March 28, 2024

Alberta Environment and Protected Areas (EPA)
Monitoring Branch
11th Floor Oxbridge Place
9820-106 Street
Edmonton, Alberta
T5K 2J6

RE: Monthly Ambient Air Monitoring Report
February 2024
Clean Harbors Canada, Inc. Approval 10348-03-01

To whom it may concern:

Clean Harbors Canada, Inc. (Clean Harbors) is presenting this Monthly Ambient Air Monitoring Report, which was prepared by GHD Limited (Consultant), for the reporting period of February 2024, to Alberta Environment and Protected Areas (EPA). The Clean Harbors Ryley Industrial Waste Management Facility (Facility) is located in SE 09-050-17 W4M near Ryley, Alberta.

This ambient air monitoring program is conducted in accordance with the requirements outlined in the facility's amended Environmental Protection and Enhancement Act (EPEA) Approval, Approval No. 10348-03-01 (Approval). Clean Harbors' original Ambient Air Monitoring Program for Approval No. 10348-03-00 was initially approved on June 24, 2009. As part of the amended Approval requirements, the Facility submitted an Enhanced Ambient Air Quality Monitoring Program to Alberta EPA on September 14, 2022 (no formal approval has been provided by Alberta EPA). Operating under the Approval and the submitted program, Clean Harbors operates the following ambient air monitoring stations:

- Wind
  - Facility Meteorological Station – EPA Station ID 00010348-C-1
  - Facility Site Station – EPA Station ID 00010348-C-2
  - Ryley School Station – EPA Station ID 00010348-C-3
- TSP
  - Facility Site Station – EPA Station ID 00010348-I-2
  - Ryley School Station – EPA Station ID 00010348-I-3
  - Highway 854 Lift Station – EPA Station ID 00010348-I-1
- PM_{10}
  - Highway 854 Lift Station – EPA Station ID 00010348-I-1

Included in this report are the following:

- Summary of the ambient air monitoring program for February 2024
- Summary of AMD Electronic Transfer System submittals
- Results for Total Suspended Particulate Matter (TSP) reported in $\mu g/m^3$
- Results for Particulate Matter $\leq$ 10 microns (PM_{10}) reported in $\mu g/m^3$
- Results for metals if the TSP or PM_{10} results were >50 $\mu g/m^3$

- Results for Total Non-Methane Organic Compounds (TNMOC) and Volatile Organic Compounds (VOC)
- Wind frequency distribution tables, wind rose and monthly uptime

Should there be any questions and comments regarding this report, please do not hesitate to contact the undersigned.

Yours truly,

CLEAN HARBORS CANADA INC.

Stan Yuha

Facility Manager
Ryley Facility

Alberta Environment and Protected Areas (EPA)
Monthly Ambient Air Monitoring Report
February 2024
Report Completed on March 28, 2024

Clean Harbors Environmental Services Inc.

Approval Number: 10348-03-01

Ryley Facility, Alberta

CLEAN HARBORS CANADA, INC.
P.O. Box 390, Ryley, Alberta T0B 4A0 Telephone (780) 663-3828

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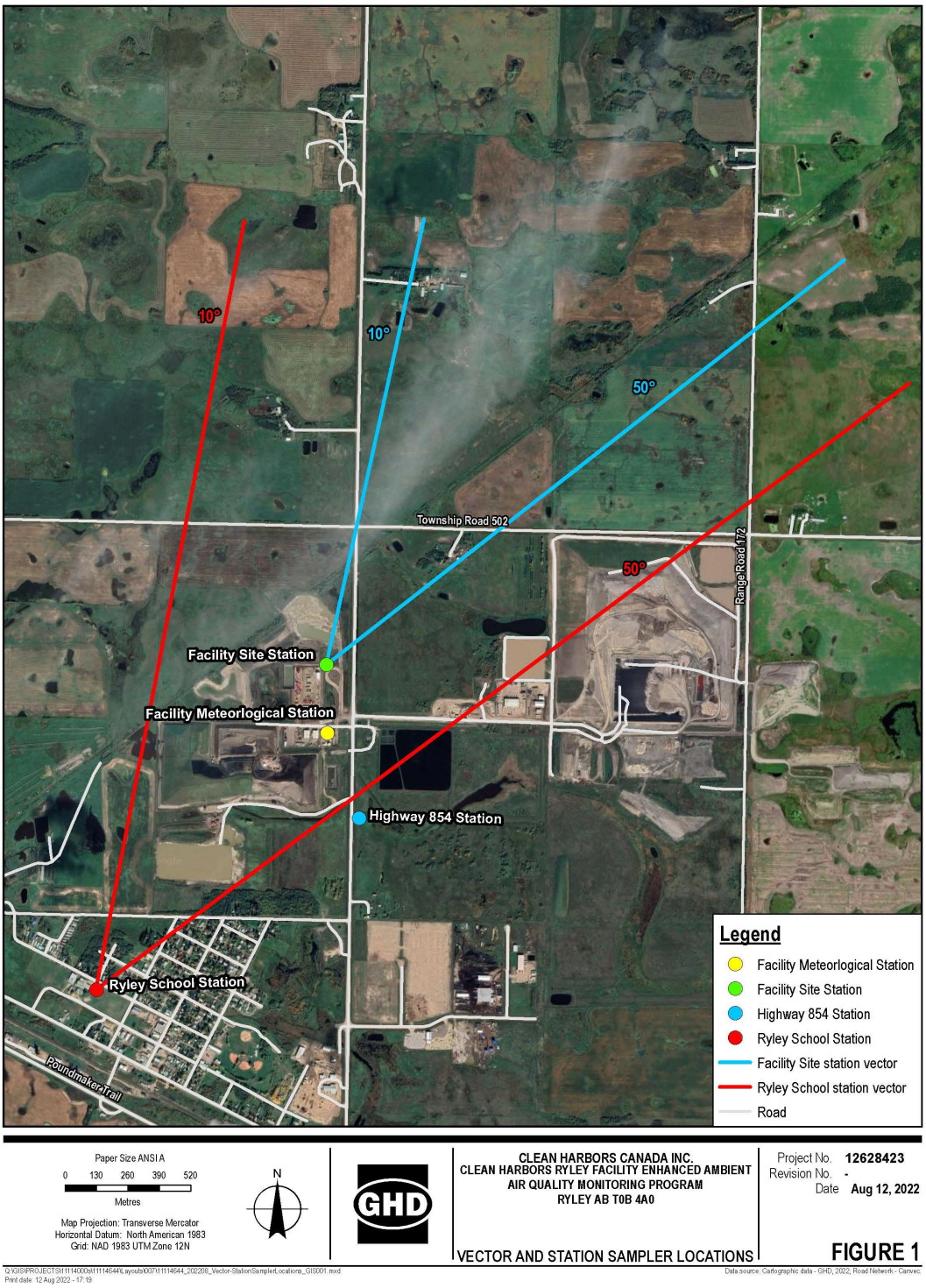
1. Introduction

The Facility operates the following ambient air monitoring stations to assess ambient air quality at and around the Facility as shown in Figure 1.



1. Upwind intermittent ambient air quality monitoring station, known as the Facility Site Station (EPA Station ID 00010348-I-2), located at 50114 Range Road 173, Ryley, Alberta (53°18'13.11"N and 112°25'5.81"W). At this location, a Tisch TE-5170V VFC High Volume TSP Sampler (TSP Hi-Vol Sampler) is located against the Facility perimeter fence, north of the vehicle staging road.
2. Downwind intermittent ambient air quality monitoring station, known as the Ryley School Station (EPA Station ID 00010348-I-3), located at 5211 52 Avenue, Ryley, Alberta (53°17'28.99"N and 112°25'55.81"W). At this location, a TSP Hi-Vol Sampler is located on the roof of the Ryley School.

For these two locations, samples are collected and analyzed for the following: total suspended particulate matter (TSP) (typically with diameter less than 35 microns (µm)). Additionally, TSP samples that exceed 50 micrograms per cubic metre (50 µg/m^3) are analyzed for a target list of metals. The samplers are programmed to run for approximately 24-hours. All samples are collected for a total of 24-hours by intermittent sampling when the wind speed is greater than 5 km/hr and wind direction is blowing from the northeast towards the southwest.

3. Intermittent monitoring station, known as the Highway 854 Lift Station (EPA Station ID 00010348-I-1), located on Secondary Road 854, approximately 350 metres southeast of the Facility (Latitude: 53°17'52.66"N, Longitude: 112°24'57.87"W). At this location, a TSP Hi-Vol Sampler and a Partisol FRM 2000 PM_{10} Sampler (PM_{10} Sampler) will be located on the roof of the lift station. Samples are collected and analyzed for the following: TSP, particulate matter less than or equal to 10 µm in diameter (PM_{10}), volatile organic compounds (VOCs), and total non-methane organic compounds (TNMOC). Additionally, TSP or PM_{10} samples that exceed 50 µg/m^3 are analyzed for a target list of metals. Sampling is conducted once every 6-days for a 24-hour sampling period (midnight to midnight) as required by the Facility's Approval. The 6-day sampling frequency will be in alignment with the Government of Canada, National Air Pollution Surveillance Program (National Air Pollution Surveillance Program – Canada.ca). To correlate PM_{10} data with TSP data, Clean Harbors will continue PM_{10} sampling at the station for a two-year period.

4. Continuous meteorological stations that collect wind speed and wind direction data are also located at the Facility Meteorological Station (EPA Station ID 00010348-C-1), Upwind Facility Site Station (EPA Station ID 00010348-C-2), and Downwind Ryley School Station (EPA Station ID 00010348-C-3). The anemometer equipment used to measure this data includes three R. M. Young 05305-10A Wind Monitor-Aqs.

All sampling and monitoring is conducted in accordance with the Facility's amended Approval (Approval No. 10348-03-01), the Alberta Air Monitoring Directive, 2016 (AMD), and in accordance with the following EPA standards:

- The Alberta Stack Sampling Code, Alberta Environment, 1995, as amended
- The Methods Manual for Chemical Analysis of Atmospheric Pollutants, Alberta Environment, 1993, as amended
- The *Air Monitoring Directive*, Alberta Environment, 1989, as amended

1.1 Contact Information

As required by AMD Chapter 9, Section 2, contact information is provided for the following Facility personnel and Contractors that assisted with the performance of the Facility's Air Monitoring Program.

Contact Information	
Name	**Mr. Stan Yuha**
Title	Plant Manager
Company	Clean Harbors
Responsibilities	Report Certifier/ETS Submitter
Address	PO Box 390, Ryley, AB T0B 4A0
Phone	780-663-2509
Email	yuha.stan@cleanharbors.com
Name	**Mr. Todd Webb**
Title	Laboratory Chemist
Company	Clean Harbors
Responsibilities	Station Field Operator and Field Sampler
Address	PO Box 390, Ryley, AB T0B 4A0
Phone	780-663-2513
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Name	**Mr. Pooya Shariaty**
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Address	3445-114th Ave. SE, Suite 103 Calgary, AB
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Email	Pooya.shariaty@ghd.com
Name	**Ms. Stepheney Davey**
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Company	GHD Limited
Responsibilities	Maintenance/Calibration Services/Report Preparer/ETS Submitter
Address	10250 101 Street NW, Suite 640, Edmonton, AB
Phone	780-229-3687
Email	Stepheney.davey@ghd.com
Name	**Ms. Aja Penny**
Title	Air Quality Engineer in Training
Company	GHD Limited
Responsibilities	Maintenance/Calibration Services/Report Preparer/ETS Submitter
Address	10250 101 Street NW, Suite 640, Edmonton, AB
Phone	780-229-3680
Email	Aja.Penny@ghd.com
Company	**Innotech**
Responsibilities	Laboratory Analytical Services
Address	PO Bag 4000, Vegreville, Alberta
Phone	780-632-8211
Email	EAS.Results@albertainnovates.ca

2. Summary of Ambient Air Monitoring Activities

The following ambient air monitoring activities were conducted during the month of February 2024.

Activity	*Completed (Y/N)*	*Date(s)*
Wind – Facility Meteorological Station		
Wind Speed/Direction Sensor Calibration	N	June 30, 2023[(1)]
Changes to the Wind Speed/Direction Sensor	N	-
Wind – Facility Site Station		
Wind Speed/Direction Sensor Calibration	N	Anemometer Error[(2)]
Changes to the Wind Speed/Direction Sensor	N	-
Wind – Ryley School Station		
Wind Speed/Direction Sensor Calibration	N	June 30, 2023
Changes to the Wind Speed/Direction Sensor	N	-
TSP – Facility Site Station		
TSP Hi-Vol Sampler Calibration	N	December 13, 2023
Changes to the TSP Hi-Vol Sampler	N	-
TSP Samples Collected	Y	February 1, 2024 – March 1, 2024
TSP Metal Analysis Conducted	Y	February 1, 2024 – March 1, 2024
TSP Sampler Maintenance Activities	Y	February 1, 2024
TSP – Ryley School Station		
TSP Hi-Vol Sampler Calibration	N	December 13, 2023
Changes to the TSP Hi-Vol Sampler	N	-
TSP Samples Collected	Y	February 1, 2024 – March 1, 2024
TSP Metal Analysis Conducted	Y	February 1, 2024 – March 1, 2024
TSP Sampler Maintenance Activities	Y	February 1, 2024
TSP, PM_{10}, VOC and TNMOC – Highway 854 Lift Station		
TSP Hi-Vol Sampler Calibration	N	December 13, 2023
PM_{10} Sampler Calibration	N	December 13, 2023
Changes to the TSP Hi-Vol Sampler	N	-
Changes to the PM_{10} Sampling Station	N	-
TSP Samples Collected	Y	February 6, 2024 February 12, 2024 February 18, 2024 February 24, 2024
PM_{10} Samples Collected	Y	February 6, 2024 February 12, 2024

Activity	*Completed (Y/N)*	*Date(s)*
		February 18, 2024 February 24, 2024
VOC and TNMOC Samples Collected	Y	February 6, 2024 February 12, 2024 February 18, 2024 February 24, 2024
TSP Metal Analysis Conducted	N	-
PM_{10} Metal Analysis Conducted	N	-
TSP Sampler Maintenance Activities	Y	February 6, 2024 February 12, 2024 February 18, 2024 February 24, 2024
PM_{10} Sampler Maintenance Activities	Y	February 6, 2024 February 12, 2024 February 18, 2024 February 24, 2024
Other		
Dust Suppression Activities	N	-

Note:
(1) The wind speed/direction sensor on the Facility Site Meteorological Station was checked for calibration on June 30, 2023 and was shown to be within the allowable tolerances and was then re-installed after calibration.
(2) Instrument is not currently reporting due to anemometer program corruption. The instrument was calibrated prior to install in the Fall of 2014 for voluntary reporting**.**

3. Summary of Electronic Transfer System (ETS) Submittals

In addition to the February 2024 monthly report, the following summarized items were submitted to the ETS:

3.1 AMD XML Schema

An XML formatted Schema file was submitted to the Alberta EPA via the ETS portal. The XML Schema file contains the results from:

- Wind
  - Facility Meteorological Station – EPA Station ID 00010348-C-1.
  - Facility Site Station – EPA Station ID 00010348-C-2.
  - Ryley School Station – EPA Station ID 00010348-C-3.

- TSP
  - Facility Site Station – EPA Station ID 00010348-I-2.
  - Ryley School Station – EPA Station ID 00010348-I-3.
  - Highway 854 Lift Station – EPA Station ID 00010348-I-1.
- PM_{10}
  - Highway 854 Lift Station – EPA Station ID 00010348-I-1.

3.2 Ambient Air Monitoring Program Laboratory Reports

One laboratory report in PDF file format was submitted to the Alberta EPA via the ETS portal. The PDF file contains the results from EPA Station ID 00010348-I-1, EPA Station ID 00010348-I-2, and EPA Station ID 00010348-I-3.

3.3 Ambient Air Monitoring Program Calibration Reports

One calibration report in PDF file format was submitted to the Alberta EPA via the ETS portal. The PDF file contains the results from EPA Station ID 00010348-C-1.

4. Calibration and Operation & Maintenance (O&M) Activities

4.1 Facility Meteorological Station for Wind Speed and Direction (EPA Station ID 00010348-C-1)

The Facility Meteorological Station was taken down and calibrated on June 30, 2023. The station was shown to be within all allowable tolerances, as required by the manufacturer, and was then re-installed after calibration. Provided in Appendix A is the calibration report and record of installation.

4.2 Facility Site Station for Wind Speed and Direction (EPA Station ID 00010348-C-2)

The Facility Site Station was last calibrated upon installation. When installed, the station was shown to be within all allowable tolerances, as required by the manufacturer.

During May 2023, Clean Harbors chose to swap the Ryley School Station (EPA Station ID 00010348-C-3) anemometer with the Facility Site Station (EPA Station ID 00010348-C-2) anemometer due to EPA Station ID 00010348-C-3 anemometer program corruption. Per Approval No. 10348-03-01, Clean Harbors is only required to report "a minimum of one (1) meteorological station in each of the Ryley School and Facility Site intermittent ambient air quality monitoring stations" thus, reporting from Station ID 00010348-C-2 is not required as Clean Harbors reports from the Facility Meteorological Station (Station ID 00010348-C-1).

4.3 Ryley School Station for Wind Speed and Direction (EPA Station ID 00010348-C-3)

The Ryley School Station was taken down and calibrated on June 30, 2023. The station was shown to be within all allowable tolerances, as required by the manufacturer, and was then re-installed after calibration. Provided in Appendix A is the calibration report.

4.4 Facility Site Station TSP Hi-Vol Sampler (EPA Station ID 00010348-I-2)

The sampling activities for the Tisch TE-5170V VFC High Volume TSP Sampler (TSP Hi-Vol Sampler) are recorded in the field sampling sheets provided in Appendix B.

On a quarterly basis, performance audits are completed on the TSP Hi-Vol Sampler. A quarterly audit was performed on December 13, 2023.

4.5 Ryley School Station TSP Hi-Vol Sampler (EPA Station ID 00010348-I-3)

The sampling activities for the TSP Hi-Vol Sampler are recorded in the field sampling sheets provided in Appendix B.

On a quarterly basis, performance audits are completed on the TSP Hi-Vol Sampler. A quarterly audit was performed on December 13, 2023.

4.6 Highway 854 Lift Station TSP Hi-Vol Sampler (EPA Station ID 00010348-I-1)

The sampling activities for the TSP Hi-Vol Sampler are recorded in the field sampling sheets provided in Appendix B.

On a quarterly basis, performance audits are completed on the TSP Hi-Vol Sampler. A quarterly audit was performed on December 13, 2023.

4.7 Highway 854 Lift Station PM_{10} Sampler (EPA Station ID 00010348-I-1)

Maintenance activities for the Thermo Scientific™ Partisol 2000i-Federal Reference Method (FRM) PM_{10} Sampler included inlet cleaning and leak checks that were conducted before each sampling event in February 2024. The pre-sampling maintenance activities are recorded in the field sampling sheets provided in Appendix B.

On a quarterly basis, performance audits are completed on the TSP Hi-Vol Sampler. A quarterly audit was performed on December 13, 2023.

5. Ambient Air Monitoring Results

The following section presents the results from the ambient air monitoring program for the Facility Meteorological Station (EPA Station ID 00010348-C-1), Facility Site Station (EPA Station ID 00010348-C-2), Ryley School Station (EPA Station ID 00010348-C-3), Highway 854 Lift Station (EPA Station ID 00010348-I-1), Facility Site Station (EPA Station ID 00010348-I-2), and Ryley School Station (EPA Station ID 00010348-I-3) conducted in June 2023. Where applicable, comparisons were made to Alberta Ambient Air Quality Objectives (AAAQO) for parameters that had 24-hour average objectives. These parameters are TSP and some of the VOCs including o,m,p-xylene, hexane, and toluene. For the parameter objectives with averaging periods other than 24-hours, Section 7.1.2 of the Air Quality Model Guideline was used to convert the measured values to the corresponding AAAQO averaging periods prior to comparison. For all other parameters, AAAQO have not been established.

5.1 Meteorological Data for Wind Speed and Direction

In accordance with the Approval and the AMD, the Facility is required to collect wind speed and directional data continuously for the Facility Meteorological Station, Facility Site Station, and Ryley School Station. Tables 1 - 3 present the hourly and 24-hour average wind speeds, Tables 4 - 6 present the hourly and 24-hour most frequent wind direction data (degrees from north), and Tables 7 - 9 present the Wind Class Frequency Distribution for February 2024 from the Facility Meteorological Station, Facility Site Station, and Ryley School Station, respectively. Appendix C provides graphical representations of the Wind Class Frequency Distribution and the Wind Roses based on Tables 1 – 9.

5.1.1 Facility Meteorological Station Data Verification and Validation and Uptime (EPA Station ID 00010348-C-1)

Based on the verification and validation process conducted for the meteorological data that was collected in February 2024, it was determined that 99.91 percent of the data is valid, which represents 99.91 percent uptime of the meteorological station. This is above the 90 percent uptime limit required for compliance, as per the Approval.

5.1.2 Facility Site Station Data Verification and Validation and Uptime (EPA Station ID 00010348-C-2)

As noted above, Clean Harbors chose to swap the Ryley School Station (EPA Station ID 00010348-C-3) anemometer with the Facility Site Station (EPA Station ID 00010348-C-2) anemometer due to EPA Station ID 00010348-C-3 anemometer program corruption. Per Approval No. 10348-03-01, Clean Harbors is only required to report "a minimum of one (1) meteorological station in each of the Ryley School and Facility Site intermittent ambient air quality monitoring stations" thus, reporting from Station ID 00010348-C-2 is not required as Clean Harbors reports from the Facility Meteorological Station (Station ID 00010348-C-1).

5.1.3 Ryley School Station Data Verification and Validation and Uptime (EPA Station ID 00010348-C-3)

Based on the verification and validation process conducted for the meteorological data that was collected in February 2024, it was determined that 100 percent of the data is valid, which represents 100 percent uptime of the meteorological station. This is above the 90 percent uptime limit required for compliance, as per the Approval.

5.2 TSP Concentrations

AAAQO are specified for TSP at 100 µg/m^3 (24-hour averaging period). The sample results are converted to a 24-hour averaging period for comparison with the sample AAAQO.

In accordance with the Facility's Approval, TSP samples that exceed 50 µg/m^3 are analyzed for a target list of metals. Appendix B provides the field sheets completed for each sampling event. Appendix D provides the chain of custody forms and laboratory analytical reports.

5.2.1 Facility Site Station (EPA Station ID 00010348-I-2)

Table 10 presents the results of the sampling conducted for TSP from the Facility Site Station. The TSP sample collected in February 2024 (converted to a 24-hour averaging period) was shown to have a TSP concentration of 16.153 µg/m^3, which is below the 100 µg/m^3 AAAQO threshold.

5.2.2 Ryley School Station (EPA Station ID 00010348-I-3)

Table 11 presents the results of the sampling conducted for TSP from the Ryley School Station. The TSP sample collected in February 2024 (converted to a 24-hour averaging period) was shown to have a TSP concentration of 15.693 µg/m^3, which is below the 100 µg/m^3 AAAQO threshold.

5.2.3 Highway 854 Lift Station (EPA Station ID 00010348-I-1)

Table 12 presents the results of the sampling conducted for TSP from the Highway 854 Lift Station. None of the samples analyzed in February 2024 were shown to have elevated TSP concentration above the 100 µg/m3 AAAQO threshold.

It is noted that for Test #886 performed on February 6, 2024, the sampler has only run for approximately 23-hours as there was a power outage lasting approximately 40 minutes.

5.3 PM_{10} Concentrations

AAAQO are specified for TSP at 100 µg/m^3 and Particulate Matter $\leq$ 2.5 microns ($PM_{2.5}$) at 29 µg/m^3 (24-hour averaging period). There is currently no AAAQO specified for PM_{10} for a 24-hour averaging period in Alberta. To correlate PM_{10} data with TSP data, Clean Harbors will continue PM_{10} sampling at the station for a two-year period. In accordance with the Facility's Approval, PM_{10} samples that exceed 50 µg/m^3 are analyzed for a target list of metals. Appendix B provides the field sheets completed for each sampling event. Appendix D provides the chain of custody forms and laboratory analytical reports.

5.3.1 Highway 854 Lift Station (EPA Station ID 00010348-I-1)

Table 13 presents the results of the sampling conducted for PM_{10}.

5.4 VOC and TNMOC Concentrations

There are three VOC parameters that have corresponding AAAQO with 24-hour averaging periods including o,p,m-xylene, hexane and toluene. Appendix B provides the field sheets completed for each sampling event. Appendix D provides the chain of custody forms and laboratory analytical reports.

5.4.1 Highway 854 Lift Station (EPA Station ID 00010348-I-1)

Table 14 presents the VOC and TNMOC concentrations measured in February 2024. There were no exceedances for the parameters with AAAQO in February 2024.

5.5 Metal Concentrations

In accordance with the Facility's Approval, if collected TSP or PM_{10} samples show exceedances over 50 µg/m^3 after gravimetric analysis, a subsequent filter particulate analysis is done using inductively coupled plasma mass spectroscopy (ICP-MS) for 21 trace elements. There are four parameters that have corresponding AAAQO with 1-hour averaging periods including arsenic, chromium, lead, nickel, and manganese. The sample results were converted to a 1-hour averaging period for comparison with the sample AAAQO. If metal analysis was conducted, Appendix B provides the field sheets completed for each sampling event. Appendix D provides the chain of custody forms and laboratory analytical reports.

5.5.1 Facility Site Station (EPA Station ID 00010348-I-2)

The TSP sample collected in February 2024 was below 50 µg/m^3 and as such, analysis for metals was not required on the sample.

5.5.2 Ryley School Station (EPA Station ID 00010348-I-3)

The TSP sample collected in February 2024 was below 50 µg/m^3 and as such, analysis for metals was not required on the sample.

5.5.3 Highway 854 Lift Station (EPA Station ID 00010348-I-1)

TSP

None of the TSP samples analyzed in February 2024 were above 50 µg/m^3 and as such, analysis for metals was not conducted on the samples.

PM_{10}

None of the PM_{10} samples analyzed in February 2024 were above the 50 µg/m^3 and as such, analysis for metals was not conducted on the samples.

5.6 Dust Suppression

There were no dust suppression activities, which include using leachate spread on the surface of the active landfill, conducted during February 2024.

6. Conclusions

The following summarizes the Ambient Air Monitoring Program that was conducted in February 2024.

1 During February 2024, the Facility Meteorological Station (EPA Station ID 00010348-C-1) operated at 99.91 percent uptime. Based on the data verification and validation procedure conducted, this is in compliance with the minimum 90 percent uptime required by the AMD.

2 During February 2024, the continuous Facility Site wind Station was not operational. Per the approval, reporting from Station ID 00010348-C-2 is not required as Clean Harbors reports from the Facility Meteorological Station.

3 During February 2024, the continuous Ryley School wind Station operated at 100 percent uptime. Based on the data verification and validation procedure conducted, this is in compliance with the minimum 90 percent uptime required by the AMD.

4 The TSP concentration measured at the intermittent Facility Site Station from February 1, 2024 to March 1, 2024 was 19.090 µg/m^3 (concentration when converted to a 24-hour averaging period was 16.153 µg/m^3).

5 The TSP concentration measured at the intermittent Ryley School Station from February 1, 2024 to March 1, 2024 was 16.069 µg/m^3 (concentration when converted to a 24-hour averaging period was 15.693 µg/m^3).

6 The TSP concentrations measured at the intermittent Highway 854 Lift Station (EPA Station ID 00010348-I-1) on February 6, February 12, February 18, and February 24 were 12.595 µg/m^3, 33.420 µg/m^3, 27.294 µg/m^3, and 22.325 µg/m^3 respectively.

7 The PM_{10} concentrations measured at the intermittent Highway 854 Lift Station (EPA Station ID 00010348-I-1) on February 6, February 12, February 18, and February 24 were 8.958 µg/m^3, 13.049 µg/m^3, 18.740 µg/m^3, and 8.000 µg/m^3 respectively.

8 Based on the VOC and TMNOC results measured at the intermittent Highway 854 Lift Station (EPA Station ID 00010348-I-1), no exceedances were detected for parameters with applicable AAAQO, which included o,m,p-xylene, hexane and toluene. There are no applicable AAAQO for other parameters that were monitored in February 2024.

9 The TSP concentration measured for Facility Test #111 (HV-22-04-019), conducted from February 1, 2024 to March 1, 2024, was below the 50 µg/m^3 threshold outlined in the Facility's approval.

10 The TSP concentration measured for School Test #111 (HV-22-12-10), conducted from February 1, 2024 to March 1, 2024, was below the 50 µg/m^3 threshold outlined in the Facility's approval.

11 None of the TSP concentrations measured at the Highway 854 Lift Station were over the 50 µg/m^3 threshold outlined in the Facility's approval.

12 None of the PM_{10} concentrations measured at the Highway 854 Lift Station were over the 50 µg/m^3 threshold outlined in the Facility's approval.

Clean Harbors will continue to perform their Facility's Ambient Air Monitoring Program in accordance with their Approval and the AMD and evaluate the data to determine impacts on the ambient air quality.

7. Certification

Per the requirements of AMD, Chapter 9, Section 2.3, the following certification is provided for the February 2024 Ambient Air Monitoring Report.

"I certify that I have reviewed and verified this report and that the information is complete, accurate and representative of the monitoring results, reporting timeframe and the specified analysis, summarization and reporting requirements."

Stan Yuha

Plant Manager/Report Certifier

END OF REPORT

Tables

TABLE 1

Average Wind Speed (metres/second)
EPA Station ID 00010348-C-1
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Ryley Wind Speed Data (m/s) - Month of February 2024																							
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	5.8	6.2	5.4	4.9	5.1	3.3	2.7	2.4	2.6	2.4	2.5	2.5	3.3	4.7	4.4	4.4	3.0	4.1	3.6	3.8	3.7	3.6	3.3	2.2
2	3.2	3.3	3.7	4.0	3.9	3.2	2.4	2.8	2.6	3.0	3.3	2.7	2.4	2.3	2.1	2.1	3.1	3.3	1.7	1.6	1.7	0.3	0.2	2.5
3	2.6	2.1	3.0	4.3	3.5	3.1	3.4	3.7	3.2	3.6	4.5	5.6	9.2	11.7	12.2	10.0	10.3	7.9	9.2	9.0	8.6	7.1	5.8	5.1
4	5.2	5.7	5.1	5.3	4.6	4.5	4.2	4.0	3.7	3.9	4.1	3.9	3.4	2.6	2.3	1.9	1.5	2.3	1.4	1.3	1.7	1.9	1.7	1.8
5	1.6	1.8	1.8	1.7	1.3	0.6	0.1	0.3	0.3	0.2	0.7	1.4	1.9	2.7	2.7	2.7	2.8	1.7	2.1	1.9	2.0	1.2	1.7	1.2
6	1.6	1.4	1.2	1.6	2.0	1.6	1.9	2.6	2.6	3.2	3.3	(X)	4.9	5.3	5.2	4.9	4.3	5.0	4.2	4.4	4.5	3.8	3.9	3.5
7	3.0	2.7	2.3	2.3	1.8	1.4	1.4	0.7	1.1	1.2	1.5	1.1	1.0	0.9	0.8	0.9	1.6	1.4	1.1	0.9	0.8	0.9	0.8	0.8
8	0.7	0.8	0.5	0.0	0.7	0.6	0.6	0.5	0.2	0.3	0.0	0.0	0.1	0.5	0.4	0.4	0.0	1.7	1.6	2.9	2.2	2.5	3.1	2.5
9	3.2	2.9	3.6	2.9	4.2	7.1	7.4	6.2	5.0	3.6	4.1	5.3	5.0	5.3	4.4	3.6	2.7	2.9	1.4	2.3	1.9	2.2	2.9	4.7
10	4.9	3.7	3.2	2.7	2.6	2.3	3.6	2.6	2.0	1.6	2.5	2.7	2.6	2.4	2.0	2.8	3.5	3.0	3.1	5.3	5.6	6.9	6.7	6.8
11	6.4	6.5	6.8	6.8	7.2	6.3	5.6	5.6	4.4	5.9	6.7	6.6	6.0	6.0	5.2	4.7	4.7	4.4	4.8	4.0	4.0	5.2	6.4	6.3
12	2.5	2.3	3.0	2.5	3.5	2.4	1.9	1.8	1.6	2.0	2.1	2.7	2.7	4.5	5.8	7.3	7.3	5.3	3.8	4.3	5.0	5.5	5.1	6.2
13	5.4	5.3	4.8	5.3	4.7	5.1	6.2	6.4	6.8	6.8	6.8	7.2	8.1	7.3	6.6	6.3	5.8	4.3	3.5	3.6	5.2	5.8	4.9	4.8
14	6.0	5.5	5.5	4.8	4.7	4.2	3.7	5.5	5.2	6.0	6.0	6.3	6.9	7.2	6.0	5.3	5.2	4.2	2.6	1.3	0.4	0.5	0.7	0.9
15	0.5	0.5	0.3	0.6	1.0	0.7	0.9	1.0	1.6	1.7	1.4	1.0	0.9	0.8	1.3	1.2	2.2	1.8	2.0	3.7	3.8	3.7	4.2	5.3
16	5.6	5.7	5.7	6.1	6.1	5.5	4.1	5.0	6.1	6.1	4.3	4.5	3.0	4.3	3.7	4.0	4.3	4.9	5.8	6.8	6.5	7.5	7.4	8.2
17	7.4	7.6	8.4	7.3	3.6	4.6	3.9	3.6	5.6	4.4	4.0	3.7	3.5	2.4	1.9	1.4	2.2	1.8	2.3	2.2	2.6	3.8	3.5	3.2
18	3.8	2.3	2.0	2.8	3.2	2.0	1.4	1.3	1.2	0.9	0.8	1.8	1.7	2.4	1.7	2.1	2.1	1.1	1.8	2.9	4.3	2.2	3.6	6.0
19	6.3	5.8	5.8	5.2	5.0	5.0	5.3	5.0	5.3	4.5	3.1	2.0	1.6	1.5	1.1	0.9	1.8	2.4	1.9	2.4	2.8	2.7	2.6	1.9
20	2.3	2.9	3.8	2.9	1.8	1.5	3.2	2.0	1.6	3.2	2.5	1.0	0.5	1.9	2.0	1.2	0.7	1.2	1.9	2.0	1.0	0.4	0.3	0.7
21	2.8	3.2	3.6	2.9	3.2	3.0	2.6	3.6	4.1	3.2	1.5	0.9	2.7	2.8	3.0	3.6	4.0	3.1	1.7	2.4	3.8	4.6	5.9	6.2
22	6.6	6.4	5.5	5.2	4.8	5.5	5.1	4.7	4.4	4.7	4.7	5.8	6.7	6.2	5.6	5.8	5.4	4.2	3.5	4.6	5.4	6.0	6.3	6.3
23	6.1	6.3	6.3	6.2	7.0	5.7	6.3	6.6	7.4	7.3	7.0	6.7	5.6	6.3	5.1	3.0	3.2	3.1	4.0	4.7	4.8	6.3	4.4	3.9
24	7.3	7.3	8.6	6.4	4.2	4.3	4.4	4.9	6.7	7.1	7.0	8.4	8.9	8.4	7.5	6.6	6.0	5.6	1.9	0.9	0.4	1.7	2.4	2.9
25	3.7	4.1	4.0	3.0	2.4	3.3	3.9	3.5	3.2	2.9	1.8	0.4	1.5	3.4	4.6	6.5	6.6	7.2	8.1	8.1	8.4	9.0	10.5	11.7
26	11.3	11.8	12.0	11.1	11.4	10.0	9.7	9.1	7.9	7.5	7.3	6.9	6.8	6.5	6.4	6.0	5.1	4.6	3.6	3.0	2.9	2.6	2.0	1.7
27	1.2	1.7	1.7	2.1	2.1	1.5	2.0	1.4	0.6	0.5	1.0	1.6	1.7	1.4	1.3	1.8	2.3	2.8	3.0	2.9	3.2	3.4	3.6	3.4
28	3.7	3.3	3.6	3.7	5.0	4.6	5.8	6.7	6.9	6.7	7.5	7.5	7.1	7.2	7.4	7.2	6.8	6.9	7.4	7.7	6.7	6.6	7.7	7.0
29	6.4	4.7	4.9	5.9	6.1	6.4	4.6	3.8	3.1	4.2	8.9	7.2	7.6	8.1	7.4	6.2	5.8	6.5	7.0	7.8	7.6	7.9	8.4	7.4

Notes:
- (X) - Power outage on February 6, 2024 that lasted approximately 40 minutes.

TABLE 2

Average Wind Speed (metres/second)
EPA Station ID 00010348-C-2
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Ryley Wind Speed Data (m/s) - Month of February 2024																							
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
2	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
3	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
4	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
5	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
6	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
7	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
8	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
9	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
10	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
11	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
12	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
13	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
14	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
15	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
16	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
17	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
18	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
19	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
20	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
21	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
22	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
23	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
24	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
25	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
26	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
27	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
28	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
29	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)

Notes:
- (X) - Equipment Malfunction

TABLE 3

Average Wind Speed (metres/second)
EPA Station ID 00010348-C-3
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Ryley Wind Speed Data (m/s) - Month of February 2024																							
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	4.9	5.4	4.0	4.1	4.5	2.5	2.6	2.1	2.0	1.6	2.0	2.2	2.8	4.1	3.6	3.9	2.5	3.5	2.9	2.7	3.6	2.9	3.0	1.5
2	1.8	2.1	2.6	3.5	3.2	2.8	2.0	2.2	1.7	1.9	2.3	2.6	2.0	1.4	1.7	1.8	1.4	0.9	0.8	0.3	0.7	0.1	0.4	1.0
3	1.6	0.8	1.2	2.5	1.5	1.4	2.0	2.4	1.2	1.8	2.6	2.5	3.3	4.2	4.2	3.6	3.7	2.4	2.7	2.8	2.7	2.7	2.2	1.4
4	1.6	2.0	2.1	2.0	1.9	2.5	2.4	2.5	2.2	1.9	2.1	2.0	1.9	1.7	1.6	1.4	1.1	1.2	0.9	0.8	1.3	1.7	1.4	1.4
5	1.3	1.4	1.5	1.5	1.1	0.6	0.2	0.3	0.4	0.3	0.5	0.9	1.0	1.2	1.1	1.2	1.2	0.7	0.8	0.8	0.7	0.6	0.7	0.5
6	1.0	0.9	1.1	1.5	1.8	1.4	1.8	2.3	2.5	2.9	2.8	3.3	4.2	4.2	4.2	4.2	3.6	3.8	3.4	3.4	3.7	3.0	2.9	3.0
7	2.7	2.3	2.1	2.1	1.6	1.4	1.0	0.5	0.8	0.9	1.2	0.8	0.9	0.9	0.9	0.8	1.2	1.2	0.9	0.7	0.4	0.5	0.6	0.4
8	0.3	0.7	0.6	0.3	0.6	0.6	0.6	0.4	0.6	0.6	0.1	0.0	0.3	0.4	0.3	0.4	0.4	0.5	1.0	1.6	1.5	1.0	1.2	1.0
9	1.2	1.1	1.8	1.7	1.7	2.1	3.2	2.1	2.6	1.7	2.3	3.3	3.4	3.3	2.5	2.2	1.8	1.4	0.2	0.2	0.6	0.4	0.6	0.8
10	0.9	0.5	1.1	1.4	1.2	1.2	1.7	2.1	2.3	1.6	1.7	1.8	1.9	2.0	1.9	2.2	2.9	2.3	2.3	1.8	1.4	1.5	1.7	2.0
11	2.2	2.6	2.5	1.5	1.8	2.1	1.8	2.7	2.8	3.2	3.7	4.2	4.1	3.8	2.7	2.0	1.3	1.0	0.8	0.8	0.8	1.6	1.3	1.2
12	1.2	1.0	0.8	0.8	0.9	0.9	0.9	0.5	0.9	2.1	1.4	1.2	1.3	3.1	3.5	4.2	4.1	3.2	2.3	1.2	1.2	0.8	1.0	1.1
13	2.0	2.0	2.3	2.6	3.0	3.2	3.3	2.4	2.7	2.4	2.5	1.9	2.5	2.4	2.0	3.8	3.0	3.2	1.7	1.3	0.7	1.2	1.2	1.0
14	1.4	1.5	1.4	1.7	2.6	2.8	2.4	3.3	3.2	2.7	2.0	2.0	3.0	2.7	2.3	1.9	1.9	1.7	1.0	0.4	0.2	0.5	0.2	0.2
15	0.2	0.4	0.2	0.3	0.3	0.4	0.6	0.6	0.8	0.6	0.5	0.5	0.3	1.1	0.6	0.6	1.0	1.2	1.2	1.3	1.1	1.5	1.3	1.4
16	1.6	1.4	1.1	1.4	0.9	1.0	0.9	0.9	1.3	1.4	1.6	1.8	2.3	2.3	2.1	1.4	1.4	1.7	1.4	1.6	1.7	2.0	1.7	2.2
17	2.1	2.1	2.5	1.7	2.0	1.1	1.0	1.5	2.9	1.8	2.3	2.9	2.2	1.7	1.5	0.9	1.0	1.4	1.3	1.5	1.9	1.8	2.1	2.2
18	1.8	1.2	0.8	1.0	1.4	1.0	0.6	0.6	0.6	0.4	0.6	1.0	1.2	1.4	1.5	1.7	1.5	1.0	1.0	0.8	0.6	0.5	0.9	1.3
19	1.2	1.0	1.5	2.0	1.7	1.2	1.3	1.0	1.0	0.7	0.6	0.5	0.8	0.9	0.5	0.6	1.6	1.7	1.4	1.1	1.1	1.5	1.4	0.8
20	1.5	2.3	2.8	1.3	0.8	0.7	1.0	1.2	1.0	1.6	2.5	0.8	0.6	1.6	1.7	1.3	0.6	0.9	1.6	1.5	0.5	0.3	0.1	0.4
21	1.2	1.3	1.7	1.5	1.0	1.4	1.2	1.3	1.3	0.6	0.5	1.0	1.3	1.3	1.3	1.4	2.2	1.4	1.3	1.7	2.0	1.7	1.5	1.5
22	1.8	1.4	1.0	1.5	2.7	2.2	2.4	2.1	1.4	1.7	3.0	3.3	4.8	4.0	3.9	4.3	3.5	2.7	1.7	1.1	0.5	0.9	1.0	1.0
23	1.0	1.2	1.2	1.2	1.5	1.1	1.3	1.8	2.0	1.8	2.1	1.9	2.2	1.8	1.7	1.9	1.2	1.7	1.2	1.2	2.4	4.0	2.6	1.9
24	4.0	4.3	4.4	3.7	2.2	1.8	1.9	2.9	4.2	4.4	4.9	5.3	5.2	4.6	4.3	3.8	3.8	3.7	0.8	0.2	0.1	0.2	0.3	0.4
25	1.5	1.2	1.0	0.9	1.8	2.7	3.2	3.0	2.6	2.0	1.4	0.9	1.0	2.6	3.2	4.8	5.2	5.5	3.7	3.7	3.7	3.8	4.5	4.6
26	5.6	6.6	6.9	6.1	6.2	6.2	5.8	5.0	3.4	3.0	2.7	2.6	3.1	2.6	2.6	2.8	1.9	2.0	1.3	0.9	1.1	0.6	0.4	0.3
27	0.4	0.7	0.6	0.7	0.7	0.4	1.0	0.5	0.1	0.2	0.6	0.6	0.8	0.9	1.0	1.5	2.2	2.2	2.1	2.1	2.6	3.0	3.2	3.2
28	3.1	3.2	3.3	3.5	3.6	3.8	4.9	5.4	5.1	5.2	6.1	5.7	5.5	5.6	5.5	5.9	5.4	4.9	5.7	6.2	5.3	5.5	5.6	5.4
29	4.7	4.3	3.4	4.3	4.2	4.4	3.7	1.9	1.7	1.4	3.8	2.7	3.8	4.0	3.3	2.0	1.9	3.1	3.7	3.3	3.3	2.9	3.3	2.5

TABLE 4

Average Wind Direction (degrees from North)
EPA Station ID 00010348-C-1
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Ryley Wind Direction Data (degrees, blowing from) - Month of February 2024																								
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	120	128	130	135	140	155	146	130	119	123	127	146	132	126	135	119	134	122	113	116	128	128	143	112
2	113	110	121	131	127	130	121	124	123	135	163	161	179	167	177	175	187	211	277	272	266	233	181	232
3	270	266	265	274	290	279	280	279	306	293	293	313	317	315	311	311	314	312	311	309	311	314	315	311
4	308	313	317	322	326	189	223	227	276	326	329	314	330	209	110	23	109	293	22	33	51	80	89	99
5	107	116	111	112	123	151	166	170	254	314	278	273	292	305	313	322	295	321	318	303	318	287	293	303
6	128	34	91	85	99	108	108	133	87	64	54	(X)	87	87	89	88	80	71	72	73	73	83	89	100
7	103	93	65	59	45	44	42	83	72	108	248	41	213	179	257	250	338	319	287	343	320	333	339	324
8	334	59	40	110	280	253	142	64	76	83	99	223	190	146	197	246	125	83	261	287	281	260	259	266
9	256	260	297	291	306	315	306	307	295	255	254	262	261	263	286	290	287	300	237	127	75	78	68	53
10	73	155	154	56	51	85	108	86	54	69	107	161	148	148	153	120	145	170	181	190	193	158	180	244
11	255	244	253	219	32	168	279	254	257	254	256	259	263	260	255	216	54	36	30	41	74	44	25	25
12	48	45	37	67	146	60	49	41	47	44	136	174	214	285	303	303	301	297	283	258	249	247	246	265
13	266	259	264	277	279	283	293	305	308	310	310	315	314	314	310	296	298	282	259	249	211	206	212	208
14	118	21	25	181	274	286	275	289	287	300	316	322	328	321	314	319	325	331	331	279	79	113	201	259
15	159	201	117	206	203	71	320	305	276	280	276	272	276	210	271	211	71	102	120	35	33	35	35	29
16	28	27	29	27	29	53	115	21	26	42	160	165	270	270	258	78	30	32	25	24	29	23	32	27
17	27	26	21	30	206	258	250	258	253	259	267	272	268	257	275	238	181	178	171	156	153	166	171	174
18	175	137	122	132	178	159	164	210	183	128	235	275	265	289	315	219	103	59	139	177	196	193	204	202
19	202	217	240	265	261	244	253	230	222	236	235	216	247	248	268	275	186	168	129	100	114	123	113	158
20	164	162	181	191	207	159	153	174	136	155	164	199	200	88	139	145	241	198	109	133	185	240	200	244
21	256	267	274	278	289	271	263	266	257	249	220	178	201	204	201	199	201	204	210	179	195	204	210	205
22	207	214	223	246	254	251	259	261	242	246	258	274	276	246	261	272	286	281	266	226	208	211	210	203
23	206	208	216	221	219	212	211	199	202	207	209	205	202	219	229	244	194	190	206	226	268	280	279	290
24	283	271	308	288	257	236	252	274	294	292	303	308	313	312	310	312	306	307	312	261	246	214	195	191
25	192	197	199	203	181	167	166	172	181	185	177	143	71	59	56	58	61	58	46	44	43	42	36	28
26	83	30	59	167	185	294	346	338	328	326	325	326	326	324	325	327	321	321	322	318	321	324	324	325
27	322	298	302	285	276	287	280	304	209	182	222	223	231	236	264	125	54	71	74	93	64	44	30	31
28	22	35	28	28	28	32	28	25	24	26	24	23	22	21	22	24	31	34	34	30	30	28	28	28
29	27	32	37	37	34	28	38	41	38	309	324	319	324	323	325	327	332	336	346	343	339	335	334	332

Notes:
-Power outage on February 6, 2024 that lasted approximately 40 minutes.

TABLE 5

Average Wind Direction (degrees from North)
EPA Station ID 00010348-C-2
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Ryley Wind Direction Data (degrees, blowing from) - Month of February 2024																							
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
2	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
3	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
4	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
5	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
6	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
7	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
8	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
9	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
10	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
11	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
12	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
13	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
14	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
15	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
16	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
17	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
18	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
19	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
20	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
21	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
22	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
23	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
24	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
25	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
26	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
27	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
28	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)
29	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)	(X)

Notes:
- (X) - Equipment Malfunction

TABLE 6

Most Frequent Wind Direction (degrees from North)
EPA Station ID 00010348-C-3
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Ryley Wind Direction Data (degrees, blowing from) - Month of February 2024																							
Day/Hour	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
1	116	120	118	125	133	122	156	136	121	121	121	147	129	128	129	123	135	119	115	113	125	122	129	122
2	98	103	109	121	117	116	114	123	117	129	172	168	178	174	184	183	207	230	281	257	279	147	203	263
3	275	262	260	275	296	286	285	284	308	294	292	304	316	320	323	327	331	325	323	314	324	330	332	322
4	322	329	335	341	312	100	87	99	122	173	211	223	143	142	82	91	115	211	86	79	81	109	113	117
5	121	131	124	123	130	164	186	194	267	301	275	276	304	307	308	280	156	253	314	313	326	299	297	236
6	129	78	116	114	124	137	133	159	125	118	109	114	115	115	117	123	116	112	115	116	116	115	113	118
7	119	110	99	102	92	86	75	82	82	67	133	107	134	153	185	172	240	191	162	207	325	279	236	321
8	293	100	75	123	162	139	145	144	99	107	153	168	145	201	215	235	228	237	281	295	287	261	256	256
9	257	255	294	292	305	318	305	309	299	260	256	272	264	270	291	289	291	297	206	203	173	208	190	219
10	222	190	168	131	129	137	126	126	134	124	155	159	158	161	157	143	156	180	204	219	221	227	242	245
11	251	248	246	238	234	240	245	250	258	262	261	266	273	270	256	233	228	223	221	217	214	214	220	219
12	127	104	121	134	164	116	123	139	125	120	158	198	239	283	296	298	297	290	277	245	244	239	244	241
13	254	251	259	273	279	285	294	307	307	312	310	320	321	321	319	299	297	284	269	253	225	225	226	225
14	224	223	224	242	275	285	276	288	290	296	313	326	329	331	310	324	321	283	235	325	194	129	229	222
15	231	234	213	249	266	163	257	324	305	292	280	262	199	118	206	209	217	191	181	215	215	212	218	218
16	218	222	226	223	231	230	230	229	229	231	242	242	251	251	249	229	228	224	220	219	217	220	220	220
17	223	222	225	235	248	243	240	253	252	256	270	282	277	261	292	241	207	184	159	132	146	162	173	180
18	167	134	96	106	187	153	167	210	188	166	237	276	281	300	81	85	71	96	141	170	211	199	206	223
19	224	235	245	252	249	241	241	230	237	233	228	233	240	211	199	156	152	165	134	101	102	113	99	151
20	183	163	194	214	209	171	128	151	138	136	175	206	121	99	128	146	242	87	113	129	174	213	224	231
21	253	253	272	281	293	268	249	245	249	243	224	179	212	218	218	217	216	213	217	192	212	218	221	221
22	221	226	229	242	252	246	252	256	245	243	254	272	278	250	259	274	283	280	269	237	222	228	227	225
23	226	225	229	232	234	224	227	221	220	224	225	224	220	228	230	239	209	199	223	236	269	282	282	296
24	279	266	302	284	259	242	253	274	285	286	288	289	294	297	291	295	295	289	309	247	210	212	215	224
25	213	221	221	221	205	191	187	191	194	205	198	203	90	89	83	86	80	75	54	47	43	43	32	20
26	34	18	6	39	34	86	56	156	320	345	327	339	342	335	332	291	327	328	330	316	300	291	302	292
27	287	263	273	262	244	247	249	249	230	194	245	231	230	213	201	169	160	164	154	151	144	134	130	121
28	122	115	114	114	115	115	115	114	114	114	114	113	112	108	108	107	92	83	91	91	95	92	96	99
29	95	85	73	78	80	81	76	55	94	291	301	313	302	301	306	327	327	305	297	302	305	308	307	317

TABLE 7

Wind Frequency Distribution
EPA Station ID 00010348-C-1
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Frequency Distribution Report: Ryley, Alberta - February 2024										
Direction	Angle	Wind Speed (m/s) and Number of Occurences (minutes)							%	Total Occurrences by Direction
		< 0.5	0.5 to < 2.1	2.1 to < 3.6	3.6 to < 5.7	5.7 to < 8.8	8.8 to < 11.1	>= 11.1		
North	> 337.5 - 22.5	190	1387	446	805	1211	251	206	10.8%	4496
Northeast	> 22.5 - 67.5	238	1056	1194	1501	1749	207	78	14.4%	6023
East	> 67.5 - 112.5	216	860	952	733	88	0	0	6.8%	2849
Southeast	> 112.5 - 157.5	189	1022	1711	912	139	0	0	9.5%	3973
South	> 157.5 - 202.5	270	980	1833	1145	375	1	0	11.0%	4604
Southwest	> 202.5 - 247.5	169	678	465	1370	1343	9	0	9.7%	4034
West	> 247.5 - 292.5	268	1681	1953	2919	1119	41	5	19.1%	7986
Northwest	> 292.5 - 337.5	142	1389	1029	1700	2703	609	184	18.6%	7756
Missing/Invalid Minutes									0.093%	39
Total Occurences by Speed		1682	9053	9583	11085	8727	1118	473		**41760**
Occurences by %		4.0%	21.7%	22.9%	26.5%	20.9%	2.7%	1.1%	**99.91%**	

Note:
-Missing minutes due to power outage on February 6, 2024 that lasted approximately 40 minutes.

TABLE 8

Wind Frequency Distribution
EPA Station ID 00010348-C-2
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Frequency Distribution Report: Ryley, Alberta - February 2024										
Direction	Angle	Wind Speed (m/s) and Number of Occurences (minutes)							%	Total Occurrences by Direction
		< 0.5	0.5 to < 2.1	2.1 to < 3.6	3.6 to < 5.7	5.7 to < 8.8	8.8 to < 11.1	>= 11.1		
North	> 337.5 - 22.5	0	0	0	0	0	0	0	0.0%	0
Northeast	> 22.5 - 67.5	0	0	0	0	0	0	0	0.0%	0
East	> 67.5 - 112.5	0	0	0	0	0	0	0	0.0%	0
Southeast	> 112.5 - 157.5	0	0	0	0	0	0	0	0.0%	0
South	> 157.5 - 202.5	0	0	0	0	0	0	0	0.0%	0
Southwest	> 202.5 - 247.5	0	0	0	0	0	0	0	0.0%	0
West	> 247.5 - 292.5	0	0	0	0	0	0	0	0.0%	0
Northwest	> 292.5 - 337.5	0	0	0	0	0	0	0	0.0%	0
Missing/Invalid Minutes									**100%**	41760
Total Occurences by Speed		0	0	0	0	0	0	0		**41760**
Occurences by %		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	**0.00%**	

TABLE 9

Wind Frequency Distribution
EPA Station ID 00010348-C-3
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Frequency Distribution Report: Ryley, Alberta - February 2024										
Direction	Angle	Wind Speed (m/s) and Number of Occurences (minutes)							%	Total Occurrences by Direction
		< 0.5	0.5 to < 2.1	2.1 to < 3.6	3.6 to < 5.7	5.7 to < 8.8	8.8 to < 11.1	>= 11.1		
North	> 337.5 - 22.5	568	2537	745	343	264	32	3	10.8%	4492
Northeast	> 22.5 - 67.5	140	320	167	142	38	3	1	1.9%	811
East	> 67.5 - 112.5	191	1455	770	881	445	11	0	9.0%	3753
Southeast	> 112.5 - 157.5	306	2733	2003	1081	220	0	0	15.2%	6343
South	> 157.5 - 202.5	564	2029	895	113	0	0	0	8.6%	3601
Southwest	> 202.5 - 247.5	1590	6545	1152	129	4	0	0	22.6%	9420
West	> 247.5 - 292.5	500	3407	2550	1027	149	1	1	18.3%	7635
Northwest	> 292.5 - 337.5	539	2484	1715	822	143	1	1	13.7%	5705
Missing/Invalid Minutes									0.0%	0
Total Occurences by Speed		4398	21510	9997	4538	1263	48	6		**41760**
Occurences by %		10.5%	51.5%	23.9%	10.9%	3.0%	0.1%	0.0%	**100.00%**	

TABLE 10

Total Suspended Particulate (TSP) Matter Results
EPA Station ID 00010348-I-2
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Filter ID	HV-22-04-019	AAAQO[(2)] **(ug/m^3)**
Test ID	Facility Test # 111	
Sample Start Date/Time	24/02/01 15:00:00	
Sample End Date/Time	24/03/01 16:00:00	
Sampling Time (hours)	43.58	
Flow Rate (m^3/min)	1.252	
Volume (m^3)	3274.00	
TSP Mass (mg)	62.5	
TSP Concentration (ug/m^3)[(1)]	19.090	
TSP Concentration (ug/m^3)[(2)]	16.153	100.000
Sampler Name	TE-5170V / P8580 TSP VFC	

Notes:

(1) These results are from a 43.33 hour averaging period that took place on February 1, 2024 to March 1, 2024.

(2) Measured data has been converted from the measured 43.58 hour averaging period to a 24 hour averaging period based on the Alberta's Air Quality Model Guideline Section 7.1.2.

TABLE 11

Total Suspended Particulate (TSP) Matter Results
EPA Station ID 00010348-I-3
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Filter ID	HV-22-12-10	AAAQO[2] **(ug/m^3)**
Test ID	School Test # 111	
Sample Start Date/Time	24/02/01 15:00:00	
Sample End Date/Time	24/03/01 16:00:00	
Sampling Time (hours)	26.12	
Flow Rate (m^3/min)	1.251	
Volume (m^3)	1960.3	
TSP Mass (mg)	31.5	
TSP Concentration (ug/m^3)[1]	16.069	
TSP Concentration (ug/m^3)[2]	15.693	100.000
Sampler Name	TE-5170V / P8581 TSP VFC	

Notes:

(1) These results are from a 26.12 hour averaging period that took place on February 1, 2024 to March 1, 2024.

(2) Measured data has been converted from the measured 26.12 hour averaging period to a 24 hour averaging period based on the Alberta's Air Quality Model Guideline Section 7.1.2.

TABLE 12

Total Suspended Particulate (TSP) Matter Results
EPA Station ID 00010348-I-1
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Filter ID	HVF-23-10-14	HVF-23-10-15	HVF-23-10-16	HVF-23-10-17
Test ID	886	887	888	889
Sample Start Date/Time	24/02/06 00:00:00	24/02/12 00:00:00	24/02/18 00:00:00	24/02/24 00:00:00
Sample End Date/Time	24/02/07 00:00:00	24/02/13 00:00:00	24/02/19 00:00:00	24/02/25 00:00:00
Sampling Time (hours)	23.06	23.52	23.82	23.87
Flow Rate (m^3/min)	1.251	1.251	1.251	1.251
Volume (m^3)	1730.88	1765.41	1787.93	1791.68
TSP Mass (mg)	21.8	59	48.8	40
TSP Concentration (ug/m^3)	12.595	33.420	27.294	22.325
Sampler Name	TE-5170V / P11162 TSP VFC	TE-5170V / P11162 TSP VFC	TE-5170V / P11162 TSP VFC	TE-5170V / P11162 TSP VFC

Note:
-Sample 886 did not sample for 24 hours due to a power outage lasting approximately 40 minutes.

TABLE 13

Particulate Matter PM_{10} Results
EPA Station ID 00010348-I-1
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Filter ID	AT76596	AT76594	AT76595	AT79744
Test ID	886	887	888	889
Sample Start Date/Time	24/02/06 00:00:00	24/02/12 00:00:00	24/02/18 00:00:00	24/02/24 00:00:00
Sample End Date/Time	24/02/07 00:00:00	24/02/13 00:00:00	24/02/19 00:00:00	24/02/25 00:00:00
Sampling Time (hours)	23.21	24	24	24
Flow Rate (l/min)	16.7	16.7	16.7	16.7
Volume (m^3)	24	24.6	24.6	24
PM_{10} Mass (mg)	0.215	0.321	0.461	0.192
PM_{10} Concentration (ug/m^3)	8.958	13.049	18.740	8.000
Sampler Name	2000 FRM-AE / 200FB209860905	2000 FRM-AE / 200FB209860905	2000 FRM-AE / 200FB209860905	2000 FRM-AE / 200FB209860905

Note:

-Sample 886 did not run for 24 hours due to a power outage lasting approximately 40 minutes.

TABLE 14

VOC and TNMOC Analytical Results
EPA Station ID 00010348-I-1
Clean Harbors Canada, Inc.
Monthly Ambient Air Monitoring Report
February 2024

Parameter	Units	Date / Sample ID / AAAQO[1]	6-Feb-24 / 886	12-Feb-24 / 887	18-Feb-24 / 888	24-Feb-24 / 889
Total Non-Methane Organic Carbon	ppmv	-	< 0.08	< 0.09	< 0.08	< 0.08
1,2,3-Trimethylbenzene	ppbv	-	< 0.08	< 0.09	< 0.08	< 0.08
1,2,4-Trimethylbenzene	ppbv	-	< 0.05	0.09	< 0.05	0.09
1,3,5-Trimethylbenzene	ppbv	-	< 0.05	< 0.05	< 0.05	< 0.05
1-Butene/Isobutylene	ppbv	-	< 0.10	< 0.11	0.15	0.46
1-Hexene/2-Methyl-1-pentene	ppbv	-	< 0.12	< 0.12	< 0.12	< 0.11
1-Pentene	ppbv	-	< 0.05	< 0.05	< 0.05	< 0.05
2,2,4-Trimethylpentane	ppbv	-	< 0.03	0.05	< 0.03	0.06
2,2-Dimethylbutane	ppbv	-	< 0.03	< 0.04	< 0.03	< 0.03
2,3,4-Trimethylpentane	ppbv	-	< 0.03	0.07	0.03	0.05
2,3-Dimethylbutane	ppbv	-	< 0.15	< 0.16	< 0.15	< 0.14
2,3-Dimethylpentane	ppbv	-	< 0.03	0.05	< 0.03	0.08
2,4-Dimethylpentane	ppbv	-	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylheptane	ppbv	-	< 0.03	0.06	< 0.03	0.04
2-Methylhexane	ppbv	-	< 0.05	0.14	0.06	0.34
2-Methylpentane	ppbv	-	0.09	0.36	0.32	0.60
3-Methylheptane	ppbv	-	< 0.05	< 0.05	< 0.05	< 0.05
3-Methylhexane	ppbv	-	< 0.03	0.15	0.07	0.41
3-Methylpentane	ppbv	-	0.05	0.19	0.13	0.10
Benzene	ppbv	-	0.10	0.25	0.22	0.15
cis-2-Butene	ppbv	-	< 0.05	< 0.05	< 0.05	< 0.05
cis-2-Pentene	ppbv	-	< 0.03	< 0.04	< 0.03	< 0.03
Cyclohexane	ppbv	-	< 0.07	0.18	0.09	0.11
Cyclopentane	ppbv	-	< 0.03	0.07	0.05	0.04
Ethylbenzene	ppbv	-	< 0.05	0.73	0.10	0.43
Isobutane	ppbv	-	0.90	0.74	3.04	0.52
Isopentane	ppbv	-	0.38	0.75	1.00	0.65
Isoprene	ppbv	-	< 0.03	< 0.04	< 0.03	< 0.03
Isopropylbenzene	ppbv	-	< 0.07	< 0.07	< 0.07	< 0.06
m,p-Xylene	ppbv	161	< 0.07	2.58	0.25	1.08
m-Diethylbenzene	ppbv	-	< 0.03	< 0.04	< 0.03	< 0.03
m-Ethyltoluene	ppbv	-	< 0.05	0.06	< 0.05	< 0.05
Methylcyclohexane	ppbv	-	0.05	0.22	0.15	0.18
Methylcyclopentane	ppbv	-	< 0.08	0.24	0.12	0.13
n-Butane	ppbv	-	1.20	1.43	2.76	0.90
n-Decane	ppbv	-	< 0.10	< 0.11	< 0.10	< 0.09
n-Dodecane	ppbv	-	< 0.5	< 0.5	< 0.5	< 0.5
n-Heptane	ppbv	-	< 0.07	0.24	0.10	0.58
n-Hexane	ppbv	1990	0.11	0.55	0.35	0.32
n-Nonane	ppbv	-	< 0.07	0.13	0.10	0.09
n-Octane	ppbv	-	< 0.03	0.10	0.07	0.15
n-Pentane	ppbv	-	0.30	0.76	0.78	0.63
n-Propylbenzene	ppbv	-	< 0.10	< 0.11	< 0.10	< 0.09
n-Undecane	ppbv	-	< 0.8	< 0.9	< 0.8	< 0.8
o-Ethyltoluene	ppbv	-	< 0.03	< 0.04	< 0.03	< 0.03
o-Xylene	ppbv	161	< 0.05	0.67	0.06	0.30
p-Diethylbenzene	ppbv	-	< 0.03	< 0.04	< 0.03	< 0.03
p-Ethyltoluene	ppbv	-	< 0.07	< 0.07	< 0.07	< 0.06
Styrene	ppbv	-	< 0.07	< 0.07	< 0.07	< 0.06
Toluene	ppbv	106	< 0.05	6.76	0.44	1.40
trans-2-Butene	ppbv	-	< 0.05	< 0.05	< 0.05	< 0.05
trans-2-Pentene	ppbv	-	< 0.03	< 0.04	< 0.03	< 0.03
Total VOCs [2]	ppbv	-	6.720	20.510	13.200	12.440

Notes:
(1) Alberta Ambient Air Quality Objectives for a 24 hour averaging period.
(2) Total VOCs are calculated under the assumption that values under the detection limit are equal to the detection limit, as per the AMD.

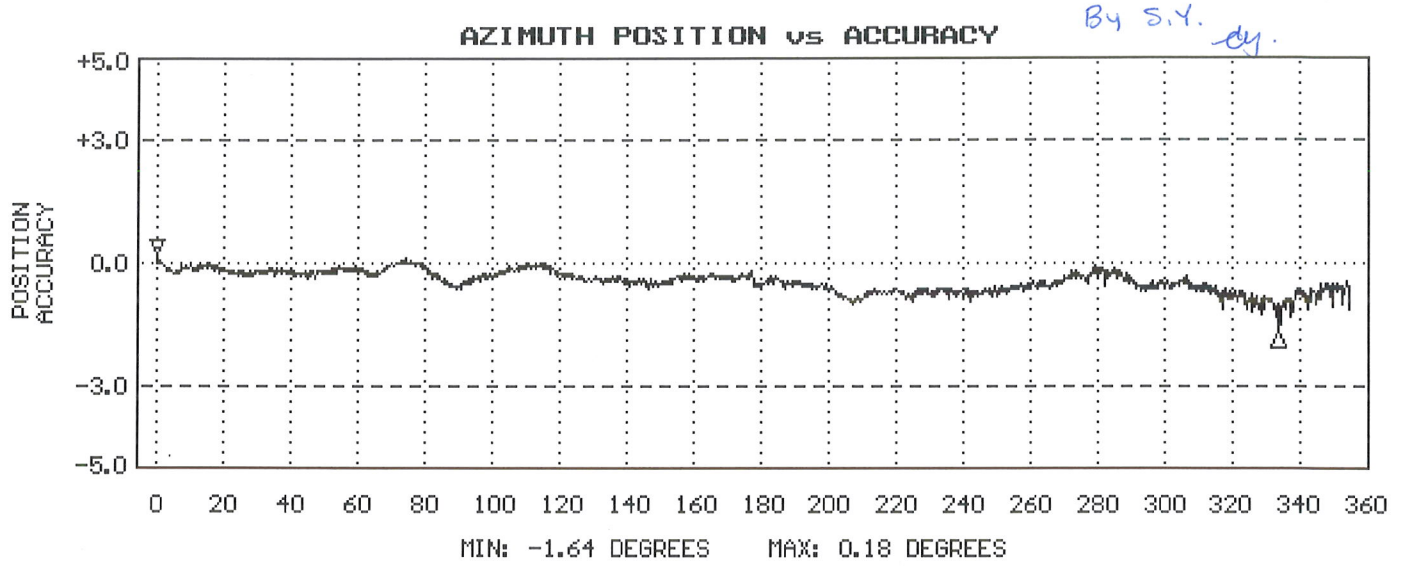
Appendix A
Meteorological Station Calibration Report

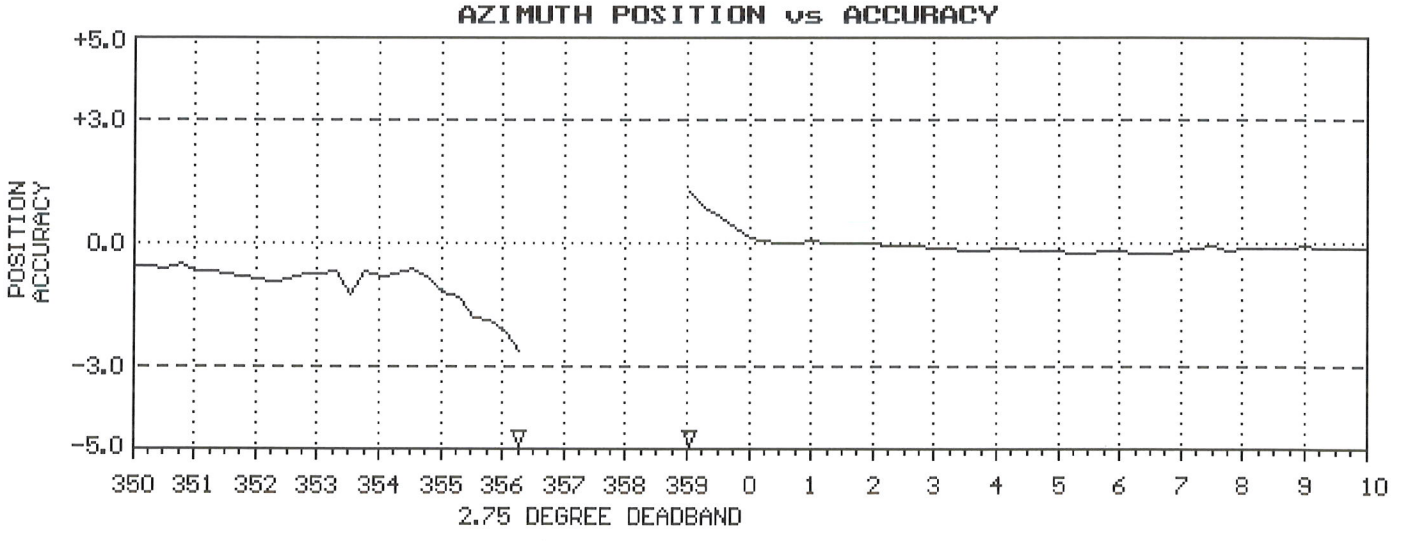
R. M. YOUNG COMPANY WIND SENSOR CALIBRATION CERTIFICATE

SENSOR: 05305-10A WIND MONITOR-AQ
SENSOR SERIAL NUMBER: WM149768
BEARINGS: SHIELDED/OIL LUBE
DATE: AUG 3 2016
WIND SPEED THRESHOLD TEST: PASS
LOW WIND SPEED AMPLITUDE/FREQUENCY TEST: PASS
HIGH WIND SPEED AMPLITUDE/FREQUENCY TEST: PASS
VANE TORQUE TEST: PASS
SPECIAL NOTES:
SPECIAL NOTES:

Insp. By

Installed Nov. 8/16
By S.Y. dy.





NOTE: Azimuth Position vs Accuracy graphs are accurate to within 0.5 degrees. The accuracy shown in the potentiometer deadband region between 355 and 0 degrees is the result of no resistance change while position changes. The gap represents the actual deadband (open circuit).

GHD Wind Calibration Form

Site and Instrument Information

Site		Wind Monitor	
Location:	Facility	**Make:**	RM Young
Calibration Date:	Jun 30, 2023	**Model:**	05305
Tech.:	P. Shariaty & S. Davey	**Serial #:**	149768
Instrument:	Continuous Wind Monitor	**Calibration due:**	Annually
Time:	1:05 PM - 1:20 PM	**Temperature:**	25°C

Pre-Calibration Inspection	Y/N
Is the wind direction < +/- 10° from compass observation?	N
Is siting aligned?	Y
Does the propeller rotate 360° with no friction?	Y
Does the vane rotate 360° with no friction?	Y

Calibration Information

Direction (degrees °)			Anemometer Speed (m/s)		
Test Angle (°)	Recorded Angle (°)	Within +/- 5°? (Y/N)	Test Speed (m/s)	Recorded Speed (m/s)	Within +/- 3 (m/s)? (Y/N)
0	0	Y	26.1	26.0	Y
30	29	Y	24.6	24.5	Y
60	59	Y	23.0	22.9	Y
180	178	Y	20.5	20.4	Y
			18.9	18.9	Y
			41.0	40.8	Y

Comments	Conversion Factors	
	m/s	RPM
Wind monitor (SN:149768) was removed from tower, inspected and the calibration was checked on June 30, 2023. Mechanical bearings and shaft alignment were inspected. Bearings were cleaned of any dust buildup. Alignment was in good condition. Wind direction calibration adjustment was required based on the pre-calibration inspection. Other than cleaning and direction calibration, no additional maintenance was required. It is recommended that the instrument be cleaned biannually and bearings checked and replaced (if required) at the next calibration interval. After calibration check, wind monitor was re-installed and sited back to original position.	26.112	5100.0
	24.576	4800.0
	23.040	4500.0
	20.480	4000.0
	18.944	3700.0
	40.960	8000.0
Calibration Adjustment Required?: Yes		

GHD Wind Calibration Form

Site and Instrument Information

Site		Wind Monitor	
Location:	Ryley School	**Make:**	RM Young
Calibration Date:	Jun 30, 2023	**Model:**	05305
Tech.:	P. Shariaty & S. Davey	**Serial #:**	183487
Instrument:	Continuous Wind Monitor	**Calibration due:**	Annually
Time:	10:00 AM - 11:20 AM	**Temperature:**	22°C

Pre-Calibration Inspection	Y/N
Is the wind direction < +/- 10° from compass observation?	N
Is siting aligned?	Y
Does the propeller rotate 360° with no friction?	Y
Does the vane rotate 360° with no friction?	Y

Calibration Information

Direction (degrees °)			Anemometer Speed (m/s)		
Test Angle (°)	Recorded Angle (°)	Within +/- 5°? (Y/N)	Test Speed (m/s)	Recorded Speed (m/s)	Within +/- 3 (m/s)? (Y/N)
0	1	Y	26.112	26.0	Y
30	29	Y	24.576	24.5	Y
330	332	Y	23.040	22.9	Y
60	57	Y	20.480	20.4	Y
90	86	Y	18.944	18.9	Y
0	1	Y	40.960	40.8	Y
180	176	Y			
260	256	Y			

Comments	Conversion Factors	
	m/s	RPM
Wind monitor (SN:183487) was removed from tower, inspected and the calibration was checked on June 30, 2023. Mechanical bearings and shaft alignment were inspected. Bearings were cleaned of any dust buildup. Alignment was in good condition. Wind direction calibration adjustment was required based on the pre-calibration inspection. Other than cleaning and direction calibration, no additional maintenance was required. It is recommended that the instrument be cleaned biannually and bearings checked and replaced (if required) at the next calibration interval. After the calibration check, the wind monitor was re-installed and sited back to the original position.	26.112	5100.0
	24.576	4800.0
	23.040	4500.0
	20.480	4000.0
	18.944	3700.0
	40.960	8000.0
Calibration Adjustment Required?: Yes		

Appendix B
Sampling Field Sheets

FIELD SHEET				
PM_{10} (Partisol Monitoring Unit)				
CLEAN HARBORS CANADA INC				
RYLEY, ALBERTA				
A) GENERAL INFORMATION				
Filter ID:	AT76596			
PO Number:	239503			
Partisol Sampler ID/Serial Number:	2000 FRM-AE / 200FB209860905			
Test number :	Particulate Test 886			
Sample Date:	24/02/06		yy/mm/dd	
Shipping Date to Laboratory:	24/02/08			
PM10 Analysis Trigger Weight (mg):	1.20		weight which PM10 conc. > 50 µg/m^3	
B) SAMPLING INFORMATION				
SAMPLE START				
Sampling Start Date:	24/02/06			
Sampling Start Time:	00:00			
Current Instrument Date:	24/02/02			
Current Instrument Time:	13:17			
Ambient Temperature °C:	7.7			
Barometric Pressure (mm Hg):	688			
Leak Check:	Pass		(Pass/Fail)	
Clean PM10 Inlet:	Yes		(Yes/No)	
Weather Conditions Sampling date :	light snow			
Weather Conditions set up:	sunny			
SAMPLE RETRIEVAL				
Sampled by	T. Webb			
Sampling End Date:	24/02/07			
Sampling End Time:	00:00			
Current Instrument Date:	24/02/07			
Current Instrument Time:	13:12:00 PM			
Run Status:	Ok		(Ensure Run Status is OK)	
Total Sampling Time (Hours):	23.21			
Volume Sampled (m^3):	24			
Average Flow Rate (L/min):	16.7 L/min			
AmbT °C :	-2.0			
Barometric Pressure (mm Hg) :	696			
Sample Filter Temperature °C :	-0.5			
Flow Rate Coefficient of Variation (%CV):	0.1			
Weather Conditions :	overcast			
Leak Check:	Pass		(Pass/Fail)	
FIELD BLANK			(Once every quarter)	
Was a field blank collected	No		(Yes/No)	
Filter ID:				
Filter Batch Number:				
Current Instrument Date:				
Current Instrument Time:				
C) OBSERVATIONS				
Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?	No			
Describe facility operations that may affect sampling event:				
Comments:	power outage for approximately 40 minutes @ 10:05			

FIELD SHEET
VOLATILE ORGANIC COMPOUNDS
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

A) GENERAL INFORMATION

Sample Identification Number:	Organic Test 886	
Sample Canister Location:	Ryley Lift Station -Shed	
Sampled by	T.Webb	
Sampler Name:	Test 886	
Sample Date:	24/02/06	yy/mm/dd
Shipping Date to Laboratory:	24/02/08	
Canister Type (ie. 1 Litre/6 Litre/Other):	6L	
Canister Serial No.:	32265	
Flow Controller Serial No.:	H/L578699/A0334390-5	

B) SAMPLE SET UP

	Set up Conditions	Sample Retrieval
Date:	24/02/02	24/02/07
Ambient Temperature °C (inside shed):	20.8	14.8
Barometric Pressure (mm Hg):	688	696
Canister Pressure Gauge Reading (- Inches Hg):	(-)27.2	(-)4
Sample Time:	24	24

C) OBSERVATIONS

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?	No
Describe general weather conditions during sampling event:	light snow
Describe facility operations that may affect sampling event:	
Comments:	

CLEAN HARBORS CANADA INC
TSP (High Volume Monitoring Unit)
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

1. SAMPLING INFORMATION

Sample ID	Test #886			
Lab Filter ID	HVF-23-10-15			
Start Sampling	2 mm	6 dd	0 hr	2024
Stop Sampling	2 mm	7 dd	0 hr	2024
Timer Initial:	1582.30			
Timer Final:	1605.36			
	23.06			

Total Sampling Time: 23 hr 4 min 1384 minutes
Average Flow Rate: cfm
Actual m3/min: 1.251
Air Volume: 1730.9 cubic metres
Net TSP Weight: g
TSP Concentration: mg/m3
TSP Analysis Trigger Weight: 86.5 mg weight which TSP conc. > 50 µg/m^3

3. OBSERVATIONS

Comments: Sample did not sample for 24 hours, due to power outage for approximately 40 minutes

Instrument Last Calibrated: 13-Dec-23

3. GUIDELINES

- Faceplate must be handtight.
- Flow rate must be ±10 percent of established flow rate.
- Faceplate gasket must be in good condition.
- Rotameter must be free of foreign material.
- Rotameter operation must be stable.
- Sampler motor brushes must be changed every 400 hours of operation.
- TSP analysis triggers when concentration >0.05mg/m3

Sample was collected in accordance with the above guidelines.

Sampler's Signature: _____

Comments: _____

FIELD SHEET				
PM_{10} (Partisol Monitoring Unit)				
CLEAN HARBORS CANADA INC				
RYLEY, ALBERTA				
A) GENERAL INFORMATION				
Filter ID:	AT76594			
PO Number:	239503			
Partisol Sampler ID/Serial Number:	2000 FRM-AE / 200FB209860905			
Test number :	Particulate Test 887			
Sample Date:	24/02/12		yy/mm/dd	
Shipping Date to Laboratory:	24/02/16			
PM10 Analysis Trigger Weight (mg):	1.23		weight which PM10 conc. > 50 µg/m^3	
B) SAMPLING INFORMATION				
SAMPLE START				
Sampling Start Date:	24/02/12			
Sampling Start Time:	00:00			
Current Instrument Date:	24/02/07			
Current Instrument Time:	13:24			
Ambient Temperature °C:	-1.6			
Barometric Pressure (mm Hg):	696			
Leak Check:	Pass		(Pass/Fail)	
Clean PM10 Inlet:	Yes		(Yes/No)	
Weather Conditions Sampling date :	passing clouds			
Weather Conditions set up:	overcast			
SAMPLE RETRIEVAL				
Sampled by	N. Sideroff			
Sampling End Date:	24/02/13			
Sampling End Time:	00:00			
Current Instrument Date:	24/02/15			
Current Instrument Time:	10:54			
Run Status:	Ok		(Ensure Run Status is OK)	
Total Sampling Time (Hours):	24			
Volume Sampled (m^3):	24.6			
Average Flow Rate (L/min):	16.7 L/min			
AmbT °C :	-6.4			
Barometric Pressure (mm Hg) :	711			
Sample Filter Temperature °C :	-5.4			
Flow Rate Coefficient of Variation (%CV):	0.1			
Weather Conditions :	overcast			
Leak Check:	Pass		(Pass/Fail)	
FIELD BLANK			(Once every quarter)	
Was a field blank collected	No		(Yes/No)	
Filter ID:				
Filter Batch Number:				
Current Instrument Date:				
Current Instrument Time:				
C) OBSERVATIONS				
Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?	No			
Describe facility operations that may affect sampling event:				
Comments:				

FIELD SHEET
VOLATILE ORGANIC COMPOUNDS
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

A) GENERAL INFORMATION

Sample Identification Number:	Organic Test 887	
Sample Canister Location:	Ryley Lift Station -Shed	
Sampled by	T.Webb	
Sampler Name:	Test 887	
Sample Date:	24/02/12	yy/mm/dd
Shipping Date to Laboratory:	24/02/16	
Canister Type (ie. 1 Litre/6 Litre/Other):	6L	
Canister Serial No.:	29017	
Flow Controller Serial No.:	H/L578699/A0334390-5	

B) SAMPLE SET UP

	Set up Conditions	Sample Retrieval
Date:	24/02/07	24/02/07
Ambient Temperature °C (inside shed):	14.8	11.4
Barometric Pressure (mm Hg):	696	711
Canister Pressure Gauge Reading (- Inches Hg):	(-)27.2	(-)8.8
Sample Time:	24	24

C) OBSERVATIONS

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?	No
Describe general weather conditions during sampling event:	passing clouds
Describe facility operations that may affect sampling event:	
Comments:	

CLEAN HARBORS CANADA INC
TSP (High Volume Monitoring Unit)
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

1. SAMPLING INFORMATION

Sample ID	Test #887			
Lab Filter ID	HVF-23-10-15			
Start Sampling	2	12	0	2024
	mm	dd	hr	
Stop Sampling	2	13	0	2024
	mm	dd	hr	
Timer Initial:	1605.36			
Timer Final:	1628.88			
	23.52			

Total Sampling Time	23	hr	31	min	1411 minutes
Average Flow Rate		cfm			
Actual m3/min	1.251				
Air Volume	1765.4	cubic metres			
Net TSP Weight		g			
TSP Concentration		mg/m3			
TSP Analysis Trigger Weight	88.3	mg	weight which TSP conc. > 50 µg/m^3		

3. OBSERVATIONS

Comments:

Instrument Last Calibrated: 13-Dec-23

3. GUIDELINES

- Faceplate must be handtight.
- Flow rate must be ±10 percent of established flow rate.
- Faceplate gasket must be in good condition.
- Rotameter must be free of foreign material.
- Rotameter operation must be stable.
- Sampler motor brushes must be changed every 400 hours of operation.
- TSP analysis triggers when concentration >0.05mg/m3

Sample was collected in accordance with the above guidelines.

Sampler's Signature: _____

Comments: _____

FIELD SHEET				
PM_{10} (Partisol Monitoring Unit)				
CLEAN HARBORS CANADA INC				
RYLEY, ALBERTA				
A) GENERAL INFORMATION				
Filter ID:	AT76595			
PO Number:	239503			
Partisol Sampler ID/Serial Number:	2000 FRM-AE / 200FB209860905			
Test number :	Particulate Test 888			
Sample Date:	24/02/18		yy/mm/dd	
Shipping Date to Laboratory:	24/02/21			
PM10 Analysis Trigger Weight (mg):	1.23		weight which PM10 conc. > 50 µg/m^3	
B) SAMPLING INFORMATION				
SAMPLE START				
Sampling Start Date:	24/02/18			
Sampling Start Time:	00:00			
Current Instrument Date:	24/02/15			
Current Instrument Time:	11:05			
Ambient Temperature °C:	-6.0			
Barometric Pressure (mm Hg):	710			
Leak Check:	Pass		(Pass/Fail)	
Clean PM10 Inlet:	Yes		(Yes/No)	
Weather Conditions Sampling date :	passing clouds			
Weather Conditions set up:	passing clouds			
SAMPLE RETRIEVAL				
Sampled by	N. Sideroff			
Sampling End Date:	24/02/19			
Sampling End Time:	00:00			
Current Instrument Date:	24/02/20			
Current Instrument Time:	11:30			
Run Status:	Ok		(Ensure Run Status is OK)	
Total Sampling Time (Hours):	24			
Volume Sampled (m^3):	24.5			
Average Flow Rate (L/min):	16.7 L/min			
AmbT °C :	1.4			
Barometric Pressure (mm Hg) :	696			
Sample Filter Temperature °C :	2.0			
Flow Rate Coefficient of Variation (%CV):	0.2			
Weather Conditions :	broken clouds			
Leak Check:	Pass		(Pass/Fail)	
FIELD BLANK			(Once every quarter)	
Was a field blank collected	No		(Yes/No)	
Filter ID:				
Filter Batch Number:				
Current Instrument Date:				
Current Instrument Time:				
C) OBSERVATIONS				
Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?	No			
Describe facility operations that may affect sampling event:				
Comments:				

FIELD SHEET
VOLATILE ORGANIC COMPOUNDS
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

A) GENERAL INFORMATION

Sample Identification Number:	Organic Test 888	
Sample Canister Location:	Ryley Lift Station -Shed	
Sampled by	T.Webb	
Sampler Name:	Test 888	
Sample Date:	24/02/18	yy/mm/dd
Shipping Date to Laboratory:	24/02/21	
Canister Type (ie. 1 Litre/6 Litre/Other):	6L	
Canister Serial No.:	A47961	
Flow Controller Serial No.:	H/L578699/A0334390-5	

B) SAMPLE SET UP

	Set up Conditions	Sample Retrieval
Date:	24/02/15	24/02/20
Ambient Temperature °C (inside shed):	11.4	15.6
Barometric Pressure (mm Hg):	710	696
Canister Pressure Gauge Reading (- Inches Hg):	(-)27.1	(-)5
Sample Time:	24	24

C) OBSERVATIONS

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?	No
Describe general weather conditions during sampling event:	passing clouds
Describe facility operations that may affect sampling event:	
Comments:	

CLEAN HARBORS CANADA INC
TSP (High Volume Monitoring Unit)
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

1. SAMPLING INFORMATION

Sample ID	Test #888			
Lab Filter ID	HVF-23-10-16			
Start Sampling	2 mm	18 dd	0 hr	2024
Stop Sampling	2 mm	19 dd	0 hr	2024
Timer Initial:	1628.88			
Timer Final:	1652.70			
	23.82			
Total Sampling Time	23 hr	49 min	1429	minutes
Average Flow Rate	cfm			
Actual m3/min	1.251			
Air Volume	1787.9	cubic metres		
Net TSP Weight	g			
TSP Concentration	mg/m3			
TSP Analysis Trigger Weight	89.4	mg	weight which TSP conc. > 50 µg/m^3	

3. OBSERVATIONS

Comments:

Instrument Last Calibrated: 13-Dec-23

3. GUIDELINES

- Faceplate must be handtight.
- Flow rate must be ±10 percent of established flow rate.
- Faceplate gasket must be in good condition.
- Rotameter must be free of foreign material.
- Rotameter operation must be stable.
- Sampler motor brushes must be changed every 400 hours of operation.
- TSP analysis triggers when concentration >0.05mg/m3

Sample was collected in accordance with the above guidelines.

Sampler's Signature: _____

Comments: _____

FIELD SHEET				
PM_{10} (Partisol Monitoring Unit)				
CLEAN HARBORS CANADA INC				
RYLEY, ALBERTA				
A) GENERAL INFORMATION				
Filter ID:	AT79744			
PO Number:	239503			
Partisol Sampler ID/Serial Number:	2000 FRM-AE / 200FB209860905			
Test number :	Particulate Test 889			
Sample Date:	24/02/24		yy/mm/dd	
Shipping Date to Laboratory:	24/03/01			
PM10 Analysis Trigger Weight (mg):	1.20		weight which PM10 conc. > 50 µg/m^3	
B) SAMPLING INFORMATION				
SAMPLE START				
Sampling Start Date:	24/02/24			
Sampling Start Time:	00:00			
Current Instrument Date:	24/02/20			
Current Instrument Time:	11:36			
Ambient Temperature °C:	0.9			
Barometric Pressure (mm Hg):	696			
Leak Check:	Pass		(Pass/Fail)	
Clean PM10 Inlet:	Yes		(Yes/No)	
Weather Conditions Sampling date :	partly sunny			
Weather Conditions set up:	broken clouds			
SAMPLE RETRIEVAL				
Sampled by	T. Webb			
Sampling End Date:	24/02/25			
Sampling End Time:	00:00			
Current Instrument Date:	24/02/28			
Current Instrument Time:	15:12			
Run Status:	Ok		(Ensure Run Status is OK)	
Total Sampling Time (Hours):	24			
Volume Sampled (m^3):	24.0			
Average Flow Rate (L/min):	16.7 L/min			
AmbT °C :	-14.3			
Barometric Pressure (mm Hg) :	691			
Sample Filter Temperature °C :	-10.7			
Flow Rate Coefficient of Variation (%CV):	0			
Weather Conditions :	partly cloudy			
Leak Check:	Pass		(Pass/Fail)	
FIELD BLANK			(Once every quarter)	
Was a field blank collected	No		(Yes/No)	
Filter ID:				
Filter Batch Number:				
Current Instrument Date:				
Current Instrument Time:				
C) OBSERVATIONS				
Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?	No			
Describe facility operations that may affect sampling event:				
Comments:				

FIELD SHEET
VOLATILE ORGANIC COMPOUNDS
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

A) GENERAL INFORMATION

Sample Identification Number:	Organic Test 889	
Sample Canister Location:	Ryley Lift Station -Shed	
Sampled by	T.Webb	
Sampler Name:	Test 889	
Sample Date:	24/02/24	yy/mm/dd
Shipping Date to Laboratory:	24/03/01	
Canister Type (ie. 1 Litre/6 Litre/Other):	6L	
Canister Serial No.:	29030	
Flow Controller Serial No.:	H/L578699/A0334390-5	

B) SAMPLE SET UP

	Set up Conditions	Sample Retrieval
Date:	24/02/20	24/02/28
Ambient Temperature °C (inside shed):	15.6	10.4
Barometric Pressure (mm Hg):	696	691
Canister Pressure Gauge Reading (- Inches Hg):	(-)27.4	(-)6
Sample Time:	24	24

C) OBSERVATIONS

Was there significant precipitation (e.g., >1/2-inch rain) within 24 hours prior to (or during) the sampling event?	No
Describe general weather conditions during sampling event:	partly sunny
Describe facility operations that may affect sampling event:	
Comments:	

CLEAN HARBORS CANADA INC
TSP (High Volume Monitoring Unit)
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

1. SAMPLING INFORMATION

Sample ID	Test #889			
Lab Filter ID	HVF-23-10-17			
Start Sampling	2	24	0	2024
	mm	dd	hr	
Stop Sampling	2	25	0	2024
	mm	dd	hr	
Timer Initial:	1652.70			
Timer Final:	1676.57			
	23.87			

Total Sampling Time	23	hr	52	min	1432 minutes
Average Flow Rate		cfm			
Actual m3/min	1.251				
Air Volume	1791.7	cubic metres			
Net TSP Weight		g			
TSP Concentration		mg/m3			
TSP Analysis Trigger Weight	89.6	mg	weight which TSP conc. > 50 µg/m^3		

3. OBSERVATIONS

Comments:

Instrument Last Calibrated: 13-Dec-23

3. GUIDELINES

- Faceplate must be handtight.
- Flow rate must be ±10 percent of established flow rate.
- Faceplate gasket must be in good condition.
- Rotameter must be free of foreign material.
- Rotameter operation must be stable.
- Sampler motor brushes must be changed every 400 hours of operation.
- TSP analysis triggers when concentration >0.05mg/m3

Sample was collected in accordance with the above guidelines.

Sampler's Signature: _____

Comments: _____

FIELD SHEET
TSP (High Volume Monitoring Unit)
CLEAN HARBORS CANADA INC
RYLEY, ALBERTA

1. SAMPLING INFORMATION

Sample ID	Facility Test # 111			
Lab Filter ID	HVF-22-04-019			
Start Sampling	2 mm	1 dd	15 hr	2024
Stop Sampling	3 mm	1 dd	16 hr	2024
Timer Initial:	3297.97			
Timer Final:	3341.55			

Total Sampling Time	43 hr	35 min	2615
Average Flow Rate	cfm		
Actual m3/min	1.252		
Air Volume	3274.0 cubic metres		
Net TSP Weight	g		
TSP Concentration	mg/m3		

2. SAMPLING INFORMATION

Sample ID	School Test # 111			
Lab Filter ID	HV-22-12-10			
Start Sampling	2 mm	1 dd	15 hr	2024
Stop Sampling	3 mm	1 dd	16 hr	2024
Timer Initial:	2673.72			
Timer Final:	2699.84			

Total Sampling Time	26 hr	7 min	1567
Average Flow Rate	cfm		
Actual m3/min	1.251		
Air Volume	1960.3 cubic metres		
Net TSP Weight	g		
TSP Concentration	mg/m3		

3. OBSERVATIONS

Comments:

Instrument Last Calibrated: 13-Dec-23

3. GUIDELINES

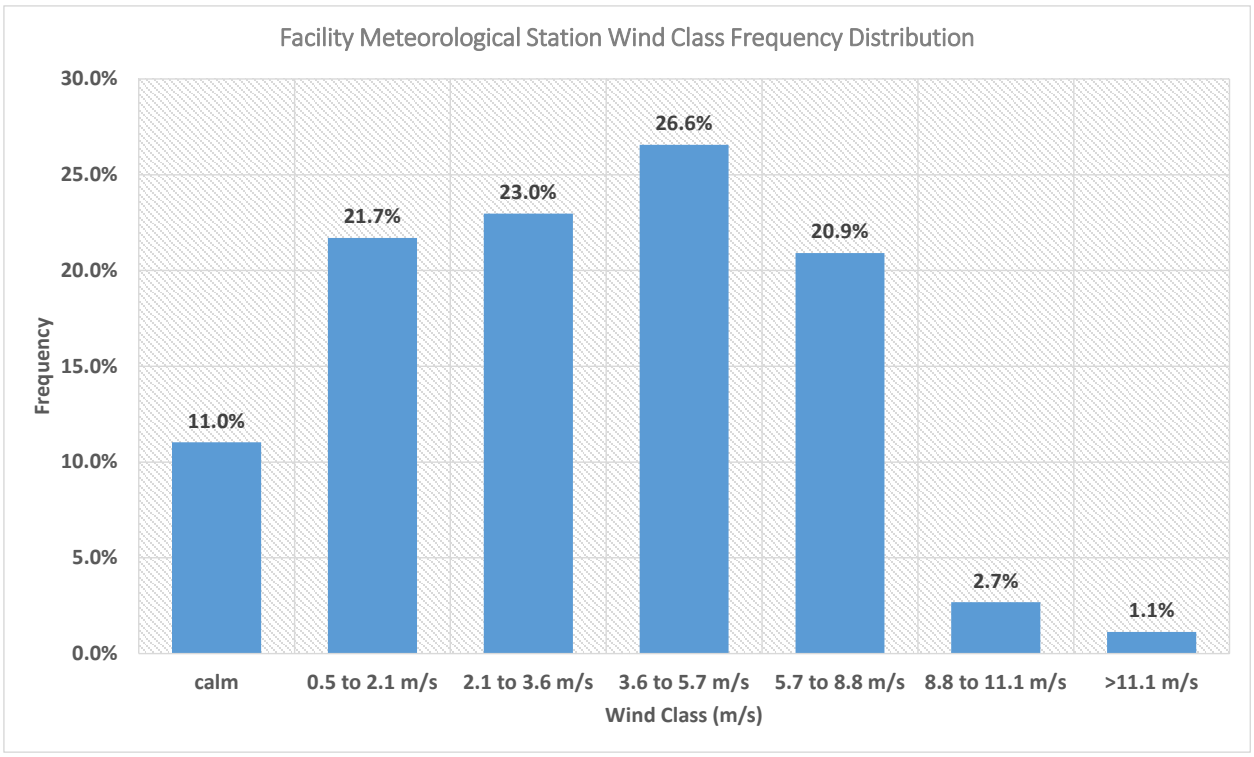
- Faceplate must be handtight.
- Flow rate must be ±10 percent of established flow rate.
- Faceplate gasket must be in good condition.
- Rotameter must be free of foreign material.
- Rotameter operation must be stable.
- Sampler motor brushes must be changed every 400 hours of operation.

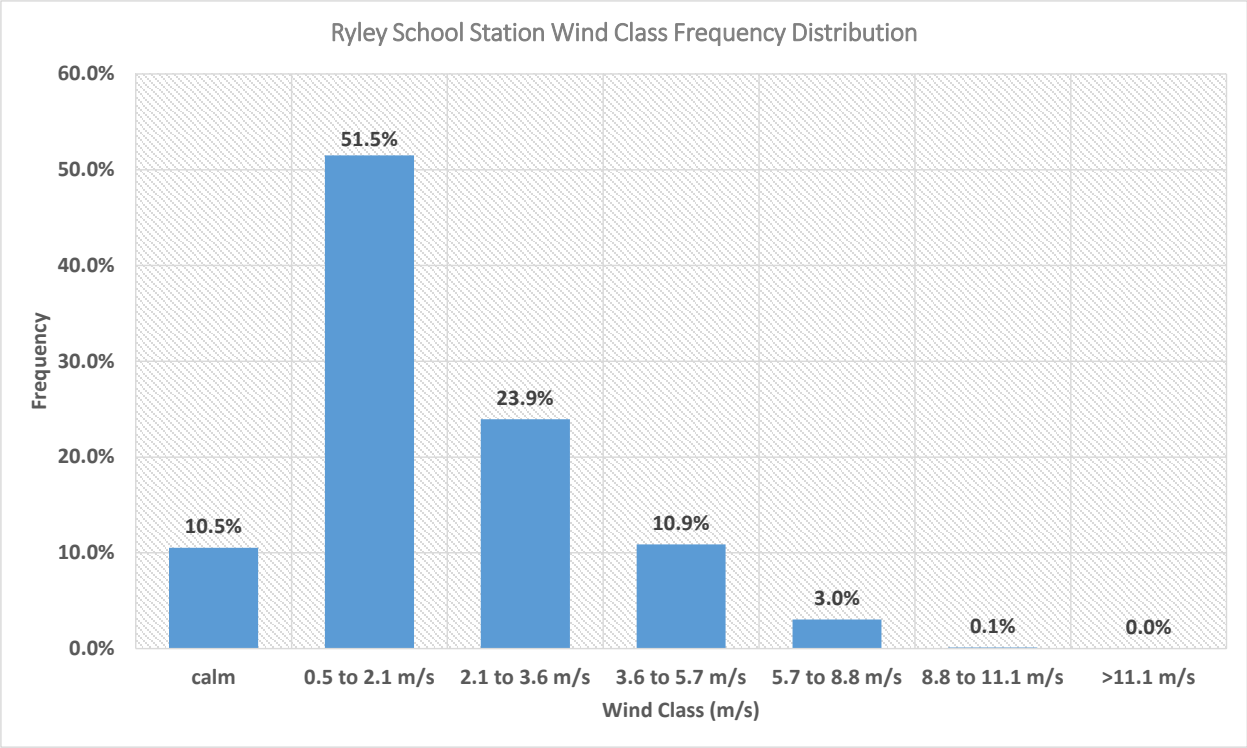
Sample was collected in accordance with the above guidelines.

Sampler's Signature: Stan Yuha

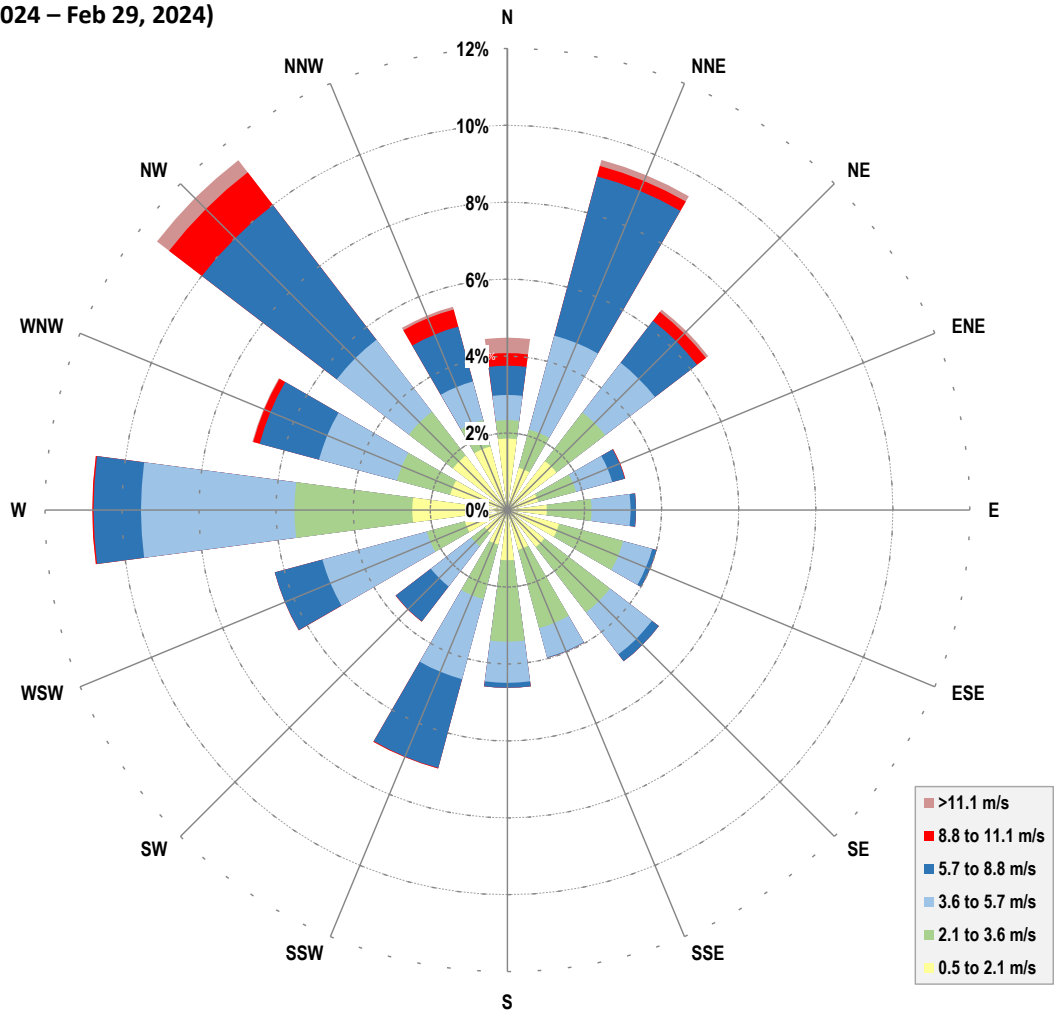
Comments:

Appendix C
Wind Class Frequency Distribution Graphs and Wind Rose

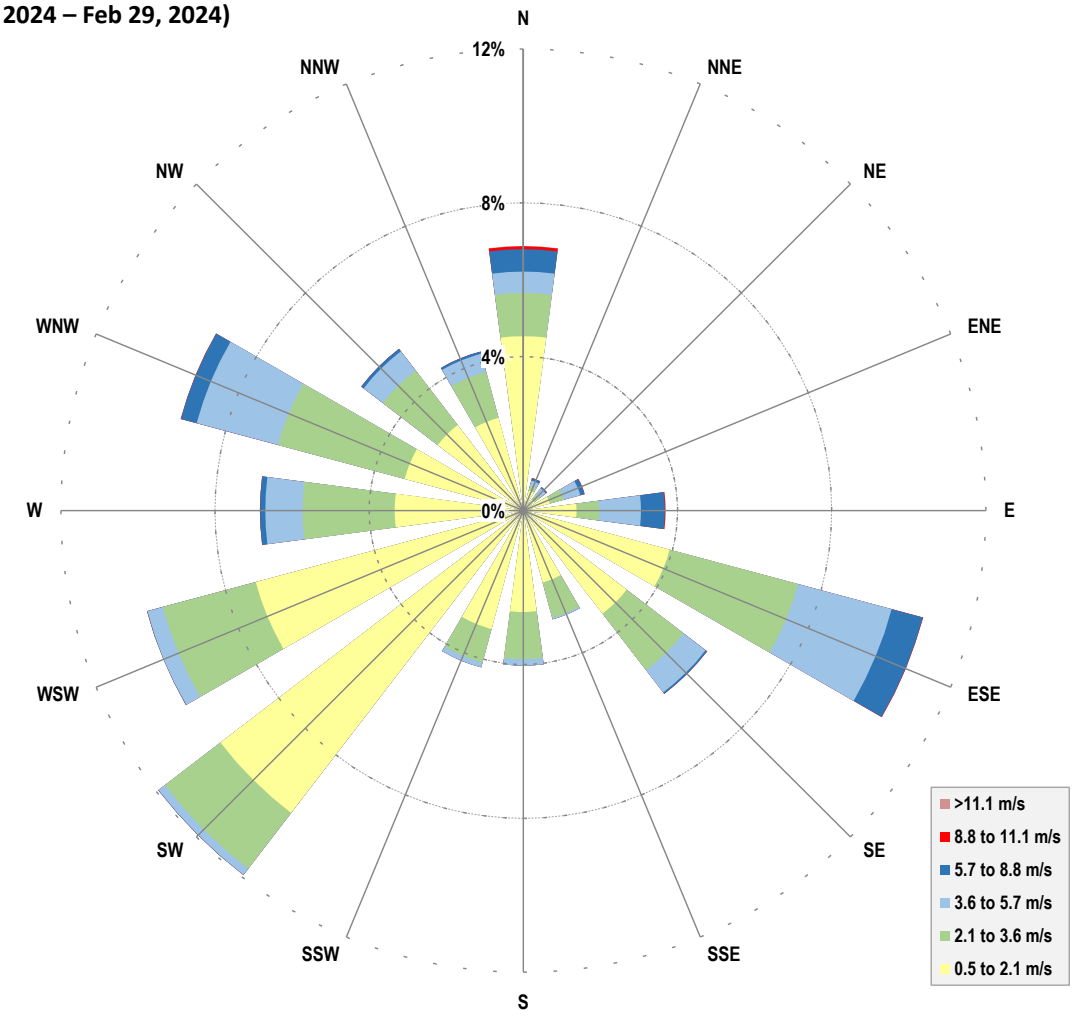

Facility Meteorological Station Wind Class Frequency Distribution
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Frequency
11.0%
21.7%
23.0%
26.6%
20.9%
2.7%
1.1%
calm
0.5 to 2.1 m/s
2.1 to 3.6 m/s
3.6 to 5.7 m/s
5.7 to 8.8 m/s
8.8 to 11.1 m/s
>11.1 m/s
Wind Class (m/s)


Ryley School Station Wind Class Frequency Distribution
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Frequency
51.5%
23.9%
10.5%
10.9%
3.0%
0.1%
0.0%
calm
0.5 to 2.1 m/s
2.1 to 3.6 m/s
3.6 to 5.7 m/s
5.7 to 8.8 m/s
8.8 to 11.1 m/s
>11.1 m/s
Wind Class (m/s)

Clean Harbors Facility Meteorological Station
(Feb 1, 2024 – Feb 29, 2024)



Clean Harbors Ryley School Station
(Feb 1, 2024 – Feb 29, 2024)



Appendix D
Chain of Custody Forms and Laboratory Analytical Reports

InnoTech ALBERTA
PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Todd Webb
Clean Harbors Environmental
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

INVOICE: Stephanie Dennis
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

CLIENT SAMPLE ID: Ryley Facility Test # 111 HVF-22-04-19
Matrix: Air Filter
CANISTER ID:
PRIORITY: Normal
DESCRIPTION:
DATE SAMPLED: 01-Feb-24 0:00
DATE RECEIVED: 06-Mar-24
REPORT CREATED: 22-Mar-24
REPORT NUMBER: 24030029
VERSION: Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24030029-001	Antimony		30.6	ng/Filter	0.30	AC-021	16-Mar-24
24030029-001	Arsenic	K, T, U	< 0.30	ng/Filter	0.30	AC-021	16-Mar-24
24030029-001	Barium		14500000	ng/Filter	300	AC-021	16-Mar-24
24030029-001	Beryllium		62.5	ng/Filter	0.60	AC-021	16-Mar-24
24030029-001	Boron		16100000	ng/Filter	600	AC-021	16-Mar-24
24030029-001	Cadmium		1290	ng/Filter	0.80	AC-021	16-Mar-24
24030029-001	Chromium		2820	ng/Filter	20	AC-021	16-Mar-24
24030029-001	Cobalt		407	ng/Filter	0.50	AC-021	16-Mar-24
24030029-001	Copper		165000	ng/Filter	20	AC-021	16-Mar-24
24030029-001	Iron		656000	ng/Filter	80	AC-021	16-Mar-24
24030029-001	Lead		7070	ng/Filter	0.70	AC-021	16-Mar-24
24030029-001	Manganese		39300	ng/Filter	1.0	AC-021	16-Mar-24
24030029-001	Mercury	K, T, U	< 0.70	ng/Filter	0.70	AC-021	16-Mar-24
24030029-001	Nickel		2950	ng/Filter	5.0	AC-021	16-Mar-24
24030029-001	Selenium		158	ng/Filter	4.0	AC-021	16-Mar-24
24030029-001	Silver		138	ng/Filter	0.50	AC-021	16-Mar-24
24030029-001	Thallium		67.1	ng/Filter	0.20	AC-021	16-Mar-24

Report certified by: Rebecca Dasilva, Account Coordinator On behalf of: Adam Malcolm, Manager, Chemical Testing
Date: March 22, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at https://directory.cala.ca//

InnoTech ALBERTA
PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Ryley Facility Test # 111 HVF-22-04-19		Air Filter	01-Feb-24 0:00

DESCRIPTION:

REPORT NUMBER: 24030029 **REPORT CREATED:** 22-Mar-24 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24030029-001	Tin		334	ng/Filter	0.20	AC-021	16-Mar-24
24030029-001	Uranium		255	ng/Filter	0.200	AC-021	16-Mar-24
24030029-001	Vanadium		1540	ng/Filter	0.40	AC-021	16-Mar-24
24030029-001	Zinc		10800000	ng/Filter	1000	AC-021	16-Mar-24
24030029-001	Zirconium		29800	ng/Filter	1.0	AC-021	16-Mar-24
24030029-001	Particulate Weight		62.5	mg	0.1	Research	07-Mar-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 22, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

InnoTech ALBERTA
PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
Ryley School Test # 111 HVF-22-12-10		Air Filter	01-Feb-24 0:00

DESCRIPTION:

REPORT NUMBER: 24030029 **REPORT CREATED:** 22-Mar-24 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24030029-002	Antimony	K, T, U	< 0.30	ng/Filter	0.30	AC-021	16-Mar-24
24030029-002	Arsenic	K, T, U	< 0.30	ng/Filter	0.30	AC-021	16-Mar-24
24030029-002	Barium		13000000	ng/Filter	300	AC-021	16-Mar-24
24030029-002	Beryllium		6.28	ng/Filter	0.60	AC-021	16-Mar-24
24030029-002	Boron		14100000	ng/Filter	600	AC-021	16-Mar-24
24030029-002	Cadmium		269	ng/Filter	0.80	AC-021	16-Mar-24
24030029-002	Chromium		1640	ng/Filter	20	AC-021	16-Mar-24
24030029-002	Cobalt		190	ng/Filter	0.50	AC-021	16-Mar-24
24030029-002	Copper		208000	ng/Filter	20	AC-021	16-Mar-24
24030029-002	Iron		441000	ng/Filter	80	AC-021	16-Mar-24
24030029-002	Lead		1040	ng/Filter	0.70	AC-021	16-Mar-24
24030029-002	Manganese		16000	ng/Filter	1.0	AC-021	16-Mar-24
24030029-002	Mercury	K, T, U	< 0.70	ng/Filter	0.70	AC-021	16-Mar-24
24030029-002	Nickel		2240	ng/Filter	5.0	AC-021	16-Mar-24
24030029-002	Selenium		65.0	ng/Filter	4.0	AC-021	16-Mar-24
24030029-002	Silver		122	ng/Filter	0.50	AC-021	16-Mar-24
24030029-002	Thallium		57.0	ng/Filter	0.20	AC-021	16-Mar-24
24030029-002	Tin		155	ng/Filter	0.20	AC-021	16-Mar-24
24030029-002	Uranium		234	ng/Filter	0.200	AC-021	16-Mar-24
24030029-002	Vanadium		1370	ng/Filter	0.40	AC-021	16-Mar-24
24030029-002	Zinc		10100000	ng/Filter	1000	AC-021	16-Mar-24
24030029-002	Zirconium		32400	ng/Filter	1.0	AC-021	16-Mar-24
24030029-002	Particulate Weight		31.5	mg	0.1	Research	07-Mar-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 22, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at https://directory.cala.ca//

Revision History

Order ID	Ver	Date	Reason
24030029	01	22-Mar-24	Report created

Methods

Method	Description
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
Research	Research method

List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

Order Comments

24030029

Send results to Stan Yuha. Quote QT140005

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

Sample Comments

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Todd Webb
Clean Harbors Environmental
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

INVOICE: Stephanie Dennis
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

CLIENT SAMPLE ID: HiVol Test#: 886 - HVF-23-10-14

Matrix: Air Filter

CANISTER ID:

PRIORITY: Normal

DESCRIPTION: HiVol Filter

DATE SAMPLED: 06-Feb-24 0:00

DATE RECEIVED: 09-Feb-24

REPORT CREATED: 20-Feb-24

REPORT NUMBER: 24020064

VERSION Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020064-003	Particulate Weight		21.8	mg	0.1	Research	14-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 20, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

InnoTech's ISO/IEC 17025:2017 scope of accreditation can be located at https://directory.cala.ca//

InnoTech ALBERTA
PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PM10 Test #: 886 - AT6596		Air Filter	06-Feb-24 0:00

DESCRIPTION: PM10 Filter

REPORT NUMBER: 24020064 **REPORT CREATED:** 20-Feb-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020064-002	Particulate Weight		0.215	mg	0.004	AC-029	12-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 20, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test #: 886	32265	Ambient Air	06-Feb-24 0:00

DESCRIPTION: Canister

REPORT NUMBER: 24020064 **REPORT CREATED:** 20-Feb-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020064-001	Total Non-Methane Organic Carbon	K, T, U	< 0.08	ppmv	0.08	NA-028	16-Feb-24
24020064-001	1,2,3-Trimethylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	13-Feb-24
24020064-001	1,2,4-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	1,3,5-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	1-Butene/Isobutylene	K, T, U	< 0.10	ppbv	0.10	AC-058	13-Feb-24
24020064-001	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.12	ppbv	0.12	AC-058	13-Feb-24
24020064-001	1-Pentene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	2,2,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	2,2-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	2,3,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	2,3-Dimethylbutane	K, T, U	< 0.15	ppbv	0.15	AC-058	13-Feb-24
24020064-001	2,3-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	2,4-Dimethylpentane	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	2-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	2-Methylhexane	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	2-Methylpentane	I	0.09	ppbv	0.03	AC-058	13-Feb-24
24020064-001	3-Methylheptane	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	3-Methylhexane	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	3-Methylpentane	I	0.05	ppbv	0.03	AC-058	13-Feb-24
24020064-001	Benzene	I	0.10	ppbv	0.05	AC-058	13-Feb-24
24020064-001	cis-2-Butene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	cis-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	Cyclohexane	K, T, U	< 0.07	ppbv	0.07	AC-058	13-Feb-24
24020064-001	Cyclopentane	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	Ethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 20, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test #: 886	32265	Ambient Air	06-Feb-24 0:00

DESCRIPTION: Canister

REPORT NUMBER: 24020064 **REPORT CREATED:** 20-Feb-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020064-001	Isobutane		0.90	ppbv	0.05	AC-058	13-Feb-24
24020064-001	Isopentane		0.38	ppbv	0.07	AC-058	13-Feb-24
24020064-001	Isoprene	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	Isopropylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	13-Feb-24
24020064-001	m,p-Xylene	K, T, U	< 0.07	ppbv	0.07	AC-058	13-Feb-24
24020064-001	m-Diethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	m-Ethyltoluene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	Methylcyclohexane	I	0.05	ppbv	0.03	AC-058	13-Feb-24
24020064-001	Methylcyclopentane	K, T, U	< 0.08	ppbv	0.08	AC-058	13-Feb-24
24020064-001	n-Butane		1.20	ppbv	0.03	AC-058	13-Feb-24
24020064-001	n-Decane	K, T, U	< 0.10	ppbv	0.10	AC-058	13-Feb-24
24020064-001	n-Dodecane	K, T, U	< 0.5	ppbv	0.5	AC-058	13-Feb-24
24020064-001	n-Heptane	K, T, U	< 0.07	ppbv	0.07	AC-058	13-Feb-24
24020064-001	n-Hexane	I	0.11	ppbv	0.05	AC-058	13-Feb-24
24020064-001	n-Octane	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	n-Pentane		0.30	ppbv	0.07	AC-058	13-Feb-24
24020064-001	n-Propylbenzene	K, T, U	< 0.10	ppbv	0.10	AC-058	13-Feb-24
24020064-001	n-Undecane	K, T, U	< 0.8	ppbv	0.8	AC-058	13-Feb-24
24020064-001	n-Nonane	K, T, U	< 0.07	ppbv	0.07	AC-058	13-Feb-24
24020064-001	o-Ethyltoluene	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	o-Xylene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	p-Diethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24
24020064-001	p-Ethyltoluene	K, T, U	< 0.07	ppbv	0.07	AC-058	13-Feb-24
24020064-001	Styrene	K, T, U	< 0.07	ppbv	0.07	AC-058	13-Feb-24
24020064-001	Toluene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 20, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test #: 886	32265	Ambient Air	06-Feb-24 0:00

DESCRIPTION: Canister

REPORT NUMBER: 24020064 **REPORT CREATED:** 20-Feb-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020064-001	trans-2-Butene	K, T, U	< 0.05	ppbv	0.05	AC-058	13-Feb-24
24020064-001	trans-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	13-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 20, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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Revision History

Order ID	Ver	Date	Reason
24020064	01	20-Feb-24	Report created

Methods

Method	Description
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-028	Determination of Total Non-methane Hydrocarbons and Total Hydrocarbons in Ambient Air by Gas Chromatography Flame Ionization Detector
Research	Research method

List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

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Order Comments

24020064

Project ID: Test #: 886. Report also to Stan Yuha.

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Sample Comments

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Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Todd Webb
Clean Harbors Environmental
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

INVOICE: Stephanie Dennis
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

CLIENT SAMPLE ID: HiVol Test # 887 - Filter # HVF-23-10-15

Matrix: Air Filter

CANISTER ID:

PRIORITY: Normal

DESCRIPTION: Hi-Vol Filter

DATE SAMPLED: 12-Feb-24 0:00

DATE RECEIVED: 20-Feb-24

REPORT CREATED: 27-Feb-24

REPORT NUMBER: 24020131

VERSION **Version 01**

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020131-003	Particulate Weight		59.0	mg	0.1	Research	21-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 27, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PM10 Test # 887 - Filter # AT76594		Air Filter	12-Feb-24 0:00

DESCRIPTION: PM10 Filter

REPORT NUMBER: 24020131 **REPORT CREATED:** 27-Feb-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020131-002	Particulate Weight		0.321	mg	0.004	AC-029	21-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 27, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test # 887	29017	Ambient Air	12-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24020131 **REPORT CREATED:** 27-Feb-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020131-001	Total Non-Methane Organic Carbon	K, T, U	< 0.09	ppmv	0.09	NA-028	20-Feb-24
24020131-001	1,2,3-Trimethylbenzene	K, T, U	< 0.09	ppbv	0.09	AC-058	21-Feb-24
24020131-001	1,2,4-Trimethylbenzene	I	0.09	ppbv	0.05	AC-058	21-Feb-24
24020131-001	1,3,5-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	21-Feb-24
24020131-001	1-Butene/Isobutylene	K, T, U	< 0.11	ppbv	0.11	AC-058	21-Feb-24
24020131-001	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.12	ppbv	0.12	AC-058	21-Feb-24
24020131-001	1-Pentene	K, T, U	< 0.05	ppbv	0.05	AC-058	21-Feb-24
24020131-001	2,2,4-Trimethylpentane	I	0.05	ppbv	0.04	AC-058	21-Feb-24
24020131-001	2,2-Dimethylbutane	K, T, U	< 0.04	ppbv	0.04	AC-058	21-Feb-24
24020131-001	2,3,4-Trimethylpentane	I	0.07	ppbv	0.04	AC-058	21-Feb-24
24020131-001	2,3-Dimethylbutane	K, T, U	< 0.16	ppbv	0.16	AC-058	21-Feb-24
24020131-001	2,3-Dimethylpentane	I	0.05	ppbv	0.04	AC-058	21-Feb-24
24020131-001	2,4-Dimethylpentane	K, T, U	< 0.05	ppbv	0.05	AC-058	21-Feb-24
24020131-001	2-Methylheptane	I	0.06	ppbv	0.04	AC-058	21-Feb-24
24020131-001	2-Methylhexane	I	0.14	ppbv	0.05	AC-058	21-Feb-24
24020131-001	2-Methylpentane		0.36	ppbv	0.04	AC-058	21-Feb-24
24020131-001	3-Methylheptane	K, T, U	< 0.05	ppbv	0.05	AC-058	21-Feb-24
24020131-001	3-Methylhexane	I	0.15	ppbv	0.04	AC-058	21-Feb-24
24020131-001	3-Methylpentane		0.19	ppbv	0.04	AC-058	21-Feb-24
24020131-001	Benzene	I	0.25	ppbv	0.05	AC-058	21-Feb-24
24020131-001	cis-2-Butene	K, T, U	< 0.05	ppbv	0.05	AC-058	21-Feb-24
24020131-001	cis-2-Pentene	K, T, U	< 0.04	ppbv	0.04	AC-058	21-Feb-24
24020131-001	Cyclohexane	I	0.18	ppbv	0.07	AC-058	21-Feb-24
24020131-001	Cyclopentane	I	0.07	ppbv	0.04	AC-058	21-Feb-24
24020131-001	Ethylbenzene		0.73	ppbv	0.05	AC-058	21-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 27, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test # 887	29017	Ambient Air	12-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24020131 **REPORT CREATED:** 27-Feb-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020131-001	Isobutane		0.74	ppbv	0.05	AC-058	21-Feb-24
24020131-001	Isopentane		0.75	ppbv	0.07	AC-058	21-Feb-24
24020131-001	Isoprene	K, T, U	< 0.04	ppbv	0.04	AC-058	21-Feb-24
24020131-001	Isopropylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	21-Feb-24
24020131-001	m,p-Xylene		2.58	ppbv	0.07	AC-058	21-Feb-24
24020131-001	m-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	21-Feb-24
24020131-001	m-Ethyltoluene	I	0.06	ppbv	0.05	AC-058	21-Feb-24
24020131-001	Methylcyclohexane		0.22	ppbv	0.04	AC-058	21-Feb-24
24020131-001	Methylcyclopentane		0.24	ppbv	0.09	AC-058	21-Feb-24
24020131-001	n-Butane		1.43	ppbv	0.04	AC-058	21-Feb-24
24020131-001	n-Decane	K, T, U	< 0.11	ppbv	0.11	AC-058	21-Feb-24
24020131-001	n-Dodecane	K, T, U	< 0.5	ppbv	0.5	AC-058	21-Feb-24
24020131-001	n-Heptane	I	0.24	ppbv	0.07	AC-058	21-Feb-24
24020131-001	n-Hexane		0.55	ppbv	0.05	AC-058	21-Feb-24
24020131-001	n-Octane	I	0.10	ppbv	0.04	AC-058	21-Feb-24
24020131-001	n-Pentane		0.76	ppbv	0.07	AC-058	21-Feb-24
24020131-001	n-Propylbenzene	K, T, U	< 0.11	ppbv	0.11	AC-058	21-Feb-24
24020131-001	n-Undecane	K, T, U	< 0.9	ppbv	0.9	AC-058	21-Feb-24
24020131-001	n-Nonane	I	0.13	ppbv	0.07	AC-058	21-Feb-24
24020131-001	o-Ethyltoluene	K, T, U	< 0.04	ppbv	0.04	AC-058	21-Feb-24
24020131-001	o-Xylene		0.67	ppbv	0.05	AC-058	21-Feb-24
24020131-001	p-Diethylbenzene	K, T, U	< 0.04	ppbv	0.04	AC-058	21-Feb-24
24020131-001	p-Ethyltoluene	K, T, U	< 0.07	ppbv	0.07	AC-058	21-Feb-24
24020131-001	Styrene	K, T, U	< 0.07	ppbv	0.07	AC-058	21-Feb-24
24020131-001	Toluene		6.76	ppbv	0.05	AC-058	21-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 27, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test # 887	29017	Ambient Air	12-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24020131 **REPORT CREATED:** 27-Feb-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020131-001	trans-2-Butene	K, T, U	< 0.05	ppbv	0.05	AC-058	21-Feb-24
24020131-001	trans-2-Pentene	K, T, U	< 0.04	ppbv	0.04	AC-058	21-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: February 27, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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Revision History

Order ID	Ver	Date	Reason
24020131	01	27-Feb-24	Report created

Methods

Method	Description
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-028	Determination of Total Non-methane Hydrocarbons and Total Hydrocarbons in Ambient Air by Gas Chromatography Flame Ionization Detector
Research	Research method

List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

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Order Comments

24020131

Test # 887. Send results to Stan Yuha.

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Sample Comments

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Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Todd Webb
Clean Harbors Environmental
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

INVOICE: Stephanie Dennis
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

CLIENT SAMPLE ID: Hi-Vol Test # 889 - HVF-23-10-17
Matrix: Air Filter
CANISTER ID:
PRIORITY: Normal
DESCRIPTION: Hi-Vol Filter
DATE SAMPLED: 24-Feb-24 0:00
DATE RECEIVED: 04-Mar-24
REPORT CREATED: 18-Mar-24
REPORT NUMBER: 24030017
VERSION: Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24030017-003	Particulate Weight		40.0	mg	0.1	Research	05-Mar-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing
Date: March 18, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PM10 Test # 889 - Filter # AT9744		Air Filter	24-Feb-24 0:00

DESCRIPTION: PM10 Filter

REPORT NUMBER: 24030017 **REPORT CREATED:** 18-Mar-24 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24030017-002	Particulate Weight		0.192	mg	0.004	AC-029	07-Mar-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 18, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test # 889	29030	Ambient Air	24-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24030017 **REPORT CREATED:** 18-Mar-24 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24030017-001	Total Non-Methane Organic Carbon	K, T, U	< 0.08	ppmv	0.08	NA-028	04-Mar-24
24030017-001	1,2,3-Trimethylbenzene		< 0.08	ppbv	0.08	AC-058	07-Mar-24
24030017-001	1,2,4-Trimethylbenzene		0.09	ppbv	0.05	AC-058	07-Mar-24
24030017-001	1,3,5-Trimethylbenzene		< 0.05	ppbv	0.05	AC-058	07-Mar-24
24030017-001	1-Butene/Isobutylene		0.46	ppbv	0.09	AC-058	07-Mar-24
24030017-001	1-Hexene/2-Methyl-1-pentene		< 0.11	ppbv	0.11	AC-058	07-Mar-24
24030017-001	1-Pentene		< 0.05	ppbv	0.05	AC-058	07-Mar-24
24030017-001	2,2,4-Trimethylpentane		0.06	ppbv	0.03	AC-058	07-Mar-24
24030017-001	2,2-Dimethylbutane		< 0.03	ppbv	0.03	AC-058	07-Mar-24
24030017-001	2,3,4-Trimethylpentane		0.05	ppbv	0.03	AC-058	07-Mar-24
24030017-001	2,3-Dimethylbutane		< 0.14	ppbv	0.14	AC-058	07-Mar-24
24030017-001	2,3-Dimethylpentane		0.08	ppbv	0.03	AC-058	07-Mar-24
24030017-001	2,4-Dimethylpentane		< 0.05	ppbv	0.05	AC-058	07-Mar-24
24030017-001	2-Methylheptane		0.04	ppbv	0.03	AC-058	07-Mar-24
24030017-001	2-Methylhexane		0.34	ppbv	0.05	AC-058	07-Mar-24
24030017-001	2-Methylpentane		0.60	ppbv	0.03	AC-058	07-Mar-24
24030017-001	3-Methylheptane		< 0.05	ppbv	0.05	AC-058	07-Mar-24
24030017-001	3-Methylhexane		0.41	ppbv	0.03	AC-058	07-Mar-24
24030017-001	3-Methylpentane		0.10	ppbv	0.03	AC-058	07-Mar-24
24030017-001	Benzene		0.15	ppbv	0.05	AC-058	07-Mar-24
24030017-001	cis-2-Butene		< 0.05	ppbv	0.05	AC-058	07-Mar-24
24030017-001	cis-2-Pentene		< 0.03	ppbv	0.03	AC-058	07-Mar-24
24030017-001	Cyclohexane		0.11	ppbv	0.06	AC-058	07-Mar-24
24030017-001	Cyclopentane		0.04	ppbv	0.03	AC-058	07-Mar-24
24030017-001	Ethylbenzene		0.43	ppbv	0.05	AC-058	07-Mar-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 18, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test # 889	29030	Ambient Air	24-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24030017 **REPORT CREATED:** 18-Mar-24 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24030017-001	Isobutane		0.52	ppbv	0.05	AC-058	07-Mar-24
24030017-001	Isopentane		0.65	ppbv	0.06	AC-058	07-Mar-24
24030017-001	Isoprene		< 0.03	ppbv	0.03	AC-058	07-Mar-24
24030017-001	Isopropylbenzene		< 0.06	ppbv	0.06	AC-058	07-Mar-24
24030017-001	m,p-Xylene		1.08	ppbv	0.06	AC-058	07-Mar-24
24030017-001	m-Diethylbenzene		< 0.03	ppbv	0.03	AC-058	07-Mar-24
24030017-001	m-Ethyltoluene		< 0.05	ppbv	0.05	AC-058	07-Mar-24
24030017-001	Methylcyclohexane		0.18	ppbv	0.03	AC-058	07-Mar-24
24030017-001	Methylcyclopentane		0.13	ppbv	0.08	AC-058	07-Mar-24
24030017-001	n-Butane		0.90	ppbv	0.03	AC-058	07-Mar-24
24030017-001	n-Decane		< 0.09	ppbv	0.09	AC-058	07-Mar-24
24030017-001	n-Dodecane		< 0.5	ppbv	0.5	AC-058	07-Mar-24
24030017-001	n-Heptane		0.58	ppbv	0.06	AC-058	07-Mar-24
24030017-001	n-Hexane		0.32	ppbv	0.05	AC-058	07-Mar-24
24030017-001	n-Octane		0.15	ppbv	0.03	AC-058	07-Mar-24
24030017-001	n-Pentane		0.63	ppbv	0.06	AC-058	07-Mar-24
24030017-001	n-Propylbenzene		< 0.09	ppbv	0.09	AC-058	07-Mar-24
24030017-001	n-Undecane		< 0.8	ppbv	0.8	AC-058	07-Mar-24
24030017-001	n-Nonane		0.09	ppbv	0.06	AC-058	07-Mar-24
24030017-001	o-Ethyltoluene		< 0.03	ppbv	0.03	AC-058	07-Mar-24
24030017-001	o-Xylene		0.30	ppbv	0.05	AC-058	07-Mar-24
24030017-001	p-Diethylbenzene		< 0.03	ppbv	0.03	AC-058	07-Mar-24
24030017-001	p-Ethyltoluene		< 0.06	ppbv	0.06	AC-058	07-Mar-24
24030017-001	Styrene		< 0.06	ppbv	0.06	AC-058	07-Mar-24
24030017-001	Toluene		1.40	ppbv	0.05	AC-058	07-Mar-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 18, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test # 889	29030	Ambient Air	24-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24030017 **REPORT CREATED:** 18-Mar-24 **VERSION:** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24030017-001	trans-2-Butene		< 0.05	ppbv	0.05	AC-058	07-Mar-24
24030017-001	trans-2-Pentene		< 0.03	ppbv	0.03	AC-058	07-Mar-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 18, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

Revision History

Order ID	Ver	Date	Reason
24030017	01	18-Mar-24	Report created

Methods

Method	Description
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-028	Determination of Total Non-methane Hydrocarbons and Total Hydrocarbons in Ambient Air by Gas Chromatography Flame Ionization Detector
Research	Research method

List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

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Order Comments

24030017

Test # 889. Send results to Stan Yuha.

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Sample Comments

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Result Comments

Note:

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

RESULTS: Todd Webb
Clean Harbors Environmental
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

INVOICE: Stephanie Dennis
PO Box 390
2 km N of Hwy 14 on Sec Road 854 50114 RR 173
Ryley
AB T0B 4A0

CLIENT SAMPLE ID: Hi-Vol Test #: 888, HVF-23-10-16

Matrix: Air Filter

CANISTER ID:

PRIORITY: Normal

DESCRIPTION: Hi-Vol Filter

DATE SAMPLED: 18-Feb-24 0:00

DATE RECEIVED: 22-Feb-24

REPORT CREATED: 05-Mar-24

REPORT NUMBER: 24020145

VERSION **Version 01**

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020145-003	Particulate Weight		48.8	mg	0.1	Research	23-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 5, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
PM10 Test #: 888 Flt # AT76595		Air Filter	18-Feb-24 0:00

DESCRIPTION: PM10 Filter

REPORT NUMBER: 24020145 **REPORT CREATED:** 05-Mar-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020145-002	Particulate Weight		0.461	mg	0.004	AC-029	27-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 5, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test #: 888	A47961	Ambient Air	18-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24020145 **REPORT CREATED:** 05-Mar-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020145-001	Total Non-Methane Organic Carbon	K, T, U	< 0.08	ppmv	0.08	NA-028	23-Feb-24
24020145-001	1,2,3-Trimethylbenzene	K, T, U	< 0.08	ppbv	0.08	AC-058	28-Feb-24
24020145-001	1,2,4-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	28-Feb-24
24020145-001	1,3,5-Trimethylbenzene	K, T, U	< 0.05	ppbv	0.05	AC-058	28-Feb-24
24020145-001	1-Butene/Isobutylene	I	0.15	ppbv	0.10	AC-058	28-Feb-24
24020145-001	1-Hexene/2-Methyl-1-pentene	K, T, U	< 0.12	ppbv	0.12	AC-058	28-Feb-24
24020145-001	1-Pentene	K, T, U	< 0.05	ppbv	0.05	AC-058	28-Feb-24
24020145-001	2,2,4-Trimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	2,2-Dimethylbutane	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	2,3,4-Trimethylpentane	I	0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	2,3-Dimethylbutane	K, T, U	< 0.15	ppbv	0.15	AC-058	28-Feb-24
24020145-001	2,3-Dimethylpentane	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	2,4-Dimethylpentane	K, T, U	< 0.05	ppbv	0.05	AC-058	28-Feb-24
24020145-001	2-Methylheptane	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	2-Methylhexane	I	0.06	ppbv	0.05	AC-058	28-Feb-24
24020145-001	2-Methylpentane		0.32	ppbv	0.03	AC-058	28-Feb-24
24020145-001	3-Methylheptane	K, T, U	< 0.05	ppbv	0.05	AC-058	28-Feb-24
24020145-001	3-Methylhexane	I	0.07	ppbv	0.03	AC-058	28-Feb-24
24020145-001	3-Methylpentane	I	0.13	ppbv	0.03	AC-058	28-Feb-24
24020145-001	Benzene	I	0.22	ppbv	0.05	AC-058	28-Feb-24
24020145-001	cis-2-Butene	K, T, U	< 0.05	ppbv	0.05	AC-058	28-Feb-24
24020145-001	cis-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	Cyclohexane	I	0.09	ppbv	0.07	AC-058	28-Feb-24
24020145-001	Cyclopentane	I	0.05	ppbv	0.03	AC-058	28-Feb-24
24020145-001	Ethylbenzene	I	0.10	ppbv	0.05	AC-058	28-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 5, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test #: 888	A47961	Ambient Air	18-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24020145 **REPORT CREATED:** 05-Mar-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020145-001	Isobutane		3.04	ppbv	0.05	AC-058	28-Feb-24
24020145-001	Isopentane		1.00	ppbv	0.07	AC-058	28-Feb-24
24020145-001	Isoprene	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	Isopropylbenzene	K, T, U	< 0.07	ppbv	0.07	AC-058	28-Feb-24
24020145-001	m,p-Xylene	I	0.25	ppbv	0.07	AC-058	28-Feb-24
24020145-001	m-Diethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	m-Ethyltoluene	K, T, U	< 0.05	ppbv	0.05	AC-058	28-Feb-24
24020145-001	Methylcyclohexane	I	0.15	ppbv	0.03	AC-058	28-Feb-24
24020145-001	Methylcyclopentane	I	0.12	ppbv	0.08	AC-058	28-Feb-24
24020145-001	n-Butane		2.76	ppbv	0.03	AC-058	28-Feb-24
24020145-001	n-Decane	K, T, U	< 0.10	ppbv	0.10	AC-058	28-Feb-24
24020145-001	n-Dodecane	K, T, U	< 0.5	ppbv	0.5	AC-058	28-Feb-24
24020145-001	n-Heptane	I	0.10	ppbv	0.07	AC-058	28-Feb-24
24020145-001	n-Hexane		0.35	ppbv	0.05	AC-058	28-Feb-24
24020145-001	n-Octane	I	0.07	ppbv	0.03	AC-058	28-Feb-24
24020145-001	n-Pentane		0.78	ppbv	0.07	AC-058	28-Feb-24
24020145-001	n-Propylbenzene	K, T, U	< 0.10	ppbv	0.10	AC-058	28-Feb-24
24020145-001	n-Undecane	K, T, U	< 0.8	ppbv	0.8	AC-058	28-Feb-24
24020145-001	n-Nonane	I	0.10	ppbv	0.07	AC-058	28-Feb-24
24020145-001	o-Ethyltoluene	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	o-Xylene	I	0.06	ppbv	0.05	AC-058	28-Feb-24
24020145-001	p-Diethylbenzene	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24
24020145-001	p-Ethyltoluene	K, T, U	< 0.07	ppbv	0.07	AC-058	28-Feb-24
24020145-001	Styrene	K, T, U	< 0.07	ppbv	0.07	AC-058	28-Feb-24
24020145-001	Toluene		0.44	ppbv	0.05	AC-058	28-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 5, 2024 Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

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ENVIRONMENTAL ANALYTICAL SERVICES

TEST REPORT

CLIENT SAMPLE ID	CANISTER ID	Matrix	DATE SAMPLED
VOCs and TNMOC Test #: 888	A47961	Ambient Air	18-Feb-24 0:00

DESCRIPTION: Air Canister

REPORT NUMBER: 24020145 **REPORT CREATED:** 05-Mar-24 **VERSION** Version 01

Lab ID	Parameter	Qualifier	Result	Units	RDL	Method	Analysis Date
24020145-001	trans-2-Butene	K, T, U	< 0.05	ppbv	0.05	AC-058	28-Feb-24
24020145-001	trans-2-Pentene	K, T, U	< 0.03	ppbv	0.03	AC-058	28-Feb-24

Report certified by: Andrea Conner, Admin Assistant On behalf of: Adam Malcolm, Manager, Chemical Testing

Date: March 5, 2024

Inquiries: (780) 632 8403 E-mail: EAS.Results@innotechalberta.ca

Revision History

Order ID	Ver	Date	Reason
24020145	01	05-Mar-24	Report created

Methods

Method	Description
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
NA-028	Determination of Total Non-methane Hydrocarbons and Total Hydrocarbons in Ambient Air by Gas Chromatography Flame Ionization Detector
Research	Research method

List of Analytical Method IDs within InnoTech's ISO/IEC 17025:2017 CALA Scope of Accreditation

Method ID	Description
AC-013	Mercury in Waters by Cold Vapor Atomic Fluorescence Detection (CVAFS)
AC-020	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-021	Elemental Analysis Methodology of Filter-collected Airborne Particulate Matter (PM) by ICP-MS
AC-026	Ion Chromatographic Procedures using the Dionex ICS 3000 and 5000 Systems
AC-029	Procedure for the Equilibration and Weighing of Membrane Filters and PUFs on the Mettler Toledo Micro Balance
AC-035	Analysis of Glyphosate, Aminomethylphosphonic Acid and Glufosinate in Water
AC-038	Trace Metal Analysis of Water Samples by ICP-MS
AC-048	Specific Conductance (Conductivity Meter Method)
AC-049	pH (Meter Method)
AC-054	Alkalinity Total and Phenolphthalein
AC-058	Determination of Volatile Organic Compounds in Ambient Air by Gas Chromatography Mass Spectrometry
AC-060	Trace Metal Analysis of Soil Sediment and Industrial Waste Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-061	Trace Metal Analysis for Biological Samples by Inductively Coupled Plasma Mass Spectrometry (ICP-MS)
AC-065	Analysis of Naphthenic Acids in Water by HPLC-Orbitrap-MS analysis
AC-074	Pesticides in Water
AC-079	Alkylated PAH in Soil and Sediment
AC-080	Alkylated PAH in Water (SPE Extraction)
NA-006	Determination of BTEX, F1 Hydrocarbons and F2, F3 and F4 Hydrocarbons in Water
NA-024	Analysis of Reduced Sulfur Compounds in Air

Qualifiers

Data Qualifier	Translation
B	Blank contamination; Analyte detected above the method reporting limit in an associated blank
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1	Reported value is estimated; Surrogate recoveries limits were exceeded
J2	Reported value is estimated; No known QC criteria for this component
J3	Reported value is estimated; The value failed to meet QC criteria for either precision or accuracy
J4	Reported value is estimated; The sample matrix interfered with the analysis
K	Off-scale low. Actual value is known to be less than the value given
L	Off-scale high. Actual value is known to be greater than value given
N	Non-target analyte; Tentatively identified compound (using mass spectroscopy)
Q	Sample held beyond the accepted holding time
R	Rejected data; Not suitable for the projects intended use
T	Value reported is less than the laboratory method detection limit
U	Compound was analyzed for but not detected
V	Analyte was detected in both the sample and the associated method blank

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

Order Comments

24020145

Project ID: Test # 888. Results also to Stan Yuha.

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

Sample Comments

PO Bag 4000
Vegreville, Alberta
Canada T9C 1T4
(780) 632-8211

Result Comments

Note:

1. Results relate only to items tested and apply to the sample as received.

2. This report shall not be reproduced, except in full, without the explicit approval of the laboratory.

Sample ID: 24030029-001 Priority: Normal

Customer ID: Clean Harbours
Cust Samp ID: Ryley Facility Test # 111 HVF-22-04-109

Environmental Analytical Services
PO Bag 4000
Vegreville, AB T9C 1T4
Phone: (780) 632-8284 Fax: (780) 632-8620
Shipping: Highway 16 A & 75 St

ANALYSIS REQUEST FORM

Project Code:
Client Code:
Invoice Code:
Date Rec'd (D/M/Y): RECEIVED MAR 06 2024
Rec'd By:

FOR AITF USE ONLY

Client details:
Contact: —
Company: —
Project ID: —
Address: —
—
—
Telephone: —
Email: —

CleanHarbors

Jorge A. Mendoza
Laboratory Manager

Clean Harbors
Environmental Services
Box 390 , 2 Km North of Hwy 14
on Sec. Road 854
Ryley, AB T0B 4A0
www.cleanharbors.com

780.663.3828 Ext. 235
Home Office 780.663.2342
Mobile 780.934.2342
Fax 780.663.3539
Direct Line 780.663.2513
mendoza.jorge@cleanharbors.com

"People & Technology Creating a Safer, Cleaner Environment"

Special Instructions/Comments: **RUSH (Surcharge):** ☐

PO # 240126
Quote ID: QT140005

AITF Contact: _____ **Email:** _____
Tel: _____

Sample ID	Sample Source Description	Date/Time Sampled From/To		Analysis Requested
		Date (dd/mm/yy)	Time (24 Hr)	
Ryley Facility Test # 111	Filter Number # HV-22-04-~~109~~ 019	1/2/24 1/3/24	 43.58 hrs	Particulate weight ICP-MS analysis
Ryley School Test # 111	Filter Number # HV-22-12-10	1/2/24 1/3/24	 26.12 hrs	Particulate weight ICP-MS analysis

Sample ID: 24020064-001 Priority: Normal

A SUBSIDIARY OF A Customer ID: Clean Harbours

Cust Samp ID: VOCs and TNMOC Test #: 886

)Y FORM

Environmental Analytical Services
Highway 16A & 75 Street
Vegreville, AB T9C 1T4

Phone: 780-632-8403
Email: EAS.Reception@innotechalberta.ca
www.innotechalberta.ca

Client Report...	...t Billing Information	Turnaround Time
Company: Clean Harbors Canada, Inc	Contact: Stephanie Dennis	X Normal (10 business days)
Address: PO Box 390, 50114 Range Road 173, Ryley, AB T0B 4A0	Phone: 780-663-3828	Rush
Contact: Todd Webb or Stan Yuha	Email: Dennis.Stephanie@cleanharbors.com	Note: Rush service not available for all tests. Confirm rush requests with InnoTech Alberta.
Phone: 780-663-2513 or 780-663-3828	Project ID: Test 886	
Email: Webb.Todd@cleanharbors.com, Yuha.Stan@cleanharbors.com	PO #: 239503	

Special Instructions/Comments:

***If either PM10 or HI-VOL filter exceeds its trigger weight, then both filters are analyzed for metals**

If neither filter exceeds its trigger weight, neither filter is analyzed for metals

If metals analysis is required, please report on the same report as filter weights and VOCs/TNMOC

Trigger Weight for Analysis (PM10): 1.20 mg

Trigger Weight for Analysis (HI-VOL): 86.5 mg

Date Received – Lab Use Only

RECEIVED FEB 09 2024

Lab Sample No.	Client Sample ID	Sample Source/ Description	Canister Number/ Sampler ID	Date Sampled (dd/mm/yy) From / To	Time Sampled (24 hour) From / To	Analysis Requested
1	VOCs and TNMOC Test Number: 886	Canister	32265	06/02/24	00:00	VOC PAMS & TNMOC
				07/02/24	00:00	
2	PM10 Test Number: 886	PM10 filter	AT76596	06/02/24	00:00	FLT Particulate Weight (& metals if over trigger weight)*
				07/02/24	00:00	
3	HI-VOL Test Number: 886	HI-VOL Filter	HVF-23-10-14	06/02/24		Particulate Weight (& metals if over trigger weight)*
				07/02/24		
					Total: 23.06 hrs	

Client Authorization: _____ Laboratory Personnel: _____

(Signature) *(Signature)*

This "Chain of Custody" form is subject to InnoTech Alberta standard terms and conditions.

Sample ID: 24020064-001 **Priority:** Normal

Customer ID: Clean Harbours
Cust Samp ID: VOCs and TNMOC Test #: 886

InnoTech ALBERTA

Canister ID: 32265.

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: ISQ on: AUG 2 1 2023

Evacuated: SEP 1 9 2023 Recertified: DEC 2 0 2023

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: Test # 886

Sampled By: -6 "Hg JMP

Starting Vacuum:	End Vacuum:
-27.2 "Hg	-2.2 "Hg/psig

Sample ID: 24020064-001 **Priority:** Normal

Customer ID: Clean Harbours
Cust Samp ID: VOCs and TNMOC Test #: 886

Filter Shipping Record

RECEIVED
FEB 09 2024

Sent To: Clean Harbors
PO Box 390
Ryley, AB T0B 4A0
(1/2 mile north, Hwy 854)
Todd Webb
780-663-2513

Date: November 29/23

Project: Clean Harbors

Prepared by: S Melenka

Filter Size	# of Filters in Cassettes	Filter IDs
47 mm	1	AT76596 Test 886

Returns: coolers, large and small containers may be shipped to: Innotech, PO Bag 4000, HWY 16A & 75th Street, Vegreville, AB T9C 1T4

{00004084;2}

TERMS AND CONDITIONS

The attached document entitled "**Chain of Custody Form**" is subject to the following Terms and Conditions, unless otherwise specified on the Quotation. InnoTech Alberta's commencement of the Services shall be deemed acceptance of the terms and conditions by the Client.

1.Any proposal contained herein is prepared for the consideration of the Client only. Its contents may not be used or disclosed to any other party without prior written consent of the INNOTECH ALBERTA INC. (hereinafter referred to as "InnoTech Alberta").

2.InnoTech Alberta will perform the Services in accordance with normal professional standards.

3.The delivery time for performance of the Services (as set out on the front page of this Quotation) is approximate and may be changed by InnoTech Alberta giving written notice to the Client.

4.InnoTech Alberta will exercise due care and proficiency in testing items submitted by a Client. InnoTech Alberta shall not, however, be liable to the Client for any damage or loss caused to the item being tested or for any damage, loss or expense caused by any delay in carrying out the test, including any damage, loss or expense resulting from InnoTech Alberta's negligence. InnoTech Alberta shall not be responsible for any damage, which is a natural or necessary result of any testing procedure.

5.For the purposes of this Quotation, Intellectual Property means all information, data, artistic and literary works, concepts, designs, processes, software, algorithms and inventions, including, without limitation, those that could be the subject of patent, copyright, industrial design, trade secret or other forms of protection. Intellectual Property which was owned by either InnoTech Alberta or the Client prior to the signing of this Agreement remains the property of that party. Nothing in this Agreement shall operate as a license, permission or grant of any other rights to either InnoTech Alberta's or the Client's Intellectual Property.

6.All data, reports and other information relating to the Services shall be treated by InnoTech Alberta as the confidential property of the Client, and InnoTech Alberta will use reasonable efforts to ensure that its employees, contractors and agents will not disclose the same to any other person, firm or corporation during the term of this Agreement and for a period of five (5) years after the date of termination of the Agreement. The obligation of confidentiality set out herein shall not apply to any information that was in InnoTech Alberta's possession prior to receipt from the Client or which is or becomes part of the public domain through no act or failure on the part of InnoTech Alberta. The obligation of confidentiality set out in this Section shall not prevent the disclosure of information to any level of government having jurisdiction to make lawful demand therefor, or required to be disclosed by any applicable law. Any records required to be maintained by InnoTech Alberta pursuant to this Agreement are subject to the protection and access provisions of the Freedom of Information and Protection of Privacy Act (Alberta).

7.The reported results of any InnoTech Alberta tests or evaluations performed on samples or items provided by the Client shall be interpreted as being specific to the sample or item tested. InnoTech Alberta makes no representation that any similar or related untested samples or items would produce the same results.

8.The Client shall not use InnoTech Alberta's name in any advertising material, sale offer, news releases, public statements or announcements, whether written or oral relating to the Services or the results thereof, without the prior written consent of InnoTech Alberta.

9.Records, test data, reports and samples, except where shipped to the Client after completion of the work shall be retained by InnoTech Alberta according to InnoTech Alberta's approved Records Retention and Disposition Schedule.

10.Prices quoted are in Canadian Dollars unless otherwise stated in writing and are exclusive of any provincial, municipal, sales, use or goods and services tax.

11.Prices quoted do not include shipping, insurance or cost of consumables. The Client shall be responsible for all costs incurred by InnoTech Alberta in collecting any item for testing and returning the item to the Client after testing and shall be responsible for all necessary incidental costs incurred by InnoTech Alberta in providing the Services. InnoTech Alberta will not be responsible for any damage or loss to items during shipping and it is the responsibility of the Client to arrange and pay for any insurance it deems necessary.

12.Any test samples or other materials supplied by the Client to InnoTech Alberta may, at InnoTech Alberta's option, be returned by InnoTech Alberta to the Client. The Client shall:

(a)be responsible for all costs associated with the handling, transportation and disposal of such materials;

(b)reimburse InnoTech Alberta for any costs incurred by InnoTech Alberta associated with the handling, transportation and disposal of such materials; and

(c)indemnify and hold InnoTech Alberta harmless from any and all claims, damages or actions associated with the handling, transportation and disposal of such materials.

13.The Client shall pay all invoices rendered by InnoTech Alberta to the Client within thirty (30) days from the date of invoice, without deduction or set-off.

14.If the Client fails to pay any amount under this Agreement, such unpaid amount shall bear interest at a rate per month equal to one (1%) percent (or 12.6825% per annum) with interest on overdue interest at the same rate.

15.InnoTech Alberta makes no representation, warranties or conditions, either expressed or implied, statutory or otherwise and does not warrant the quality, state, merchantability or fitness for any purpose of any goods or products to be delivered pursuant to this Agreement. The Client accepts the results of these Services or items tested as is, and acknowledges that any use or interpretation of the information contained is at the Client's own risk.

16.In no event shall InnoTech Alberta be liable for any indirect or consequential damage or loss suffered by the Client, including loss of anticipated profits.

17.The Client shall indemnify and hold harmless InnoTech Alberta from any and all claims, demands, actions and costs (including legal costs on a solicitor-client basis) that may arise out of:
(a)any dangerous defect or content in the item being tested, whether apparent or not, which dangerous defect or content was not disclosed in writing to InnoTech Alberta by the Client at the time the item was submitted for testing;
(b)differences between those items actually tested and items previously or subsequently produced which are purported to be identical to the item tested; or
(c)any use of the tested item or any item incorporating the tested item, whether by the Client or a third party following its return to the Client.
The hold harmless shall survive this Agreement.

18.The Client shall, at its own expense and without limiting its liabilities herein, be responsible for insuring its operation in an amount not less than $2,000,000 inclusive per occurrence, insuring against bodily injury, and property damage including loss of use thereof. Further, the Client is responsible for insuring all owned property directly or indirectly related to this Agreement and InnoTech Alberta shall have no liability for any loss or damage to such property. 19.InnoTech Alberta shall maintain the following insurance: (i) commercial general liability insurance (including cross liability, severability of interests, non-owned automobile liability) in the amount of two million dollars ($2,000,000.00) per occurrence, and; (ii) professional liability and errors and omissions insurance in the amount of one million dollars ($1,000,000.00) per claim, and two million dollars ($2,000,000.00) in the aggregate. In addition, InnoTech Alberta shall maintain all workers' compensation coverage required by applicable laws. Notwithstanding the foregoing, InnoTech Alberta reserves the right to supplement or add insurance coverage from time to time as may be required in its sole discretion. InnoTech Alberta may provide certificates of insurance for coverages outlined in (i) and (ii) above.

20.The Client agrees to comply with all InnoTech Alberta Safety & Security regulations in effect while on InnoTech Alberta premises.

21.This Agreement represents the entire agreement between the parties and shall supersede all prior agreements relative to this transaction.

22.InnoTech Alberta shall not be liable to the Client for any failure or delay in performance of its obligations caused by circumstances beyond its control, including but not limited to acts of God, strikes, laws imposed after the fact, governmental restrictions, riots, wars, civil disorder, rebellion, sabotage, fire, flood, explosion, earthquake or other disasters.

23.InnoTech Alberta may assign this Quotation to an "affiliated" (as that term is defined at Section 2 of the Business Corporations Act (Alberta)) or successor entity on written notice to the Client.

24.This Quotation and rights and parties thereto shall be governed by and construed according to the laws of the Province of Alberta. The parties hereby submit to the jurisdiction of the Courts of Alberta.

Sample ID: 24020064-001 **Priority:** Normal

Customer ID: Clean Harbours

Cust Samp ID: VOCs and TNMOC Test #: 886

Sample ID: 24020131-001 **Priority:** Normal

Customer ID: Clean Harbours
Cust Samp ID: VOCs and TNMOC Test # 887

CHAIN OF CUSTODY FORM

Environmental Analytical Services
Highway 16A & 75 Street
Vegreville, AB T9C 1T4

Phone: 780-632-8403
Email: EAS.Reception@innotechalberta.ca
www.innotechalberta.ca

Client Reporting Information		**Client Billing Information**		**Turnaround Time**
Company:	Clean Harbors Canada, Inc	Contact:	Stephanie Dennis	X Normal (10 business days)
Address:	PO Box 390, 50114 Range Road 173, Ryley, AB T0B 4A0	Phone:	780-663-3828	**Rush**
Contact:	Todd Webb or Stan Yuha	Email:	Dennis.Stephanie@cleanharbors.com	Note: Rush service not available for all tests. Confirm rush requests with InnoTech Alberta.
Phone:	780-663-2513 or 780-663-3828	Project ID:	Test 887	
Email:	Webb.Todd@cleanharbors.com, Yuha.Stan@cleanharbors.com	PO #:	239503	

Special Instructions/Comments:

***If either PM10 or HI-VOL filter exceeds its trigger weight, then both filters are analyzed for metals**

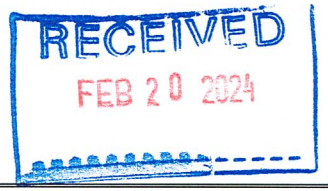
If neither filter exceeds its trigger weight, neither filter is analyzed for metals

If metals analysis is required, please report on the same report as filter weights and VOCs/TNMOC

Trigger Weight for Analysis (PM10): 1.23 mg

Trigger Weight for Analysis (HI-VOL): 88.3 mg

Date Received – Lab Use Only



Lab Sample No.	Client Sample ID	Sample Source/ Description	Canister Number/ Sampler ID	Date Sampled (dd/mm/yy) From / To	Time Sampled (24 hour) From / To	Analysis Requested
	VOCs and TNMOC Test Number: 887	Canister	29017	12/02/24	00:00	VOC PAMS & TNMOC
				13/02/24	00:00	
	PM10 Test Number: 887	PM10 filter	AT76594	12/02/24	00:00	FLT Particulate Weight (& metals if over trigger weight)*
				13/02/24	00:00	
	HI-VOL Test Number: 887	HI-VOL Filter	HVF-23-10-15	12/02/24		Particulate Weight (& metals if over trigger weight)*
				13/02/24		
					Total: 23.52 hrs	

Client Authorization: _____ Laboratory Personnel: _____

(Signature) *(Signature)*

This "Chain of Custody" form is subject to InnoTech Alberta standard terms and conditions.

Sample ID: 24020131-002 **Priority:** Normal

Customer ID: Clean Harbours
Cust Samp ID: PM10 Test # 887 - Filter # AT76594

RECEIVED
FEB 20 2024

Filter Shipping Record

Sent To: Clean Harbors
PO Box 390
Ryley, AB T0B 4A0
(1/2 mile north, Hwy 854)
Todd Webb
780-663-2513

Date: November 29/23

Project: Clean Harbors

Prepared by:

Filter Size	# of Filters in Cassettes	Filter IDs
47 mm	1	AT76594 test 887

Returns: coolers, large and small containers may be shipped to: Innotech, PO Bag 4000, HWY 16A & 75th Street, Vegreville, AB T9C 1T4

InnoTech ALBERTA

Canister ID: 29017

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: ISQ on: OCT 24 2023

Evacuated: JAN 04 2024 Recertified: _____

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: _____

Sampled By: _____

Starting Vacuum:	End Vacuum:
-27.2 "Hg	-8.8 "Hg/psig

Sample ID: 24020131-001 **Priority:** Normal

Customer ID: Clean Harbours

Cust Samp ID: VOCs and TNMOC Test # 887

{00004084;2}

TERMS AND CONDITIONS

The attached document entitled "**Chain of Custody Form**" is subject to the following Terms and Conditions, unless otherwise specified on the Quotation. InnoTech Alberta's commencement of the Services shall be deemed acceptance of the terms and conditions by the Client.

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2.InnoTech Alberta will perform the Services in accordance with normal professional standards.

3.The delivery time for performance of the Services (as set out on the front page of this Quotation) is approximate and may be changed by InnoTech Alberta giving written notice to the Client.

4.InnoTech Alberta will exercise due care and proficiency in testing items submitted by a Client. InnoTech Alberta shall not, however, be liable to the Client for any damage or loss caused to the item being tested or for any damage, loss or expense caused by any delay in carrying out the test, including any damage, loss or expense resulting from InnoTech Alberta's negligence. InnoTech Alberta shall not be responsible for any damage, which is a natural or necessary result of any testing procedure.

5.For the purposes of this Quotation, Intellectual Property means all information, data, artistic and literary works, concepts, designs, processes, software, algorithms and inventions, including, without limitation, those that could be the subject of patent, copyright, industrial design, trade secret or other forms of protection. Intellectual Property which was owned by either InnoTech Alberta or the Client prior to the signing of this Agreement remains the property of that party. Nothing in this Agreement shall operate as a license, permission or grant of any other rights to either InnoTech Alberta's or the Client's Intellectual Property.

6.All data, reports and other information relating to the Services shall be treated by InnoTech Alberta as the confidential property of the Client, and InnoTech Alberta will use reasonable efforts to ensure that its employees, contractors and agents will not disclose the same to any other person, firm or corporation during the term of this Agreement and for a period of five (5) years after the date of termination of the Agreement. The obligation of confidentiality set out herein shall not apply to any information that was in InnoTech Alberta's possession prior to receipt from the Client or which is or becomes part of the public domain through no act or failure on the part of InnoTech Alberta. The obligation of confidentiality set out in this Section shall not prevent the disclosure of information to any level of government having jurisdiction to make lawful demand therefor, or required to be disclosed by any applicable law. Any records required to be maintained by InnoTech Alberta pursuant to this Agreement are subject to the protection and access provisions of the Freedom of Information and Protection of Privacy Act (Alberta).

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8.The Client shall not use InnoTech Alberta's name in any advertising material, sale offer, news releases, public statements or announcements, whether written or oral relating to the Services or the results thereof, without the prior written consent of InnoTech Alberta.

9.Records, test data, reports and samples, except where shipped to the Client after completion of the work shall be retained by InnoTech Alberta according to InnoTech Alberta's approved Records Retention and Disposition Schedule.

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11.Prices quoted do not include shipping, insurance or cost of consumables. The Client shall be responsible for all costs incurred by InnoTech Alberta in collecting any item for testing and returning the item to the Client after testing and shall be responsible for all necessary incidental costs incurred by InnoTech Alberta in providing the Services. InnoTech Alberta will not be responsible for any damage or loss to items during shipping and it is the responsibility of the Client to arrange and pay for any insurance it deems necessary.

12.Any test samples or other materials supplied by the Client to InnoTech Alberta may, at InnoTech Alberta's option, be returned by InnoTech Alberta to the Client. The Client shall:

(a)be responsible for all costs associated with the handling, transportation and disposal of such materials;

(b)reimburse InnoTech Alberta for any costs incurred by InnoTech Alberta associated with the handling, transportation and disposal of such materials; and

(c)indemnify and hold InnoTech Alberta harmless from any and all claims, damages or actions associated with the handling, transportation and disposal of such materials.

13.The Client shall pay all invoices rendered by InnoTech Alberta to the Client within thirty (30) days from the date of invoice, without deduction or set-off.

14.If the Client fails to pay any amount under this Agreement, such unpaid amount shall bear interest at a rate per month equal to one (1%) percent (or 12.6825% per annum) with interest on overdue interest at the same rate.

15.InnoTech Alberta makes no representation, warranties or conditions, either expressed or implied, statutory or otherwise and does not warrant the quality, state, merchantability or fitness for any purpose of any goods or products to be delivered pursuant to this Agreement. The Client accepts the results of these Services or items tested as is, and acknowledges that any use or interpretation of the information contained is at the Client's own risk.

16.In no event shall InnoTech Alberta be liable for any indirect or consequential damage or loss suffered by the Client, including loss of anticipated profits.

17.The Client shall indemnify and hold harmless InnoTech Alberta from any and all claims, demands, actions and costs (including legal costs on a solicitor-client basis) that may arise out of:
(a)any dangerous defect or content in the item being tested, whether apparent or not, which dangerous defect or content was not disclosed in writing to InnoTech Alberta by the Client at the time the item was submitted for testing;
(b)differences between those items actually tested and items previously or subsequently produced which are purported to be identical to the item tested; or
(c)any use of the tested item or any item incorporating the tested item, whether by the Client or a third party following its return to the Client.
The hold harmless shall survive this Agreement.

18.The Client shall, at its own expense and without limiting its liabilities herein, be responsible for insuring its operation in an amount not less than $2,000,000 inclusive per occurrence, insuring against bodily injury, and property damage including loss of use thereof. Further, the Client is responsible for insuring all owned property directly or indirectly related to this Agreement and InnoTech Alberta shall have no liability for any loss or damage to such property. 19.InnoTech Alberta shall maintain the following insurance: (i) commercial general liability insurance (including cross liability, severability of interests, non-owned automobile liability) in the amount of two million dollars ($2,000,000.00) per occurrence, and; (ii) professional liability and errors and omissions insurance in the amount of one million dollars ($1,000,000.00) per claim, and two million dollars ($2,000,000.00) in the aggregate. In addition, InnoTech Alberta shall maintain all workers' compensation coverage required by applicable laws. Notwithstanding the foregoing, InnoTech Alberta reserves the right to supplement or add insurance coverage from time to time as may be required in its sole discretion. InnoTech Alberta may provide certificates of insurance for coverages outlined in (i) and (ii) above.

20.The Client agrees to comply with all InnoTech Alberta Safety & Security regulations in effect while on InnoTech Alberta premises.

21.This Agreement represents the entire agreement between the parties and shall supersede all prior agreements relative to this transaction.

22.InnoTech Alberta shall not be liable to the Client for any failure or delay in performance of its obligations caused by circumstances beyond its control, including but not limited to acts of God, strikes, laws imposed after the fact, governmental restrictions, riots, wars, civil disorder, rebellion, sabotage, fire, flood, explosion, earthquake or other disasters.

23.InnoTech Alberta may assign this Quotation to an "affiliated" (as that term is defined at Section 2 of the Business Corporations Act (Alberta)) or successor entity on written notice to the Client.

24.This Quotation and rights and parties thereto shall be governed by and construed according to the laws of the Province of Alberta. The parties hereby submit to the jurisdiction of the Courts of Alberta.

Sample ID: 24020131-003 **Priority:** Normal

Customer ID: Clean Harbours

Cust Samp ID: HiVol Test # 887 - Filter # HVF-23-10-15

InnoTe ALBE
A SUBSIDIARY OF ALBERTA INNI

Sample ID: 24020145-001 **Priority:** Normal

Customer ID: Clean Harbours

Cust Samp ID: VOCs and TNMOC Test #: 888

:M

Environmental Analytical Services
Highway 16A & 75 Street
Vegreville, AB T9C 1T4

Phone: 780-632-8403
Email: EAS.Reception@innotechalberta.ca
www.innotechalberta.ca

Client Reporting Info		Information		Turnaround Time
Company:	Clean Harbors Canada, Inc	Contact:	Stephanie Dennis	X Normal (10 business days)
Address:	PO Box 390, 50114 Range Road 173, Ryley, AB T0B 4A0	Phone:	780-663-3828	Rush
Contact:	Todd Webb or Stan Yuha	Email:	Dennis.Stephanie@cleanharbors.com	Note: Rush service not available for all tests. Confirm rush requests with InnoTech Alberta.
Phone:	780-663-2513 or 780-663-3828	Project ID:	Test 888	
Email:	Webb.Todd@cleanharbors.com, Yuha.Stan@cleanharbors.com	PO #:	239503	

Special Instructions/Comments:

***If either PM10 or HI-VOL filter exceeds its trigger weight, then both filters are analyzed for metals**

If neither filter exceeds its trigger weight, neither filter is analyzed for metals

If metals analysis is required, please report on the same report as filter weights and VOCs/TNMOC

Trigger Weight for Analysis (PM10): 1.23 mg

Trigger Weight for Analysis (HI-VOL): 89.4 mg

Date Received – Lab Use Only

RECEIVED
FEB 22 2024

Lab Sample No.	Client Sample ID	Sample Source/ Description	Canister Number/ Sampler ID	Date Sampled (dd/mm/yy) From / To	Time Sampled (24 hour) From / To	Analysis Requested
1	VOCs and TNMOC Test Number: 888	Canister	A47961	18/02/24	00:00	VOC PAMS & TNMOC
				19/02/24	00:00	
2	PM10 Test Number: 888	PM10 filter	AT76595	18/02/24	00:00	FLT Particulate Weight (& metals if over trigger weight)*
				19/02/24	00:00	
3	HI-VOL Test Number: 888	HI-VOL Filter	HVF-23-10-16	18/02/24		Particulate Weight (& metals if over trigger weight)*
				19/02/24		
					Total: 23.82 hrs	

Client Authorization: _____ Laboratory Personnel: _____

(Signature) *(Signature)*

This "Chain of Custody" form is subject to InnoTech Alberta standard terms and conditions.

Sample ID: 24020145-001 **Priority:** Normal

Customer ID: Clean Harbours
Cust Samp ID: VOCs and TNMOC Test #: 888

Filter Shipping Record

RECEIVED
FEB 22 2024

Sent To: Clean Harbors
PO Box 390
Ryley, AB T0B 4A0
(1/2 mile north, Hwy 854)
Todd Webb
780-663-2513

Date: November 29 / 23

Project: Clean Harbors

Prepared by: S Melenka.

Filter Size	# of Filters in Cassettes	Filter IDs
47 mm	1	AT76595 test 888

Returns: coolers, large and small containers may be shipped to: Innotech, PO Bag 4000, HWY 16A & 75th Street, Vegreville, AB T9C 1T4

InnoTech ALBERTA

Canister ID: A47961

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: ISQ on: SEP 05 2023

Evacuated: Nov 06/23 Recertified: JAN 2 2 2024

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: Test 888

Sampled By: N. Sideroff

-6 "Hg JMP

Starting Vacuum: -27.1 "Hg

End Pressure: -5 "Hg/ psig

Sample ID: 24020145-001 **Priority:** Normal

Customer ID: Clean Harbours

Cust Samp ID: VOCs and TNMOC Test #: 888

{00004084;2}

TERMS AND CONDITIONS

The attached document entitled "**Chain of Custody Form**" is subject to the following Terms and Conditions, unless otherwise specified on the Quotation. InnoTech Alberta's commencement of the Services shall be deemed acceptance of the terms and conditions by the Client.

1.Any proposal contained herein is prepared for the consideration of the Client only. Its contents may not be used or disclosed to any other party without prior written consent of the INNOTECH ALBERTA INC. (hereinafter referred to as "InnoTech Alberta").

2.InnoTech Alberta will perform the Services in accordance with normal professional standards.

3.The delivery time for performance of the Services (as set out on the front page of this Quotation) is approximate and may be changed by InnoTech Alberta giving written notice to the Client.

4.InnoTech Alberta will exercise due care and proficiency in testing items submitted by a Client. InnoTech Alberta shall not, however, be liable to the Client for any damage or loss caused to the item being tested or for any damage, loss or expense caused by any delay in carrying out the test, including any damage, loss or expense resulting from InnoTech Alberta's negligence. InnoTech Alberta shall not be responsible for any damage, which is a natural or necessary result of any testing procedure.

5.For the purposes of this Quotation, Intellectual Property means all information, data, artistic and literary works, concepts, designs, processes, software, algorithms and inventions, including, without limitation, those that could be the subject of patent, copyright, industrial design, trade secret or other forms of protection. Intellectual Property which was owned by either InnoTech Alberta or the Client prior to the signing of this Agreement remains the property of that party. Nothing in this Agreement shall operate as a license, permission or grant of any other rights to either InnoTech Alberta's or the Client's Intellectual Property.

6.All data, reports and other information relating to the Services shall be treated by InnoTech Alberta as the confidential property of the Client, and InnoTech Alberta will use reasonable efforts to ensure that its employees, contractors and agents will not disclose the same to any other person, firm or corporation during the term of this Agreement and for a period of five (5) years after the date of termination of the Agreement. The obligation of confidentiality set out herein shall not apply to any information that was in InnoTech Alberta's possession prior to receipt from the Client or which is or becomes part of the public domain through no act or failure on the part of InnoTech Alberta. The obligation of confidentiality set out in this Section shall not prevent the disclosure of information to any level of government having jurisdiction to make lawful demand therefor, or required to be disclosed by any applicable law. Any records required to be maintained by InnoTech Alberta pursuant to this Agreement are subject to the protection and access provisions of the Freedom of Information and Protection of Privacy Act (Alberta).

7.The reported results of any InnoTech Alberta tests or evaluations performed on samples or items provided by the Client shall be interpreted as being specific to the sample or item tested. InnoTech Alberta makes no representation that any similar or related untested samples or items would produce the same results.

8.The Client shall not use InnoTech Alberta's name in any advertising material, sale offer, news releases, public statements or announcements, whether written or oral relating to the Services or the results thereof, without the prior written consent of InnoTech Alberta.

9.Records, test data, reports and samples, except where shipped to the Client after completion of the work shall be retained by InnoTech Alberta according to InnoTech Alberta's approved Records Retention and Disposition Schedule.

10.Prices quoted are in Canadian Dollars unless otherwise stated in writing and are exclusive of any provincial, municipal, sales, use or goods and services tax.

11.Prices quoted do not include shipping, insurance or cost of consumables. The Client shall be responsible for all costs incurred by InnoTech Alberta in collecting any ite[illegible] and returning the item to the Client after testing and shall be responsible for all necess[illegible] by InnoTech Alberta in providing the Services. InnoTech Alberta will not be[illegible] or loss to items during shipping and it is the responsibility of the Client[illegible] insurance it deems necessary.

12.Any test samples or other materials supplied by the Client to InnoTech Alberta may, at InnoTech Alberta's option, be returned by InnoTech Alberta to the Client. The Client shall:

(a)be responsible for all costs associated with the handling, transportation and disposal of such materials;

(b)reimburse InnoTech Alberta for any costs incurred by InnoTech Alberta associated with the handling, transportation and disposal of such materials; and

(c)indemnify and hold InnoTech Alberta harmless from any and all claims, damages or actions associated with the handling, transportation and disposal of such materials.

13.The Client shall pay all invoices rendered by InnoTech Alberta to the Client within thirty (30) days from the date of invoice, without deduction or set-off.

14.If the Client fails to pay any amount under this Agreement, such unpaid amount shall bear interest at a rate per month equal to one (1%) percent (or 12.6825% per annum) with interest on overdue interest at the same rate.

15.InnoTech Alberta makes no representation, warranties or conditions, either expressed or implied, statutory or otherwise and does not warrant the quality, state, merchantability or fitness for any purpose of any goods or products to be delivered pursuant to this Agreement. The Client accepts the results of these Services or items tested as is, and acknowledges that any use or interpretation of the information contained is at the Client's own risk.

16.In no event shall InnoTech Alberta be liable for any indirect or consequential damage or loss suffered by the Client, including loss of anticipated profits.

17.The Client shall indemnify and hold harmless InnoTech Alberta from any and all claims, demands, actions and costs (including legal costs on a solicitor-client basis) that may arise out of:
(a)any dangerous defect or content in the item being tested, whether apparent or not, which dangerous defect or content was not disclosed in writing to InnoTech Alberta by the Client at the time the item was submitted for testing;
(b)differences between those items actually tested and items previously or subsequently produced which are purported to be identical to the item tested; or
(c)any use of the tested item or any item incorporating the tested item, whether by the Client or a third party following its return to the Client.
The hold harmless shall survive this Agreement.

18.The Client shall, at its own expense and without limiting its liabilities herein, be responsible for insuring its operation in an amount not less than $2,000,000 inclusive per occurrence, insuring against bodily injury, and property damage including loss of use thereof. Further, the Client is responsible for insuring all owned property directly or indirectly related to this Agreement and InnoTech Alberta shall have no liability for any loss or damage to such property. 19.InnoTech Alberta shall maintain the following insurance: (i) commercial general liability insurance (including cross liability, severability of interests, non-owned automobile liability) in the amount of two million dollars ($2,000,000.00) per occurrence, and; (ii) professional liability and errors and omissions insurance in the amount of one million dollars ($1,000,000.00) per claim, and two million dollars ($2,000,000.00) in the aggregate. In addition, InnoTech Alberta shall maintain all workers' compensation coverage required by applicable laws. Notwithstanding the foregoing, InnoTech Alberta reserves the right to supplement or add insurance coverage from time to time as may be required in its sole discretion. InnoTech Alberta may provide certificates of insurance for coverages outlined in (i) and (ii) above.

20.The Client agrees to comply with all InnoTech Alberta Safety & Security regulations in effect while on InnoTech Alberta premises.

21.This Agreement represents the entire agreement between the parties and shall supersede all prior agreements relative to this transaction.

22.InnoTech Alberta shall not be liable to the Client for any failure or delay in performance of its obligations caused by circumstances beyond its control, including but not limited to acts of God, strikes, laws imposed after the fact, governmental restrictions, riots, wars, civil disorder, rebellion, sabotage, fire, flood, explosion, earthquake or other disasters.

23.InnoTech Alberta may assign this Quotation to an "affiliated" (as that term is defined at Section [illegible] Corporations Act (Alberta)) or successor entity on written notice to the Client. [illegible]ights and parties thereto shall be governed by and construed according to [illegible]e of Alberta. The parties hereby submit to the jurisdiction of the Courts of

Sample ID: 24020145-001 **Priority:** Normal

Customer ID: Clean Harbours

Cust Samp ID: VOCs and TNMOC Test # 888

Sample ID: 24030017-001 **Priority:** Normal

Customer ID: Clean Harbours
Cust Samp ID: VOCs and TNMOC Test # 889

CHAIN OF CUSTODY FORM

Environmental Analytical Services
Highway 16A & 75 Street
Vegreville, AB T9C 1T4

Phone: 780-632-8403
Email: EAS.Reception@innotechalberta.ca
www.innotechalberta.ca

Client Reporting Information

Company:	Clean Harbors Canada, Inc
Address:	PO Box 390, 50114 Range Road 173, Ryley, AB T0B 4A0
Contact:	Todd Webb or Stan Yuha
Phone:	780-663-2513 or 780-663-3828
Email:	Webb.Todd@cleanharbors.com, Yuha.Stan@cleanharbors.com

Client Billing Information

Contact:	Stephanie Dennis
Phone:	780-663-3828
Email:	Dennis.Stephanie@cleanharbors.com
Project ID:	Test 889
PO #:	239503

Turnaround Time

X Normal (10 business days)

Rush

Note: Rush service not available for all tests.
Confirm rush requests with InnoTech Alberta.

Special Instructions/Comments:

***If either PM10 or HI-VOL filter exceeds its trigger weight, then both filters are analyzed for metals**
If neither filter exceeds its trigger weight, neither filter is analyzed for metals
If metals analysis is required, please report on the same report as filter weights and VOCs/TNMOC
Trigger Weight for Analysis (PM10): 1.20 mg
Trigger Weight for Analysis (HI-VOL): 89.6 mg

Date Received – Lab Use Only

RECEIVED
MAR 04 2024

Lab Sample No.	Client Sample ID	Sample Source/ Description	Canister Number/ Sampler ID	Date Sampled (dd/mm/yy) From / To	Time Sampled (24 hour) From / To	Analysis Requested
	VOCs and TNMOC Test Number: 889	Canister	29030	24/02/24	00:00	VOC PAMS & TNMOC
				25/02/24	00:00	
	PM10 Test Number: 889	PM10 filter	AT79744	24/02/24	00:00	FLT Particulate Weight (& metals if over trigger weight)*
				25/02/24	00:00	
	HI-VOL Test Number: 889	HI-VOL Filter	HVF-23-10-17	24/02/24		Particulate Weight (& metals if over trigger weight)*
				25/02/24		
					Total: 23.87 hrs	

Client Authorization: _____ Laboratory Personnel: _____

(Signature) *(Signature)*

This "Chain of Custody" form is subject to InnoTech Alberta standard terms and conditions.

Sample ID: 24030017-002 **Priority:** Normal

Customer ID: Clean Harbours
Cust Samp ID: PM10 Test # 888 - Filter # AT9744

Filter Shipping Record

Sent To: Clean Harbors
PO Box 390
Ryley, AB T0B 4A0
(1/2 mile north, Hwy 854)
Todd Webb
780-663-2513

Date: January 23/24

Project: Clean Harbors

Prepared by: Melenka

Filter Size	# of Filters in Cassettes	Filter IDs
47 mm	1	AT79744 Test 889

Returns: coolers, large and small containers may be shipped to: Innotech, PO Bag 4000, HWY 16A & 75th Street, Vegreville, AB T9C 1T4

InnoTech ALBERTA

Canister ID: 29030

This cleaned canister meets or exceeds TO-15 Method Specifications

Proofed by: ISQ on: OCT 24 2023

Evacuated: JAN 22 2024 Recertified: _____

(Use within: 3 months from evacuation or recertification date)

Laboratory Contact Number: 780-632-8403

Sample ID: Test 889

Sampled By: T Webb

Starting Vacuum:	End Vacuum:
-27.4 "Hg	-6 "Hg/psig

Sample ID: 24030017-001 **Priority:** Normal

Customer ID: Clean Harbours

Cust Samp ID: VOCs and TNMOC Test # 889

{00004084;2}

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5.For the purposes of this Quotation, Intellectual Property means all information, data, artistic and literary works, concepts, designs, processes, software, algorithms and inventions, including, without limitation, those that could be the subject of patent, copyright, industrial design, trade secret or other forms of protection. Intellectual Property which was owned by either InnoTech Alberta or the Client prior to the signing of this Agreement remains the property of that party. Nothing in this Agreement shall operate as a license, permission or grant of any other rights to either InnoTech Alberta's or the Client's Intellectual Property.

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12.Any test samples or other materials supplied by the Client to InnoTech Alberta may, at InnoTech Alberta's option, be returned by InnoTech Alberta to the Client. The Client shall:

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16.In no event shall InnoTech Alberta be liable for any indirect or consequential damage or loss suffered by the Client, including loss of anticipated profits.

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(b)differences between those items actually tested and items previously or subsequently produced which are purported to be identical to the item tested; or
(c)any use of the tested item or any item incorporating the tested item, whether by the Client or a third party following its return to the Client.
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23.InnoTech Alberta may assign this Quotation to an "affiliated" (as that term is defined at Section 2 of the Business Corporations Act (Alberta)) or successor entity on written notice to the Client.

24.This Quotation and rights and parties thereto shall be governed by and construed according to the laws of the Province of Alberta. The parties hereby submit to the jurisdiction of the Courts of Alberta.

Sample ID: 24030017-003 **Priority:** Normal

Customer ID: Clean Harbours

Cust Samp ID: Hi-Vol Test # 888 - HVF-23-10-17