

November 21, 2008

Mark L. Dorfman Planner Inc.
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145 Columbia Street West
Waterloo, Ontario
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**Re: Peer Review of Noise Impact Studies
Rockfort Quarry
Our File No.: 98-104-300**

VIA E-MAIL

Dear Mr. Dorfman:

We have completed our review of the noise impact studies prepared in support of the Rockfort Quarry application. Our comments and recommendations are outlined herein.

The documents reviewed are:

- Addendum to Environmental Noise and Blast Design Impact Study for Rockfort Quarry, dated July 30, 2008, prepared by Aercoustics Engineering Limited;
- Environmental Noise and Blast Design Impact Study, Rockfort Quarry, Town of Caledon, dated August 28, 2003, prepared by Aercoustics Engineering Limited;
- Haul Route Noise Analysis, Rockfort Quarry, dated July 30, 2008, prepared by Aercoustics Engineering Limited; and
- Rockfort Quarry Site Plans, last revised July 30, 2008, prepared by MHBC Planning.

NOISE AND BLAST DESIGN IMPACT STUDY

Based on our review of the noise study and the addendum as well as the Site Plans, we have these comments:

1. The addendum to the noise study indicates that R14 has been purchased by JDCL and no longer needs to be considered a noise sensitive receptor location. Additional information is needed to confirm that it is indeed not a noise sensitive receptor. Even though JDCL owns the dwelling, if there are tenants living within the house, it still needs to be considered noise sensitive. Only if it can be confirmed that the dwelling will remain unoccupied for the life

of the quarry or if owners of JDCL will occupy the dwelling can it be considered noise insensitive.

2. The list of equipment to be used on the site no longer includes a wash plant. However, the equipment list on the site plans does mention a wash plant. This should be clarified and if there will be a wash plant on the site, confirmation that it is included in the assessment is needed.
3. The hours of operation are indicated as being 6 am to 7 pm for shipping and 7 am to 7pm for drilling, excavating and processing, Monday to Friday with occasional Saturday shipping. As there are no specific recommendations within the report, we recommend that construction should only occur between 7 am and 7 pm, Monday to Friday.
4. The criteria applied at all of the noise sensitive receptor locations are the exclusion limits for a Class 3 area. This is considered appropriate and is the most stringent application of the MOE noise guideline limits.
5. Grout curtain installation is considered a construction activity within the noise impact assessment. Construction is considered an activity that has a short duration in relation to the life of the quarry. Additional details regarding the duration that grout curtain installation will occur is needed to confirm that it will be of short duration and not an ongoing chronic activity.
6. The noise impact assessment uses a 1.5 m high receptor height. For the nighttime period (i.e., 0600 to 0700 hours), a 4.5 m receptor height should be used unless it is confirmed that all of the receptors are single storey. Recent clarification from the MOE has indicated that a 4.5 m receptor height should also be used for the daytime period. Thus, the assessment needs to be updated to account for elevated receptor heights, where applicable, to confirm that the sound barrier recommendations are adequate.
7. The report indicates that the noise impact assessment has only been completed for the start-up and at the extraction limit for each receptor location. There are several concerns with this approach:
 - The extraction limit does not necessarily represent the worst case operating location (i.e., the location where the off-site sound exposures will be highest). The extraction limit is closest to the perimeter sound barriers which maximizes the sound barrier attenuation. Our experience has been that a location somewhat further from a receptor is worst case;
 - There are some phases within the quarry where additional operations are permitted to occur (i.e., the sizing plant). The inclusion of these additional sources increases

the total sound energy at the quarry and could result in higher off-site sound exposures.

8. The noise assessment only provides the results for the daytime operations. No sound exposure predictions are provided for the nighttime period to confirm that the nighttime guideline limits are met.
9. Review of the sample calculations indicates that all of the noise sources have not been included in the assessment. The omitted sources are the pumping stations, the sizing plant and the haul trucks that will haul material to market. The assessment should include these noise sources as they could contribute to the nighttime combined off-site sound exposures at the receptors.
10. The report recommends that 12 m high stockpiles be constructed that surround the processing plant. Review of the schematic detail provided on the Site Plans indicates that the stockpile do not provide acoustical screening in the direction of the primary crushing plant.
11. Figure 7 in the noise report provides a concept detail for the rock drill portable sound barrier. The barrier will only provide acoustical screening in one direction. The report should clearly identify in which direction(s) acoustical screening is to be provided by the portable barrier.
12. There are no specific discussions within the report outlining additional noise mitigation measures that may be needed for Phase 2 where the working face height may only be 3 m high. The report specifically recommends that the working face (or depth of extraction) for the first lift be at least 12 m.
13. The report recommends that equipment on the site be fitted with light to medium duty back up beepers. The operator should consider the use of alternative back up beeper technologies to reduce the potential off-site noise impacts.
14. There are no recommendations within the report as to when the perimeter and/or interim berms are to be constructed. The report should clearly indicate when the berms are to be created.
15. There is no discussion within the report regarding noise monitoring or audit sound exposure measurements. Off-site noise monitoring should be done at appropriate stages during the life of the quarry to confirm that off-site sound exposures comply with MOE noise guideline limits. In addition, to confirm the validity of the noise assessment presented and to confirm that additional noise mitigation measures are not needed (such as enclosures of the pumps), sound level measurements of individual pieces of equipment should be done to confirm that they do not exceed the values used in the assessment. If emission levels are exceeded, either additional noise mitigation needs to be provided or quieter equipment needs to be selected.

HAUL ROUTE STUDY

Based on our review of the haul route noise study, we have these comments/concerns:

1. The haul route noise assessment has been done of two key hours: the am peak hour (0700 to 0800 hours) and a typical daytime hour. The report indicates that the am peak hour was selected since the quarry truck traffic is highest during this hour. We agree that the background traffic is highest during this hour. However, the information provided on page 72.2 indicates that the 0600 to 0700 hour has the highest quarry traffic. Thus, the noise impacts may be under predicted for the peak quarry traffic hour.
2. The traffic data included in Appendix C of the report was provided by the Region in 1999 (page 69) and 1997 (pages 70 and 71). As this data is now approximately 10 years old and an aggressive growth rate to the background traffic was used, the traffic data should be updated to confirm that the values used in the assessment are valid. In addition, there are some handwritten changes to the information presented within Appendix C. An explanation of the changes should be provided.
3. It is not clear how the traffic data included in Appendix C was used to calculate the ambient sound exposures at the receptors. A description of how the hourly traffic volumes were determined is missing and the sample calculations provided are not clear in that the roadway is not indicated.
4. Note 3 on page 4 refers to a page 69.2. Our version of the report does not have this page.
5. The assessment has determined that the minimum ambient in the area is 39 dBA. This is based on ambient sound level monitoring done between May 31 and June 9, 1999. The measurement data does not include appropriate weather data to support that the results are valid. As per MOE requirements, noise monitoring is only to be done when there is no precipitation and when the wind speed does not exceed 20 km/hr. Table 8.2 on page 14 of the report indicates that the minimum ambient was dictated by the sounds of nature although additional detail is not provided. If the ambient is dictated by frogs, crickets, birds, etc., these may not be present at other times of the year such as late fall, winter and early spring. Additional details with regards to the noise monitoring are needed to confirm predictable worst case results have been presented.
6. There is only a very brief mention of the noise produced by engine braking systems. As these are often a source of noise complaint and due to the topography of the general area, noise from engine brakes is a concern in this area. Additional discussion and recommendations regarding engine brakes is needed.

CONCLUSIONS

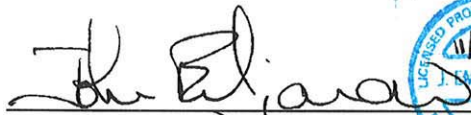
Based on the above comments, additional information is needed to support the conclusions made by the noise studies. The on-site noise study needs to confirm that the predictable worst case has been addressed. Clarification and a potential of the background traffic used to complete the haul route study is also needed.

If there are any questions or if additional information is needed, please do not hesitate to call.

Yours truly,

VALCOUSTICS CANADA LTD.

Per:


John Emeljanow, B.Eng., P.Eng.



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