

# MEMORANDUM

Date:	August 26, 2020
To:	Angela Waterman, Telkwa Coal Limited
From:	Mark Milner, Hemmera Envirochem Inc.
File:	989388-01
Re:	Vibration in the Tenas Project EA

## 1.0 INTRODUCTION

This memo was prepared by Hemmera Envirochem Inc. (Hemmera), a wholly owned subsidiary of Ausenco Canada Inc. (Ausenco), in response to your email request received on August 26, 2020. We understand that Telkwa Coal Limited (TCL) wishes to better understand how Hemmera will address vibration in the upcoming environmental assessment (EA) for the Tenas Project (the Project).

As described in the Valued Components Scoping document<sup>1</sup>, vibration has been screened out as a component. Despite this, Hemmera will include a qualitative assessment in the EA. This assessment will describe the Railway Association of Canada (RAC) guidelines applicable to vibrations including “Land Use Planning, Rail Proximity and Public Safety” (2017) and “Guidelines for New Development in Proximity to Railway Operations” (2013). Additionally, Section 95.1 of the *Canadian Transportation Act* (CTA) requires railway companies, whether constructing or operating a railway, to make only such noise and vibration as is reasonable.

Vibration levels near the rail loadout due to existing rail activity are not expected to increase with the Project given the low railcar speeds on site. It is estimated that this will be an increase of less than 1% (to be confirmed by CNR) in railcar activity on the mainline, but no increase in maximum vibration levels. Vibration generated by mine site activities and haul road traffic is expected to be low and thus negligible vibration impacts will occur at residential areas.

If dwelling units are located more than 75 m from the railway right-of-way, vibration measurements are not required given that vibration levels drop to background typically within 50 m. The nearest residence to the rail loadout is 500 m across the river and 800 m on the same side of the river.

. Existing vibration is mostly due to mainline activity and as noted, existing vibration levels as a result of mainline activity will not increase and the frequency in which vibration occurs is expected to be less than 1%. The small increase in mainline activity is expected to have a negligible impact on receptors within proximity of the mainline. Vibration is primarily a result of ground vibration and is not to be confused with noise being transmitted through the air. A noise model will be included in the EA

Please refer to Section 4.1 of the dAIR for details.

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<sup>1</sup> All documents can be found at the BC EAO Project Information Centre:  
<https://www.projects.eao.gov.bc.ca/p/5b905af23965330024d5b706/documents>

## 2.0 CLOSURE

This Work was performed in accordance with Purchase Order PERM 0015 between Hemmera Envirochem Inc. (Hemmera), a wholly owned subsidiary of Ausenco Engineering Canada Inc. (Ausenco), and Telkwa Coal Limited (Client), dated March 31, 2019 (Contract).

This Report has been prepared by Hemmera, based on fieldwork conducted by Hemmera, for sole benefit and use by Telkwa Coal Limited. In performing this Work, Hemmera has relied in good faith on information provided by others, and has assumed that the information provided by those individuals is both complete and accurate. This Work was performed to current industry standard practice for similar environmental work, within the relevant jurisdiction and same locale. The findings presented herein should be considered within the context of the scope of work and project terms of reference; further, the findings are time sensitive and are considered valid only at the time the Report was produced. The conclusions and recommendations contained in this Report are based upon the applicable guidelines, regulations, and legislation existing at the time the Report was produced; any changes in the regulatory regime may alter the conclusions and/or recommendations.

Hemmera has appreciated the opportunity to assist you. If you have any questions regarding this memo please do not hesitate to contact us.

## 3.0 REFERENCES

Railway Association of Canada (RAC). (2013). Guidelines for New Development in Proximity to Railway Operations. Retrieved on August 26, 2020 from <https://international-railway-safety-council.com/wp-content/uploads/2017/09/lulham-guidelines-for-new-development-in-proximity-railway-operations.pdf>.

Railway Association of Canada (RAC). (2017). Land Use Planning, Rail Proximity and Public Safety. Retrieved on August 26, 2020 from [https://tc.canada.ca/sites/default/files/migrated/appendix\\_f.pdf](https://tc.canada.ca/sites/default/files/migrated/appendix_f.pdf).