

**Ministry of the Environment,
Conservation and Parks**

**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**

Environmental Monitoring and Reporting
Branch

Direction de la surveillance environnementale

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March 10, 2026

To: Celeste Dugas, Manager
York Durham District Office
Central Region

From: Ellen Klupfel, A/Supervisor
Terrestrial Assessment and Field Services Unit
Air Monitoring and Modelling Section
Environmental Monitoring and Reporting Branch (EMRB)

**Re: Review of the York Durham Energy Centre Soil Assessment Report 2023
Ontario Ministry of the Environment, Conservation and Parks (Ministry) Response to RWDI's
Feedback on its Review of the York Durham Energy Centre Soil Assessment Report 2023**

On 16 October 2025, Rowan Williams Davies & Irwin Inc. (RWDI) provided feedback on the ministry's review of their York Durham Energy Centre Soil Assessment Report 2023. The following has been prepared in response to RWDI's feedback.

Ministry's General Response to RWDI's Feedback

The ministry appreciates the feedback provided by RWDI on its review of their York Durham Energy Centre Soil Assessment Report 2023 (Report). The ministry reiterates that the soil sampling results summarized in the Report indicate soil quality at the monitoring sites is in good standing and that all measured parameters are below the relevant provincial soil standards under *Ontario Regulation 153/04*. The ministry is also satisfied with the way the sampling procedures were carried out by RWDI. The concerns outlined by the ministry in its review of the Report are specific to the lack of temporal statistical analysis by RWDI. In the 2023 report, historical data was compared to the latest results, but no statistical analysis was included to support the interpretation of the data. The ministry's Terrestrial Assessment and Field Services Unit used the data provided in the Report to show that possible trends might be emerging over time and recommended that these (or other) statistical tools be used in the future. This will help determine whether or not these possible trends are real.

The ministry's response to specific comments made by RWDI in their document entitled *Durham York Energy Centre Response to MECP Comments, 2023 York Durham Energy Centre Soil Assessment Report RWDI Reference No. 2301083I* are provided below.

RWDI Comment 1: RWDI Response to the Ministry's Assessment of Soil Metal Concentrations

Metals

While we acknowledge TAFSU's comment regarding potential trends in barium and vanadium concentrations, we do not agree with the conclusion that there "may have been an impact on soil" downwind of the facility. The concentrations of these parameters in soil remain low, and the minor fluctuations over time are not indicative of a trend attributable to DYEC operations. For example, barium concentration measured in 2023 at the Downwind location (98 µg/g) is 45% of the Table 1 SCS (220 µg/g) and remains below the concentration observed at the Upwind location in 2016 (100 µg/g). Similarly, the vanadium concentration in 2023 at the Downwind location (31 µg/g) is only 34% of the Table 1 SCS (86 µg/g), comparable to the concurrent Upwind concentration (29 µg/g), and below historical concentrations recorded Upwind (33 µg/g in 2016 and 32 µg/g in 2017). The low-level concentrations and their consistency with historical data at both Upwind and Downwind locations reflects a clear absence of evidence of impact to soil quality.

Statistical analysis was not included in the 2023 assessment, as it is neither warranted based on the consistently low concentrations observed nor required by the Soil Testing Plan. RWDI has not identified evidence of environmental concern in the current or historical dataset. To enhance future reporting, RWDI will incorporate trend analysis for trace metal parameters. Statistical methods may be considered appropriate if measured concentrations approach the Table 1 SCS, at which point the methods may offer insight into potential long-term trends.

Ministry Response to RWDI Comment 1

The ministry does not dispute that soil around York Durham Energy Centre remains in good standing. The term 'Impact' is used solely in a descriptive sense and does not imply any adverse effects have and/or will occur. The ministry agrees with RWDI's observation that current concentrations of Ba and V in soil are below their relevant standards. That observation, however, does not replace or eliminate the need for proper statistical analysis to identify if there are trends over time. The ministry highlighted two statistical tests in its review of the Report that could be used by RWDI to determine trends over time. These tests show that possible temporal trends are emerging over time and the ministry recommends their use in the future to determine if these possible trends are real. The use of these statistical tools supports the monitoring objectives of the Soil Sampling Plan, and the ministry is encouraged that RWDI will consider their use in the future. It will be important to do so before soil concentrations approach the provincial standard (if they ever do).

RWDI Comment 2: RWDI Response to the Ministry's Assessment of Soil Polycyclic Aromatic Hydrocarbon Concentrations

PAHs

The PAH parameters included in the assessment align with those outlined in the Soil Testing Plan. Familiarity with the monitoring program, as well as related initiatives such as ambient air monitoring and the broader study area, is critical to fully understand the context of the facility. The Soil Testing Plan was developed and approved with direct involvement from the MECP and serves as the basis for both the assessment and the selection of parameters tested, all of which were carried out in accordance with the approved plan and the facility's ECA.

Ministry Response to RWDI Comment 2

Thank you for the clarification.

RWDI Comment 3: RWDI Response to the Ministry's Assessment of Soil Dioxin and Furan Concentrations

Dioxin and Furans

The interpretation that observed soil concentrations are not attributed to facility emissions was provided based on ambient air quality data collected during monitoring events and source testing of dioxins and furans conducted in April 2023. These results confirm that the facility was operating well below the applicable regulatory limits. As previously stated, the DYEC is not a primary contributor of dioxins and furans, and several other potential sources are present in the vicinity. Notable contributors include vehicle emissions along the Highway 401 corridor, and a significant fire that occurred July 17, 2022, which involved the destruction of numerous vehicles less than one kilometer from the Site. This fire represents a localized point source and corresponds with the slight increases in TEQ concentrations observed at both the Upwind and Downwind locations following the previous monitoring event. RWDI assumes that the TAFSU was aware of this event, however the reviewer's comments do not reference it as potential contributing factor. Despite these external influences, TEQ concentrations measured at the Downwind location remain low at only 34% of the Table 1 SCS.

RWDI recommended that soil quality monitoring should continue to assess for emerging trends. There is now sufficient historical concentration data to evaluation of temporal trends, and this analysis will be incorporated into future soil quality monitoring reports.

Ministry Response to Comment 3

The ministry reiterates its assessment that the soil at these monitoring sites remains in good standing. It is acknowledged that there are confounding variables. This is why a statistical interpretation of the data is important, and simply reporting the proportionality of the measured concentrations relative to the soil standards provides insufficient information. It is important to note that any local sources of pollution affecting soil concentrations not related to the Durham York Energy Centre would likely affect both the up- and down wind sampling locations, given their proximity to one another; therefore, trend analysis should be able to help identify effects of the

facility on soil. Furthermore, while it is acknowledged that the results of the statistical test performed by the ministry was not significant, it highlights the broad difference between the probabilities. The ministry recommends that statistical procedures be used by RWDI in the future to help identify whether or not trends are emerging over time. This will help inform decisions that may be needed if increasing trends over time are observed. Furthermore, establishing additional monitoring sites up- and downwind of the facility could be considered as it would (1) help separate out the confounding variables noted by RWDI by expanding the options for statistical testing and (2) help provide insight into potential discernable effects from the facility, if they were occur (e.g., trends over time).

In summary, the ministry acknowledges that the soil at the two monitoring sites established in the vicinity of the Durham York Energy Centre remains in good standing and that all measured parameters are below the relevant provincial soil standards under *Ontario Regulation 153/04*. We are encouraged that RWDI is considering the use of statistical analysis to help identify temporal trends in soil concentrations around the Durham York Energy Centre facility.

For further information regarding this review, please contact me at 437-995-8828.

A handwritten signature in black ink, appearing to read 'E. Klupfel', with a long horizontal flourish extending to the right.

Ellen Klupfel

On behalf of Chris Charron, Manager
Air Monitoring and Modelling Section, EMRB

Cc: Chris Charron, EMRB