

Ad Hoc Race-Track Committee Minutes
June 8, 2011
6th Meeting

1. Attendees: LaCourse, Murch, Collins, Kahn, Lelio, Watson, Cedarholm
2. LaCourse distributed meeting minutes which included sound data sets thru May 13 2011. The first two pages of data were collected on the Lee USA Speedway/Tamarack property line, the second two pages of data were collected at a survey pin in Tamarack Green Area.
3. Group reviewed the sound data. Collins suggested that group review standard deviation of the data sets in the future.
4. Lelio indicated that there were still some holes in the data set that he and Cedarholm have been building, most notably concerning special touring divisions (Prostocks, Large Block Super). He also noted that it would be good to have additional data for all divisions once the tree canopy has fully leafed out. Collins noted that vegetation would probably have an increased attenuating affect on high rather than low frequency sound waves.
5. Murch presented police dept data, taken at 100' and at the tail pipe. His data set also included the first Prostock sound measurements of the season. Murch explained that the LPD gave out two warnings to owners/drivers of cars that were not properly muffled. He also mentioned that it only takes one or two cars that are improperly muffled to significantly increase noise levels in any particular heat or race.
6. Group discussed feasibility of taking simultaneous measurements at tail pipe, 100' away, and at the Tamarack area green pin. Group felt this might be difficult due to other track noise that is present when measuring tail pipe output, but agreed to try. Group wondered why ACT and SMS racing divisions did not register the same noise levels at the Tamarack Green Area pin, as the car engines and exhaust manifolds are very similar. Murch pointed out that each division does run different mufflers.
7. Cedarholm asked about tail pipe measurements for SMS cars. Murch and Watson pointed out that since these cars do not have starter motors and must be push started, static readings are not possible. Watson noted that NEMA (new england midget association) and Big Block Super Mods also present this same problem. Group discussed this issue as it relates to the J1169 tail pipe measurement procedure.
8. Next meeting is scheduled for Sept 8 2011, 7 pm. Data collection at all locations will continue in the meantime.

Ad Hoc Race-Track Committee Minutes
April 27, 2011
5th Meeting

1. Attendees: Collins, LaCourse, Cedarholm, Murch, Watson, Lelio
2. Lelio thanked LaCourse for posting the committee minutes on Town website. LaCourse stated his view that although this ad hoc committee is a closed meeting in that it is not open to public comment, it is open to any members of the public who would like to attend and observe.
3. Group reviewed sound data collected by Lelio and Murch on 4/17/11. Two observations were raised: Murch and LaCourse stated that based on the tailpipe sound data that was recorded on 4/17/11, the 97 dB limit as measured at the tailpipe seems to be an unrealistic standard that the racing teams will not be able to meet. Lelio stated that 76 dB average readings taken in Tamarack during racing on the same day indicate the presence of a serious noise issue (100x louder than the target), given the ad hoc committee's initial goal of ensuring noise levels in abutting neighborhoods during racing match WHO's 55 dB residential neighborhood maximum standards.
4. Group discussed whether future measurements should continue to be taken at the tailpipe using the J1169 standard. Group decided to continue using the J1169 measurement procedure because it is a nationally recognized measurement procedure for automobiles, it facilitates repeatable measurement conditions, and the procedure helps to identify specific cars which fail to meet exhaust noise standards.
5. Murch stated that he and his team will have to wear hearing protection for future tailpipe measurements. Lelio indicated that per OSHA, permanent hearing damage occurs after 14 seconds of exposure to 118 dB levels, the highest sound readings measured on 4/17/11.
6. Collins asked whether Murch inspects vehicle mufflers at the tailpipe measurement station, and LaCourse asked whether one can visually inspect and identify the particular mufflers that each car is running. Murch replied that he does inspect mufflers by looking under the car. Collins suggested that if mufflers can be identified, that info should also be included in the data field.
7. Collins suggested that group make an attempt to coordinate on track and abutting property measurements, so that abutting property measurements are also accompanied with the following additional information: racing division that is currently on track, and number of cars that are currently operating on track. He also suggested that we take some simultaneous tail pipe and abutting property sound measurements on various racing division cars, using radios to coordinate between the measurement stations. Collins asked about the weather data on Lelio sample set- per Lelio this information came from the NOAA Nottingham website. Lelio will

- confirm whether wind direction means that wind is coming from that direction, or blowing in that direction.
8. LaCourse asked group to continue to take tail pipe and abutting measurements, with the goal of getting sound data on all car divisions, including all weekly and special touring divisions. Lelio suggested that abutting property sound data be gathered on Test and Tune days, too.
 9. LaCourse stated that as the season progresses, he expects measurements to show sound levels decreasing as steps are taken by racing teams (better mufflers, etc.). Watson also suggested that racing teams will get better at adhering to the sound standards as the season progresses.
 10. Lelio asked Murch if there were any other issues he found with using the J1169 measurement procedure. Murch replied that the biggest obstacle was that drivers were nervous about having their cars measured, and so were reluctant to rev their engines to the required 3/4 max RPM. He plans to ask a second officer to watch each car's RPM tach during future measurements in order to insure cars are measured at proper RPM levels. Watson concurred with this procedure.
 11. Murch told group that as he gathers future sound data, he will send it out to the committee via email.
 12. Watson invited the group to visit the track to see how sound data is collected, and view track operations. In response to a question by Cedarholm, Watson explained the free admission policy for Lee residents to the group.
 13. Next meeting is Wednesday, June 8th, 7 pm at the Town Hall.

Ad Hoc Race-Track Committee Minutes March 31, 2011 (Modified April 18, 2011)
March 31, 2011
4th Meeting

- The Committee agreed upon the protocol submitted by Chief Murch with minor modifications. The protocol for measurement is provided below in its entirety.
*“No person shall operate a motor vehicle on the racing surface which has a measured noise level of more than 97 decibels on the decibel meter on the A scale when measured 20 inches from the exhaust pipe at a 45 degree angle and at a height of 8 inches off the ground while the engine is operating at 75% of its maximum rated revolutions per minute (RPMs).
Measurements shall be taken in accordance with the Society of Automotive Engineers specification SAE J1169 Surface Vehicle Standards.
Vehicles found to be in violation of the above stated provision will not be allowed on the racing surface until such time as a properly equipped muffler has been installed, the vehicle has been retested and the vehicle is found to meet the 97-decibel limit in accordance with this provision.”*
- The Committee also agreed that the test will be done on the similar surface as

the racing surface and at a specified area outlined for vehicle entry. A sound meter on a tripod would be stationed at the proper distance to make the measurement.

- The Committee recommended that additional sound meters be purchased to be used at the Chief's discretion for measuring sound at identified areas at trackside and/or on abutters' property.
- The Committee agreed that this protocol would start with the upcoming 2011 racing season.
- Be it known that the intent of testing during this racing season is to gather data such as abutter sound intensities at the same time as vehicle testing, abutter sound intensities during races, sound intensities at identified sites for yearly comparisons.
- Be it known that Chief Murch has full discretion as to the time, dates and the number of measurements with the proviso that enough data recordings are made to establish a baseline.
- Next Meeting: April 27, Town Hall, 7 PM.

January 31, 2011
3rd Meeting

- Committee decided to adopt the 55 dB noise threshold as an initial goal for noise levels at residential properties abutting the racetrack during racing sessions.
- Chief Murch recommended that exhaust sound testing of individual cars be done in the ramp area just prior to the "bridge".
Ad Hoc Race-Track Committee Minutes March 31, 2011 (Modified April 18, 2011)
- Chief Murch said that he is initially planning to document all conversations with racing teams regarding muffler sound readings.
- Robin suggested that the Town purchase 2-3 more sound meters and secure volunteers who might be willing to take sound readings at abutting properties during races.
- Next steps:
 - Chief Murch will draft a procedure for measuring individual race vehicle exhaust noise.
 - Andy will ask Allan Dennis to help make copies of the racetrack site maps for committee members.
 - Andy will work with Dave to verify distances from the track surface to abutting property lines.
- Next meeting: February 14, 2011 7 pm Town Hall

January 17, 2011
2nd Meeting

- The Committee decided that measurement at the boundary lines were most likely not a valid means for enforcement of 21A. Members learned that dB readings were affected by a variety of physical conditions such as humidity and wind direction. As a result the Committee will now focus on measurement at the tailpipe.
- Discussion was held on different mufflers and exhaust pipe arrangements.
- Methods for reducing noise in general were discussed. Some options included sheathing the stands, requiring tailpipes to exhaust down at the track, and modifying the PA system.
- Conditional agreement among committee members included the following. 1) The next racing season will be a transitional season in that measurements will be made at the boundary lines and at certain identified residences to determine db ranges. 2) Measurements will be made at the tailpipe with detailed instructions for measurement so that the Chief of Police can implement 21A. 3) The Committee will work as an oversight committee throughout the racing season to bring forth a modified ordinance for the 2012 legislative meeting. 4) The goal is to determine a dB reading at the tailpipe that brings the noise at the boundary lines and at residences more acceptable to abutters and allows a mutually beneficial racing season for all concerned. 5) And finally, measurements should be made at benchmark stations at the boundary lines every year and kept for yearly comparisons.
- *Action Items:* The Committee will look into mufflers and tailpipe arrangements that reduce noise and existing law that speaks to measurement.
- Next Meeting: January 31, 2011, 7 PM, Town Hall

January 3, 2011

1st Meeting: Organizational Meeting

Ad Hoc Race-Track Committee Minutes March 31, 2011 (Modified April 18, 2011)

- Reviewed Committee Charge, Racetrack Ordinance, Noise Ordinance, and Superior Court Agreement
- Discussed BOS Recommendations: Do not rewrite entire ordinance, Focus on area 21A, Use as a "Guide Small Wind Energy Systems Ordinance"
- Established next meeting date: January 17, 2011 at 7 PM
- Action Items: After discussion the committee decided to study two areas of measurement for enforcement, at the tail pipe and at the boundary lines. LaCourse and Collins focused on the boundary lines and Lelio and Loureiro focused on the tail pipe. Chief Murch was assigned to study the impact of these measurement areas on implementing 21A.