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Independent Practitioners' Limited Assurance Report

To the management of Pembina Pipeline Corporation ("Pembina")

We have been engaged by the management of Pembina to undertake a limited assurance engagement on certain quantitative performance information disclosed in Pembina's Selected Waste & Water Indicators Report (the "Report") attached and as described below.

Subject matter information and applicable criteria

The scope of our limited assurance engagement, as agreed with management, comprises the following performance information (the 'subject matter information') for the year ending December 31, 2021:

- Total hazardous waste (metric tonnes)
- Total water withdrawal (cubic metres)

There are no mandatory requirements for the preparation and publication of hazardous waste and water withdrawal metrics. As such, Pembina applies its own internal reporting guidelines and definitions for reporting which can be found in Appendix 1 and 2 of the Report (collectively the 'applicable criteria').

Management's responsibilities

Management is responsible for:

- The preparation and presentation of the subject matter information in accordance with the applicable criteria, current as at the date of our report;
- Determining the appropriateness of the use of the applicable criteria; and,
- For establishing and maintaining appropriate performance management and internal control systems from which the reported performance information is derived.

Practitioner's responsibilities

Our responsibility is to express a limited assurance conclusion based on evidence obtained. We conducted our engagement in accordance with International Standard on Assurance Engagements ('ISAE') 3000 (Revised) *Assurance Engagements other than Audits or Reviews of Historical Information*, issued by the International Auditing and Assurance Standards Board. ISAE 3000 requires that we plan and perform this engagement to conclude whether a matter(s) has come to our attention that causes us to believe that the subject matter information is materially misstated.

Assurance approach

We planned and performed our work to obtain all of the evidence, information and explanations we considered necessary in order to form our conclusion as set out below. Our procedures included:

- Inquiries with relevant staff at the corporate, business unit and facility level to understand the data collection and reporting processes for the subject matter information;



- Assessment of the suitability and application of the criteria in respect of the subject matter information;
- Where relevant, performing walkthroughs of data collection and reporting processes for the subject matter information;
- Comparing a sample of the reported data for the subject matter information to underlying data sources;
- Inquiries of management regarding key assumptions and, where relevant, the re-performance of calculations;
- Completion of virtual site visits to the Redwater (for hazardous waste) and Channahon (for water withdrawal) facilities, including walkthroughs of data collection and reporting processes, interviews with senior management and relevant staff and a virtual site tour; and,
- Reviewing the subject matter information presented in the Report to determine whether it is consistent with our overall knowledge of, and experience with, waste and water performance of Pembina.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than, those applied in a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

We believe the evidence we obtained is sufficient and appropriate to provide a basis for our conclusion.

Independence and quality control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

The firm applies *International Standard on Quality Control 1* and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Significant inherent limitations

Non-financial information, such as that included in the Report, is subject to more inherent limitations than financial information, given the characteristics of the subject matter information and the availability and relative precision of methods used for determining both qualitative and quantitative information. The absence of a significant body of established practice on which to draw allows for the selection of different but acceptable measurement techniques, which can result in materially different measurements and can impact comparability. The nature and methods used to determine such information, as described in the applicable criteria, may change over time, and it is important to read Pembina's Hazardous Waste and Water Withdrawal reporting methodology available in Appendix 1 and 2 of the Report.



Basis for Qualified Opinion

As described in Appendix 1 and 2 of the Report, liquid hazardous waste, which represents 90% of *total hazardous waste*, and 70% of *total water withdrawal* and are measured using internal meters for which calibration records are not available.

The scope of our work was limited as we were not able to verify the accuracy of water withdrawn and liquid hazardous waste measured using uncalibrated meters. Accordingly, assurance of internally measured water withdrawal and liquid hazardous waste volumes was limited to the amounts recorded by Pembina's internal meters and we were not able to determine whether any adjustments might be necessary to the reported figures.

Our conclusion

Based on the procedures performed, except for the possible effects of the matter described above in the "*Basis for Qualified Opinion*", nothing has come to our attention that causes us to believe that for the year ended December 31, 2021, the subject matter information, as described above, has not been prepared and presented, in all material respects, in accordance with the applicable criteria, current as at the date of our report.

A handwritten signature in black ink that reads 'KPMG LLP' with a horizontal line underneath.

Chartered Professional Accountants

October 11, 2022
Calgary, Canada

Selected Waste and Water Indicators Report

Year ended December 31, 2021

Background

As part of Pembina Pipeline Corporation’s (“Pembina”) continued commitment to refine our reporting methodology, Pembina engaged KPMG LLP (“KPMG”) to undertake a limited assurance engagement on Pembina’s reported Total hazardous waste and Total water withdrawal indicators for the 2021 period. The following data is included in the assurance scope. Pembina intends to use the data in future ESG reporting and for communication with investors.

Total hazardous waste

Pembina has calculated Total hazardous waste in accordance with an internally developed methodology which is outlined in Appendix 1 and forms an integral part of this report. The reported data subject to assurance is presented in Table 1 below.

Table 1 – 2021 Total hazardous waste

Subject Matter	Key Performance Indicator	Units (metric tonnes)
Waste	Total hazardous waste ¹	40,083

¹ Hazardous waste data is collected for both solid and liquid sources; liquid waste is converted from m³ to metric tonnes using conversion factors described in Appendix 1.

Total water withdrawal

Pembina has calculated Total water withdrawal in accordance with an internally developed methodology which is outlined in Appendix 2 and forms an integral part of this report. The reported data subject to assurance is presented below in Table 2.

Table 2 – 2021 Total water withdrawal

Subject Matter	Key Performance Indicator	Units (million cubic meters)
Water	Total water withdrawal	1.631



Appendix 1

Total hazardous waste reporting evaluation criteria

- Pembina has selected the Operational Control approach to define the organizational boundaries for total hazardous waste data and includes all sources of hazardous waste that are in direct operational control by Pembina and Pembina subsidiaries.
- The disposal of waste is prescribed by provincial and state regulations. Pembina reports the total weight of hazardous waste sent for treatment and disposal at the point of transport from site, in alignment with the jurisdictional regulatory requirements and therefore, methodologies of classification (e.g. hazardous vs. non-hazardous) may differ across these jurisdictions.
- The main sources of hazardous waste streams are caustic, disulphide oil (DSO), and wastewater produced in the fractionation process.
- Total hazardous waste in metric tonnes is determined based on:
 - Regulatory government forms (e.g. waste manifests) that record hazardous waste weight for solids and volume for liquids provided to an authorized agency for treatment and disposal; and,
 - Operational activity data (e.g. flow meters) that measure liquid hazardous waste at the point of injection into an on-site disposal well.
 - There are no calibration records available for Pembina's internal meters used to measure the volume of liquid hazardous waste disposed, constituting over 90% of total reported hazardous waste. Internal meters are installed according to manufacturer specifications, however, because of the lack of calibration records, there is inherent uncertainty in relation to the accuracy of the reported figures.
 - Liquid hazardous waste at the Redwater facility onsite injection well is converted using a ratio of 1.22 metric tonnes per m³ and is based on the known composition of the liquid hazardous waste produced. This represents 87% of the hazardous waste in 2021.
 - For all other liquid hazardous waste of unknown composition, a 1:1 conversion of m³ to metric tonnes is used for disposal volumes. This represents a conservative estimate as these volumes are commonly water contaminated with hydrocarbons which have a specific gravity of less than one. The liquid hazardous waste disposed at the Redwater facility is heavier due to the presence of caustic.
- Hazardous waste generated and disposed by third-party contractors is excluded from the reported total hazardous waste indicator.
- There were no significant acquisitions or divestitures affecting hazardous waste in 2021.



Appendix 2

Total water withdrawal reporting evaluation criteria

- Pembina has selected the Operational Control approach to define our organizational boundaries for total water withdrawal and includes all water withdrawal associated with facilities and operations (both corporate and pipeline) that are in direct operational control by Pembina and Pembina subsidiaries.
- Total water withdrawal includes water from the following sources: 1) surface water¹, 2) groundwater¹, and 3) seawater¹. Pembina did not have any withdrawal from seawater sources in 2021.
- Water withdrawal is determined based on a combination of operational activity data measured at the point of withdrawal (e.g. flow meters), regulatory permits for allowable water withdrawal, and invoice data (e.g. utility bills). The usage included in water withdrawal during construction under temporary diversion licenses is based on total permitted water withdrawal.
- There are no calibration records available for Pembina's internal meters used to measure water withdrawal, constituting over 70% of total reported water withdrawal. Internal meters are installed according to manufacturer specifications, however, because of the lack of calibration records, there is inherent uncertainty in relation to the accuracy of the reported figures.
- Sources of water withdrawal that are excluded from the reported metric are 1) Third-party water¹ (except for Vancouver Wharves and construction-related projects), 2) produced water¹, and 3) Surface water volumes related to the collection or harvest of rainwater
- Withdrawal volumes which are not process-related³ or construction-related⁴ in nature are excluded from the total water withdrawal figure. Withdrawal volumes associated with domestic² water use is also excluded (with the exception of the Channahon, Vancouver Wharves, and Redwater facilities).
- There were no significant acquisitions or divestitures affecting water withdrawal in 2021.

¹ As defined in GRI 303: Water and Effluents 2018

² Domestic water use is defined as water for human consumption or use, including, but not limited to, drinking, food preparation, hygiene, washing, flushing toilets, and irrigation.

³ Process-related is defined as activities associated with the conversion of raw materials into final products or maintaining industrial operations. Examples of process-related activities as it relates to water include, but are not limited to, cooling system water, firewater, amine make-up water, storage cavern maintenance water, and solid storage dust suppression water.

⁴ Construction-related is defined as project development activities, specifically temporary diversion licenses and code of practice. Examples of construction-related activities as it relates to water include, but are not limited to, water used for horizontal directional drilling and hydrostatic testing of pipelines and tanks, as well as construction of ice roads.