	149	9.0	38.3	126.4	23.2	1.37	903	150	8.9	55.8	130.2	16.6	1.31	989	145	9.4	40.9	131.7	20.2	0.76	881
5/31/18	151	8.8	37.8	130.0	25.8	1.30	899	148	9.0	45.5	131.0	15.5	0.85	993	145	9.3	67.5	131.0	24.5	0.76	895
Average	150	8.4	53.9	128.4	25.5	1.38	913	149	8.6	67.5	129.3	20.6	0.85	975	144	10.2	83.6	132.4	31.7	0.76	869
Min	145	7.7	31.4	125.2	17.4	1.30	864	146	8.2	40.4	127.6	14.1	0.13	944	138	9.3	40.9	128.6	20.2	0.70	848
Max	159	9.0	103.9	133.0	36.5	1.53	965	153	9.0	157.5	132.0	27.7	1.68	1002	150	10.5	149.7	136.2	46.5	1.24	895
St Dev	2.81	0.29	20.17	1.81	4.80	0.05	24.27	1.56	0.20	23.44	1.00	3.41	0.44	15.91	2.86	0.31	25.88	1.93	6.69	0.10	11.17

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.