

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

May 2025

## 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             | 33.2                          | 40.5   | 36.6   |
| SO <sub>2</sub> | 200                        | 24 hr             | 145.2                         | 144.0  | 118.7  |
| NOx             | 190                        | 24 hr             | 147.9                         | 137.8  | 139.2  |
| THC             | 10                         | 24 hr             | 0.06                          | 1.79   | 0.40   |
|                 |                            |                   | Monthly Average (mg/dscm)     |        |        |
|                 |                            |                   | Unit 1                        | Unit 2 | Unit 3 |
| Opacity (%)     |                            |                   | 0.21                          | 0.98   | 0.60   |
| CO              |                            |                   | 26.1                          | 28.1   | 25.8   |
| THC             |                            |                   | 0.02                          | 0.58   | 0.20   |
| SO <sub>2</sub> |                            |                   | 103.8                         | 88.7   | 71.3   |
| NOx             |                            |                   | 138.2                         | 129.9  | 130.8  |

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, 2028

b. SO<sub>2</sub> – March 3, 2028

## 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                                                                   |
|--------------|----------|----------------------|--------------------------------------------------------------------------------|
| 24-May 08:00 | 30 min   | 116.6                | Volatile Fuel. Started gas burners, adjusted airflow, modified feed rate.      |
| 25-May 05:30 | 30 min   | 105.2                | Feed chute hang up. Started gas burners, 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                                                                                            |
|-------------|----------|----------------------|---------------------------------------------------------------------------------------------------------|
| 3-May 08:30 | 30 min   | 106.6                | Feed chute hang up. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation. |
| 7-May 12:30 | 30 min   | 151.4                | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.                     |

|              |        |       |                                                                                                    |
|--------------|--------|-------|----------------------------------------------------------------------------------------------------|
| 7-May 17:00  | 60 min | 144.0 | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.                |
| 7-May 18:30  | 30 min | 159.1 | Started gas burners, adjusted airflow, modified feed rate.                                         |
| 9-May 03:00  | 30 min | 113.7 | Started gas burners, adjusted airflow, modified feed rate.                                         |
| 9-May 19:00  | 30 min | 113.4 | Started gas burners, adjusted airflow, modified feed rate.                                         |
| 17-May 23:00 | 30 min | 188.1 | No action required.                                                                                |
| 19-May 08:30 | 30 min | 115.4 | Started gas burners, adjusted airflow, modified feed rate.                                         |
| 21-May 08:30 | 30 min | 145.2 | Volatile fuel. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation. |
| 23-May 03:30 | 30 min | 106.0 | Started gas burners, adjusted airflow, modified feed rate.                                         |
| 26-May 09:30 | 30 min | 183.6 | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.                |
| 27-May 04:00 | 30 min | 101.6 | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation.                |
| 28-May 15:00 | 30 min | 126.0 | Thermocouple issue. Started gas burners, adjusted airflow.                                         |
| 30-May 02:30 | 30 min | 111.1 | Volatile fuel. Started gas burners, adjusted airflow, modified feed rate, checked instrumentation. |
| 30-May 20:30 | 30 min | 128.0 | Volatile fuel. 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                                                                        |
|--------------|----------|----------------------|-------------------------------------------------------------------------------------|
| 1-May 05:00  | 30 min   | 104.0                | Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.           |
| 3-May 14:00  | 30 min   | 105.1                | Started gas burners, adjusted airflow.                                              |
| 4-May 14:00  | 30 min   | 145.4                | Started gas burners, adjusted airflow.                                              |
| 7-May 12:30  | 30 min   | 121.7                | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation. |
| 7-May 17:30  | 60 min   | 124.6                | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation. |
| 10-May 08:00 | 30 min   | 160.0                | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation. |
| 10-May 10:00 | 30 min   | 103.5                | Started gas burners, adjusted airflow, modified feed rate.                          |
| 10-May 17:30 | 30 min   | 132.9                | Started gas burners, adjusted airflow, modified feed rate.                          |
| 19-May 12:00 | 30 min   | 101.1                | Adjusted airflow.                                                                   |
| 24-May 06:30 | 30 min   | 114.4                | Volatile fuel. Started gas burners, adjusted airflow, modified feed rate.           |
| 26-May 03:30 | 30 min   | 105.2                | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation. |
| 26-May 07:30 | 30 min   | 141.2                | Started gas burners, adjusted airflow, modified feed rate.                          |
| 28-May 07:30 | 30 min   | 129.7                | Poor refuse quality. Started gas burners, adjusted airflow.                         |
| 29-May 11:30 | 30 min   | 125.7                | Started gas burners, adjusted airflow, modified feed rate, checked instrumentation. |

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

| Date / Time  | Duration | Exceedance (%) | Action Taken                |
|--------------|----------|----------------|-----------------------------|
| 25-May 13:00 | 30 min   | 6.3            | Fabric filter bags checked. |

### 3. CEMS Availability

| Analyser        | Required Availability<br>(% hours per quarter) | Averaging Period | Monthly Availability |        |        |
|-----------------|------------------------------------------------|------------------|----------------------|--------|--------|
|                 |                                                |                  | Unit 1               | Unit 2 | Unit 3 |
| Opacity         | 90                                             | Hour             | 98                   | 99     | 99     |
| Oxygen          | 90                                             | Hour             | 98                   | 99     | 99     |
| CO              | 90                                             | Hour             | 98                   | 99     | 99     |
| SO <sub>2</sub> | 90                                             | Hour             | 98                   | 99     | 99     |
| NOx             | 90                                             | Hour             | 98                   | 99     | 99     |
| THC             | 90                                             | Hour             | 98                   | 97     | 99     |
| Stack Flow      | 90                                             | Hour             | 98                   | 99     | 99     |

### 4. Shutdown Report

#### Unit 1

| Duration in Hours | Reason                      | Date     |
|-------------------|-----------------------------|----------|
| 5.28              | Grate bar failure           | May 1    |
| 6.56              | Refuse crane outage         | May 2    |
| 365.06            | Major outage                | May 3-18 |
| 0.58              | BC Hydro power interruption | May 21   |
| 2.24              | Refuse crane outage         | May 23   |
| 3.41              | Refuse crane outage         | May 30   |
| 1.04              | Fabric filter maintenance   | May 31   |

#### Unit 2

| Duration in Hours | Reason                      | Date      |
|-------------------|-----------------------------|-----------|
| 8.04              | Refuse crane outage         | May 2     |
| 2.45              | Refuse crane outage         | May 16    |
| 0.31              | Furnace pressure trip       | May 17    |
| 1.05              | BC Hydro power interruption | May 21    |
| 5.25              | Grate bar failure           | May 22    |
| 38.52             | Grate bar replacement       | May 23-24 |
| 1.45              | Fabric filter maintenance   | May 27    |
| 2.06              | Fabric filter maintenance   | May 28    |
| 3.43              | Refuse crane outage         | May 30    |

#### Unit 3

| Duration in Hours | Reason                    | Date      |
|-------------------|---------------------------|-----------|
| 6.52              | Refuse crane outage       | May 2     |
| 1.35              | Refuse crane outage       | May 16    |
| 45.35             | Grate bar replacement     | May 21-22 |
| 2.31              | Grate bar replacement     | May 23    |
| 1.04              | Fabric filter maintenance | May 25    |
| 2.18              | Fabric filter maintenance | May 26    |
| 6.44              | Fabric filter maintenance | May 26    |
| 1.10              | Fabric filter maintenance | May 27    |
| 4.03              | Refuse crane outage       | May 30    |

## **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                | 15,334            |        |        |
| Waste Processed         | tonnes/day            | 129               | 220    | 224    |
| Maximum Waste Processed | tonnes/day            | 261               | 262    | 272    |
|                         |                       | Units 1, 2, and 3 |        |        |
| Natural Gas Consumed    | m <sup>3</sup> /day   | 11,794            |        |        |
|                         | m <sup>3</sup> /month | 365,606           |        |        |
| Fly ash disposed        | tonnes                | 607               |        |        |
| Bottom ash disposed     | tonnes                | 2,742             |        |        |

## **7. Complaints and Responses**

| Date/Time | Complaint                  | Action Taken |
|-----------|----------------------------|--------------|
|           | Add particulate complaint? |              |

## May 2025 - Monthly CEMS Data

|         | Boiler #1 |                |                      |                      |                      |                      |          |         | Boiler #2 |                |                      |                      |                      |                      |         |         | Boiler #3 |                |                      |                      |                      |                      |         |         |
|---------|-----------|----------------|----------------------|----------------------|----------------------|----------------------|----------|---------|-----------|----------------|----------------------|----------------------|----------------------|----------------------|---------|---------|-----------|----------------|----------------------|----------------------|----------------------|----------------------|---------|---------|
|         | Stack     | O <sub>2</sub> | SO <sub>2</sub>      | NO <sub>x</sub>      | CO                   | THC                  | Opacity* | Furnace | Stack     | O <sub>2</sub> | SO <sub>2</sub>      | NO <sub>x</sub>      | CO                   | THC                  | Opacity | Furnace | Stack     | O <sub>2</sub> | SO <sub>2</sub>      | NO <sub>x</sub>      | CO                   | THC                  | Opacity | Furnace |
| Date    | Temp      | (%)            | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (%)      | Temp    | Temp      | (%)            | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (%)     | Temp    | Temp      | (%)            | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (mg/m <sup>3</sup> ) | (%)     | Temp    |
| 5/1/25  | 156.1     | 10.1           | 65.7                 | 132.4                | 20.5                 | 0.01                 | 0.30     | 905     | 152.4     | 9.7            | 100.6                | 130.8                | 27.4                 | 0.36                 | 0.68    | 914     | 154.2     | 10.3           | 77                   | 133.7                | 32.4                 | 0.09                 | 0.51    | 883     |
| 5/2/25  |           |                |                      |                      |                      |                      |          |         |           |                |                      |                      |                      |                      |         |         |           |                |                      |                      |                      |                      |         |         |
| 5/3/25  |           |                |                      |                      |                      |                      |          |         | 151       | 10             | 89.5                 | 137.3                | 33.4                 | 0.29                 | 0.74    | 896     | 154.5     | 10.1           | 62.9                 | 139.2                | 31.2                 | 0.20                 | 0.64    | 895     |
| 5/4/25  |           |                |                      |                      |                      |                      |          |         | 151.3     | 10.2           | 95.2                 | 135.5                | 32.4                 | 0.24                 | 0.79    | 891     | 153.7     | 10.1           | 69.7                 | 132.3                | 31.4                 | 0.29                 | 0.61    | 897     |
| 5/5/25  |           |                |                      |                      |                      |                      |          |         | 151.7     | 9.8            | 133                  | 137.8                | 23.1                 | 0.18                 | 0.79    | 916     | 153.8     | 10             | 89.5                 | 132                  | 20.4                 | 0.13                 | 0.63    | 899     |
| 5/6/25  |           |                |                      |                      |                      |                      |          |         | 148.9     | 9.9            | 144                  | 134.7                | 21.8                 | 0.25                 | 1.05    | 915     | 150.5     | 10.2           | 118.7                | 137.5                | 19.9                 | 0.21                 | 0.59    | 895     |
| 5/7/25  |           |                |                      |                      |                      |                      |          |         | 151.5     | 9.7            | 120                  | 127                  | 40.5                 | 0.33                 | 1.21    | 900     | 151.2     | 10.2           | 88.8                 | 130.6                | 28.8                 | 0.30                 | 0.61    | 891     |
| 5/8/25  |           |                |                      |                      |                      |                      |          |         | 150.7     | 9.5            | 105.6                | 126.5                | 34.1                 | 0.17                 | 0.77    | 908     | 150.4     | 9.8            | 85.7                 | 131.1                | 23                   | 0.15                 | 0.62    | 909     |
| 5/9/25  |           |                |                      |                      |                      |                      |          |         | 151.6     | 9.5            | 97.8                 | 126                  | 32.4                 | 0.27                 | 0.93    | 889     | 153.5     | 10             | 77.4                 | 128.5                | 21.8                 | 0.12                 | 0.60    | 871     |
| 5/10/25 |           |                |                      |                      |                      |                      |          |         | 153.5     | 9.6            | 98.4                 | 124.9                | 30.1                 | 0.18                 | 1.38    | 902     | 155.2     | 9.6            | 79.1                 | 128.1                | 36.6                 | 0.21                 | 0.64    | 882     |
| 5/11/25 |           |                |                      |                      |                      |                      |          |         | 153.1     | 9.7            | 129.1                | 126.9                | 28.1                 | 0.08                 | 1.78    | 901     | 153.8     | 9.6            | 110.2                | 129                  | 22.4                 | 0.13                 | 0.60    | 884     |
| 5/12/25 |           |                |                      |                      |                      |                      |          |         | 153       | 9.2            | 93.1                 | 128.1                | 23                   | 0.13                 | 1.06    | 925     | 153.7     | 9.8            | 63.1                 | 129.8                | 25.7                 | 0.20                 | 0.54    | 881     |
| 5/13/25 |           |                |                      |                      |                      |                      |          |         | 153.2     | 10             | 125.9                | 129.3                | 26.6                 | 0.36                 | 1.45    | 916     | 153.3     | 10             | 97.5                 | 135.8                | 22.6                 | 0.19                 | 0.57    | 893     |
| 5/14/25 |           |                |                      |                      |                      |                      |          |         | 153       | 10             | 75.1                 | 127.1                | 35.8                 | 0.37                 | 1.27    | 907     | 153.8     | 10.3           | 56.3                 | 129.1                | 28                   | 0.23                 | 0.55    | 887     |
| 5/15/25 |           |                |                      |                      |                      |                      |          |         | 152.6     | 9.5            | 74.2                 | 128                  | 28.5                 | 0.25                 | 0.71    | 924     | 152.9     | 9.5            | 53.9                 | 130                  | 28.2                 | 0.16                 | 0.54    | 929     |
| 5/16/25 |           |                |                      |                      |                      |                      |          |         | 151.5     | 9.8            | 70.5                 | 126.2                | 28                   | 0.25                 | 0.75    | 895     | 151.4     | 10.1           | 50                   | 125.8                | 26.8                 | 0.21                 | 0.54    | 887     |
| 5/17/25 |           |                |                      |                      |                      |                      |          |         | 152.2     | 9.7            | 70.3                 | 132.5                | 35.3                 | 0.87                 | 0.71    | 881     | 153.5     | 9.5            | 51.9                 | 130.9                | 28.8                 | 0.15                 | 0.53    | 884     |
| 5/18/25 |           |                |                      |                      |                      |                      |          |         | 151.6     | 9.5            | 81                   | 132.1                | 19.5                 | 1.01                 | 0.79    | 894     | 153.4     | 9.8            | 57.1                 | 130.6                | 22.8                 | 0.11                 | 0.55    | 902     |
| 5/19/25 | 152.5     | 10.6           | 95.7                 | 132.3                | 26                   | 0.01                 | 0.18     | 842     | 151.8     | 10             | 68.4                 | 130.5                | 22.6                 | 1.62                 | 0.79    | 882     | 154.7     | 10.4           | 56.6                 | 132.8                | 21.3                 | 0.18                 | 0.55    | 874     |
| 5/20/25 | 153.2     | 9.6            | 125.3                | 130                  | 24.8                 | 0.01                 | 0.19     | 916     | 152.1     | 10             | 73.4                 | 133.9                | 25.5                 | 1.63                 | 0.73    | 903     | 156       | 9.8            | 55.9                 | 130.2                | 21.6                 | 0.09                 | 0.58    | 917     |
| 5/21/25 | 152.5     | 10.2           | 100.6                | 132.6                | 33.2                 | 0.00                 | 0.20     | 940     | 152.4     | 10.7           | 51.7                 | 132.4                | 24.6                 | 1.79                 | 0.72    | 892     |           |                |                      |                      |                      |                      |         |         |
| 5/22/25 | 152.1     | 10             | 111.6                | 141.8                | 30.6                 | 0.03                 | 0.17     | 898     | 151.8     | 10.1           | 62.7                 | 128.4                | 21.8                 | 1.62                 | 0.74    | 907     |           |                |                      |                      |                      |                      |         |         |
| 5/23/25 | 155.1     | 10.1           | 106.8                | 138.8                | 23.9                 | 0.00                 | 0.21     | 893     |           |                |                      |                      |                      |                      |         |         | 156.7     | 9.8            | 66.7                 | 131.6                | 23.2                 | 0.29                 | 0.48    | 883     |
| 5/24/25 | 156.3     | 10.1           | 117.8                | 147.9                | 26.9                 | 0.06                 | 0.27     | 919     |           |                |                      |                      |                      |                      |         |         | 154.3     | 9.6            | 65.1                 | 129.4                | 25                   | 0.28                 | 0.68    | 883     |
| 5/25/25 | 153.9     | 9.8            | 144.7                | 143.7                | 19.2                 | 0.01                 | 0.19     | 939     | 154.1     | 9.8            | 103.1                | 131.8                | 25.4                 | 0.54                 | 0.80    | 887     | 155       | 9.1            | 90.8                 | 128.5                | 19.2                 | 0.15                 | 1.83    | 885     |
| 5/26/25 | 153.2     | 10.5           | 96                   | 144.6                | 25.1                 | 0.01                 | 0.18     | 921     | 154       | 10.4           | 73.2                 | 129.2                | 31                   | 0.65                 | 0.74    | 873     |           |                |                      |                      |                      |                      |         |         |
| 5/27/25 | 154.1     | 10.5           | 145.2                | 146.4                | 25.9                 | 0.00                 | 0.23     | 932     | 149.7     | 10.3           | 93.3                 | 127                  | 26.9                 | 0.58                 | 0.98    | 899     | 155       | 9.8            | 94.5                 | 129.5                | 26.8                 | 0.23                 | 0.59    | 865     |
| 5/28/25 | 156.4     | 10.5           | 86.3                 | 144.9                | 26.1                 | 0.03                 | 0.20     | 958     | 152.6     | 10.6           | 62.3                 | 129.4                | 29.6                 | 0.60                 | 0.97    | 899     | 154.2     | 10.2           | 48.9                 | 129.6                | 32.5                 | 0.23                 | 0.40    | 883     |
| 5/29/25 | 154.9     | 10.4           | 84.5                 | 134.6                | 28.7                 | 0.00                 | 0.17     | 884     | 152.8     | 10.4           | 66.5                 | 128.2                | 26.8                 | 0.51                 | 1.11    | 907     | 153.6     | 9.7            | 51.3                 | 128.7                | 27.5                 | 0.15                 | 0.42    | 886     |
| 5/30/25 | 154.8     | 10.3           | 94.1                 | 132.7                | 26.3                 | 0.05                 | 0.26     | 900     | 151.4     | 10.2           | 63.4                 | 129.1                | 31.1                 | 0.68                 | 1.35    | 910     | 153.6     | 9.3            | 56.9                 | 129.6                | 22.2                 | 0.24                 | 0.37    | 885     |
| 5/31/25 | 145.5     | 10.7           | 78.4                 | 132.1                | 28                   | 0.01                 | 0.20     | 950     | 151.5     | 10.9           | 61.6                 | 125.8                | 22.4                 | 0.53                 | 1.74    | 884     | 155.1     | 9.9            | 49.6                 | 128.3                | 25.4                 | 0.40                 | 0.42    | 862     |
| Average | 154       | 10.2           | 103.8                | 138.2                | 26.1                 | 0.02                 | 0.21     | 914     | 152.0     | 10.0           | 88.7                 | 129.9                | 28.1                 | 0.58                 | 0.98    | 900.6   | 153.7     | 9.9            | 71.3                 | 130.8                | 25.8                 | 0.20                 | 0.60    | 888.6   |
| Min     | 146       | 9.6            | 65.7                 | 130.0                | 19.2                 | 0.00                 | 0.17     | 842     | 148.9     | 9.2            | 51.7                 | 124.9                | 19.5                 | 0.08                 | 0.68    | 873.0   | 150.4     | 9.1            | 48.9                 | 125.8                | 19.2                 | 0.09                 | 0.37    | 862.0   |
| Max     | 156       | 10.7           | 145.2                | 147.9                | 33.2                 | 0.06                 | 0.30     | 958     | 154.1     | 10.9           | 144.0                | 137.8                | 40.5                 | 1.79                 | 1.78    | 925.0   | 156.7     | 10.4           | 118.7                | 139.2                | 36.6                 | 0.40                 | 1.83    | 929.0   |
| St Dev  | 2.7       | 0.32           | 23.40                | 6.43                 | 3.60                 | 0.02                 | 0.04     | 30.4    | 1.17      | 0.40           | 24.74                | 3.55                 | 5.05                 | 0.50                 | 0.32    | 13.10   | 1.49      | 0.32           | 19.74                | 2.95                 | 4.47                 | 0.07                 | 0.26    | 14.43   |

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.