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Telephone

(866) 217.7900
(705) 742.7900

Facsimile

(705) 742.7907

Website

cambium-inc.com

Mailing Address

P.O. Box 325,
Peterborough, Ontario
Canada, K9J 6Z3

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March 5, 2026

Town of Olds
3501 70 Avenue,
Olds, Alberta T4H 1L7

Attn: Adrian Pedro, CET
Director of Infrastructure

Re: Peer Review of the Synapse Data Air Quality Assessment, 215 Lake Shore Boulevard East, Toronto, Ontario
Cambium Reference: 2602504.000

Dear Adrian,

As per the Town of Olds' (the Town) request, Cambium Inc. (Cambium) has completed a review of the documents listed below for the proposed data center and natural gas fired power plant (the Facility) to be located near Olds, Alberta on the Northwest and Southwest Quarters of Legal Subdivision (LSD) 04-04-033-01 W5M (the Site) in regards to an air quality impact assessment.

1. *Air Quality Dispersion Modelling Assessment for Synapse Real Estate Corp. Data Center & 1.4 GW Natural-Gas Fired Power Plant LSD 04-04-033-01 W5M*, completed by Calvin Consulting Group Ltd, dated February 12, 2026 (the AQA).

Cambium's peer review is being performed for the purpose of assisting the Town with the assessment of whether the AQA is consistent with the standard of practice for licensed engineering professionals working in air emissions, air quality assessments, and regulatory compliance in Alberta. We have specifically provided our opinion on the sufficiency and accuracy of the following metrics:

- Air emissions modelling methodology, including the available AERMOD/AERMET configuration, meteorological data selection, building downwash treatment, receptor grid design, and background concentration derivation.
- Alberta Environment & Protected Areas (AEPA) and Alberta Air Quality Modelling Guideline (AQMG) requirements for modelling procedures.



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- Adherence to Alberta Ambient Air Quality Objectives (AAAQOs) and relevant provincial guidance for routine and non routine (upset) emissions.
- Interpretation of results, including predicted exceedances, sensitive receptor impacts, and proposed mitigation.
- Completeness, transparency, and suitability of documentation for municipal and provincial decision making.

As per the scope of work, a site visit was not included, and this review is limited to evaluating the completeness of the AQA’s methodology, findings, recommendations, and use of applicable standards and guidelines. Duplication or verification of calculations are specifically excluded from this scope of work.

The opinions expressed by Cambium in this review are for consideration by the Town only and not intended as modifications of the original documents. It is the Town’s discretion to act on Cambium’s opinions or comments.

BACKGROUND

The proposed Facility will include 10 natural gas power plants, each powering an associated data center building as each data center is separated into five sections that will each have two groups of six emergency backup generators for a total of 60 generators per data center.

AIR QUALITY ASSESSMENT REVIEW

Cambium’s review of the AQA is listed below.

1. Further justification on the methodology used for the calculation of background concentrations should be provided.
 - a. Taking the average of the 90th percentile hourly average concentration of a contaminant of the three years may not sufficiently represent current trends or provide a realistic maximum. Additionally, it is unclear if this strategy was applied to sulphur dioxide (SO₂) and particulate matter <2.5 µm (PM_{2.5}). Please clarify.



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2. The predicted concentrations of SO₂ and PM_{2.5} should be reported for the normal operations assessment so that long-term exposure risks may be assessed.
3. A reference for each of the emission factors listed in Table 4 was not provided. Therefore, data quality could not be evaluated.
4. Insufficient data is provided in Table 5 to validate the estimated neighboring industrial facility emissions. The calculations or raw data should be provided for the sake of clarity.
5. Table 5 does not report the emission estimate of SO₂, and for Versorium Energy Ltd, PM_{2.5} estimated emissions. Justification should be provided for excluding these contaminants from the assessment if applicable.
6. While Section 4.0 notes that background PM_{2.5} levels constitute greater than 65% of the AAAQO, the modelling results show that the project-only PM_{2.5} contribution is more than triple the background concentration. As such, the exceedance cannot reasonably be attributed to ambient background conditions. This limits the applicability of the background argument as a justification for exceedances under the non-routine provisions of the AEPA guidance.
7. The AQMG requires the development of a management plan or a management and monitoring plan when non-routine operations exceed 1.5 times and 1.0 times the AAAQO for the worst-case receptor and worst-case sensitive receptor respectively. An upset occurring less than 1% of any given averaging time is only one requirement and does not apply to averaging periods greater than 24-hours.
 - a. The AQA includes some provisions for management (i.e., “*Synapse will shut down the facility before the total annual duration of this upset emission case extends past 87.6 hours in any year.*”), however at minimum, a plan demonstrating complete management should be prepared prior to operation. This plan should explicitly describe:



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- i. How the facility will ensure that the upset condition cannot exceed the allowable duration;
- ii. Operational controls, decision trees, and shutdown protocols;
- iii. Monitoring, tracking, and reporting systems for emergency generator operation;
- iv. Triggers for corrective action; and
- v. How compliance with AEPA's non-routine exceedance provisions will be demonstrated.

b. In its current form, the assessment does not provide sufficient detail to satisfy the AQMG requirements for non-routine exceedance management. A full plan should be submitted to AEPA prior to commissioning to ensure all required controls, documentation processes, and monitoring provisions are fully developed and verifiable.

CONCLUSIONS

It is Cambium's opinion that the AQA was generally completed in accordance with the standard of practice for licensed engineering professionals working in air emissions, air quality assessments, and regulatory compliance in Alberta.

Cambium has identified several areas where additional justification or clarification would strengthen the AQA and improve confidence in the results. Cambium recommends that the Town consider the following conclusions:

1. Compliance with AAAQOs during normal operations:
 - The AQA should demonstrate that SO₂ and PM_{2.5} concentrations comply with the Alberta Ambient Air Quality Objectives (AAAQOs) under normal operating conditions.
2. Improved management of upset-condition impacts:
 - Air quality impacts associated with upset operating conditions should be further mitigated through either enhanced emission controls or the development of a comprehensive management and monitoring plan, as



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required under the Alberta Air Quality Model Guideline (AQMG) for non-routine exceedances.

LIMITATIONS OF REVIEW

As per Cambium's agreed scope of work this review excludes site visit, verification, or duplication of calculations or modelling.

CLOSING

We trust this peer review meets your current requirements. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Best regards,

Cambium Inc.

DocuSigned by:

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Sadie Bachynski, P.Eng.
Group Manager - Air Quality

Encl. Cambium Qualifications & Limitations

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March 5, 2026

CAMBIUM QUALIFICATIONS AND LIMITATIONS

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Site Assessments

A site assessment is created using data and information collected during the investigation of a site and based on conditions encountered at the time and particular locations at which fieldwork is conducted. The information, sample results and data collected represent the conditions only at the specific times at which and at those specific locations from which the information, samples and data were obtained and the information, sample results and data may vary at other locations and times. To the extent that Cambium's work or report considers any locations or times other than those from which information, sample results and data was specifically received, the work or report is based on a reasonable extrapolation from such information, sample results and data but the actual conditions encountered may vary from those extrapolations.

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