

June 27, 2022

Township of Puslinch
7404 Wellington Road 34
Puslinch, Ontario
N0B 2J0

Attention: Lynne Banks
lbanks@puslinch.ca

VIA E-MAIL

**Re: Peer Review of Acoustic Assessment Report
Waste Processing Facility
Puslinch, Ontario
VCL File: 122-0269**

Dear Ms. Banks:

We have completed our review of these documents:

- "Acoustic Assessment Report, 6678 Wellington Road 34, Cambridge, Ontario", dated January 7, 2021, prepared by GHD;
- "Planning Rationale Report, 6678 Wellington Road 34, Township of Puslinch, ON", dated December 2021; and
- "Design and Operations Report, Waste Processing Facility, 6678 Wellington Road 34, Township of Puslinch, Ontario", prepared by GHD.

Our comments are outlined herein.

1.0 COMMENTS

- a) The noise assessment has applied the Ministry of Environment, Conservation and Parks (MECP) noise guideline requirements of NPC-300. This is considered appropriate.
- b) The proposed waste processing facility is considered a stationary noise source. NPC-300 defines a stationary noise source as "a source of sound or a combination of sources of sound that are included and normally operated within the property lines of a facility, and includes the premises of one person as one stationary noise source, unless the dominant source of sound on those premises is construction". From the information provided, it is not clear if the adjacent extractive operation is part of the same site as the proposed waste processing operation. As a minimum, it appears that truck traffic shares part of the site and the entrance. The noise assessment needs to assess all the sources operating on the site and not just the new sources associated with the proposed waste processing facility.

- c) It is not clear from the information presented within the report if vacant lots that would permit a noise sensitive use exist in the area. As per NPC-300, such vacant lots need to be included as receptors in the noise impact assessment.
- d) The report indicates that the Class 2 guideline limits have been applied at all receptor locations. However, justification for Class 2 has not been provided. There is a concern that at least the receptors to the north of the facility may not be in a Class 2 area.
- e) Section 6.1 of the report indicates the worst-case assessment was based on measured sound pressure levels. However, no measurement data is provided in the report. The report then goes on to say CadnaA was used to model the potential noise impacts which contradicts the prior statement. Clarification is needed.
- f) The modelling assumptions indicate a maximum reflection order of 1 was used to complete the assessment. A minimum 1 (and ideally at least 2) order of reflection should be used in the model.
- g) The ground absorption coefficients used in the model are not considered appropriate. Often 1 is used for absorptive ground (grass and crop land) and 0 is used for hard, sound reflective surfaces (gravel areas, haul road, ponds, etc.). Hard surfaces can provide some sound absorption. If hard ground absorption is to be accounted for then the soft ground cannot be assumed to be perfectly absorptive.
- h) The sound absorption coefficient used to model the reflective buildings is missing from the report.
- i) The report concludes that any future equipment that contributes less than 30 dBA at the PORs does not require further assessment. Even though it is agreed that a single source at this level is insignificant, if multiple sources at this level are added, they could contribute to the off-site noise impacts. Thus, our recommendation is that any changes to the proposed operation should not proceed without a proper acoustical assessment.
- j) The noise source summary in Appendix C seems to indicate that the reference sound level for the truck route comes from a UK reference. North American references/standards should be used for motor vehicle traffic since sound emission requirements and vehicle types are different between Europe and North America.

2.0 CONCLUSIONS

Our review of the acoustic assessment report prepared in support of the waste processing facility indicates there are a few items, as outlined above, that require further clarification and assessment before we can concur with its findings and conclusions

If there are any questions, please do not hesitate to call.

Yours truly,

VALCOUSTICS CANADA LTD.

Per: 

John Emeljanow, P.Eng.

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