



P.E.

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October 3, 2012

Ms. Kate Sedlacek
Scott County
200 Fourth Avenue West
Shakopee, MN 55379

Subject: Truck Noise Test – Jordan Aggregates Proposed Mining Operations

Dear Kate:

This past August 27th AGC Developments, Incorporated conducted a brief study of the potential noise generation from the trucks traffic that could be expected from the subject mining operations. The trucks participating in the study were chosen by Scott County Staff (3 trucks), and the proposer of the Mining operations (1 truck). The ages and conditions of the trucks are not known by the author of this report.

Three sites that could be affected from the traffic from the mines were chosen by the author after consulting with you on the choice.

1. Site 1 by a church in Jordan at the intersection of Minnesota highways 282 and 21 did not yield any acceptable noise data. Though it was chosen to observe stop and go operations, on the day of the study the site was too noisy for the test, and due to the route chosen, the separation time between the trucks allowed for the trucks to turn around and run behind each other, therefore unacceptably driving by in pairs a number of times.
2. Site 2 (nursing home) and 3 (residential area) along Valley View Drive did generate some acceptable data, but still some pass-bys were affected by the local traffic. The trucks were tested driving in both directions near these sites. For the nursing home site two pass-bys were driving south, therefore on the lane further away from the property. For the residential site the opposite is true, with the trucks two pass-bys being closer to the property
3. At the nursing home the trucks were tested under a more demanding acceleration condition when leaving the corner, and therefore the noise was more influenced by the truck drivers' operating procedures than for the residential site, where a steady pass-by at about 30 mph was documented.
4. Data was acquired by three methods:
 - a. Two observers clocked the time above 50, 55, 60, and 65 dBA using 4 stop watches while observing two separate sound level meters' displays.

- b. One meter was also storing the statistical distribution of the sound separately for each site.
- c. A third meter was exclusively logging the average sound level in 5 seconds windows.

Analyses of the data for both sites, and combining the results, lead to the conclusions that:

- a. The only standard to be of concern is the L10 limit for daytime and nighttime hours.
- b. Exceedance to the daytime L10 standard can occur at 34 hourly truck pass-bys, and most probably will occur at 41 pass-bys.
- c. Exceedance to the nighttime standard can occur at 15 hourly truck pass-bys, and most probably will occur at 26 pass-bys.

Furthermore,

d. The County will not have control over the age and condition of the trucks that will be used in the operation of the mine.

e. It is stated in the Environmental Assessment Worksheet that: "The anticipated truck volumes stated will result in an average of 5 round trips per hour with a maximum of 11 round trips per hour during peak production." -- or, 10 to 22 pass-bys.

Depending on the hours of operation of the mine (including the possibility of a nighttime operating portable asphalt plant), and the ultimate routes used by the trucks, the possibility exists that the nighttime L10 hourly Standards could be exceeded by the truck traffic.

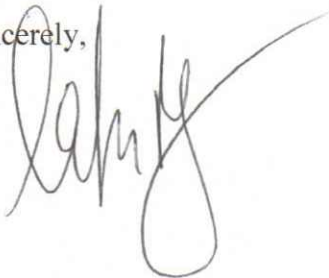
ADDITIONAL TESTING

Due to the high noise levels encountered at the intersection of highways 282 and 21 for the above tests, County staff requested an additional test documenting the levels at that intersection for the one hour survey required by Minnesota's noise standards. The attached graph documents the levels found and the exceedance to the daytime standard of the 65 dBA L10 limit. A total of 53 truck pass-bys occurred in the tested hour.

NOISE ABATEMENT RECOMMENDATIONS

1. The hours of operation of the mine could be limited to 7:30 a.m. to 9:30 p.m. eliminating the possibility of nighttime violation of the noise standards.
2. The operator of the mine could institute a simple noise check of the trucks transporting the aggregate by testing their noise generation using the stationary run-up procedure for diesel powered trucks with governors. The test takes a few minutes and the sound level meter needed for the test is now available for less than \$30. I will be glad to instruct the mine operator in the performance of the test at no charge to the operator or the County. For this suggestion to produce positive outcomes, trucks exceeding the State's motor vehicle noise limit must be required to correct their problem prior to returning to the mine, and be re-tested to insure compliance.

Sincerely,

A handwritten signature in black ink, appearing to be "Lahm", written over the word "Sincerely,".

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