

Questions and Responses from Verizon Representatives

HSD REGULAR SCHOOL BOARD MEETING

November 14, 2017

1. Can you explain why the RES site was considered to be optimal by Verizon? (administration question)

Mike Coulter, Verizon RF Engineer- Location. There are currently 3 over loaded Cell Phone Towers that service this existing area. The objective of the new tower is to off-load the customer demand from the other 3 existing towers. The placement of the RES tower (referred to by Verizon as the Wheatland Tower) would do precisely that with the best possible location.

A follow up question was addressed- Mr. Aloisi - If the location would be moved ¼ mile from the present spot would it still meet Verizon's need? Mike RF Engineer - If a new location was proposed, Verizon would need to run a full assessment to ensure it would meet the above objective of being able to offload customer demand. The ultimate goal for Verizon is to meet their customer needs for service and the RES tower would do that.

Follow on question was addressed- Mr. Otto. Were other sites around the property available that were ruled out? (this leads into question 2)

2. Can you identify other sites in the Rohrerstown area that were considered and deemed to be not viable by Verizon? (administration question)

Mike Coulter, RF Engineer- The only other proposal was from the Fire Company. This was not viable due to zoning and title issues.

3. What research evidence, vetted and recognized by scientific and medical organizations regarded as being the most objective, credible, authoritative voices nationally and internationally on human health issues, can you point the Board in the direction of that speaks specifically to the safety of human beings in general, and children in particular, when it comes to RF energy exposure specifically from base stations/cell towers? (administration question)

Independent Consultant and Professional Engineer Paul Dugan- The FCC sets the national standard and has sole jurisdiction over the regulation of electromagnetic fields for licensees, and the subject is preempted provided the facility is demonstrated to comply. FCC adopted the standards based on recommendations from other expert agencies (EPA, FDA, NIOSH, OSHA, IEEE, ANSI, and NCRP). Personally, he does not feel there is any health risk.

The FCC has stated, "[R]adiofrequency emissions from antennas used for cellular and PCS transmissions result in exposure levels on the ground that are typically thousands of times below safety limits. These safety limits were adopted by the FCC based on the recommendations of expert organizations and endorsed by agencies of the Federal Government responsible for health and safety. Therefore, there is no reason to believe that such towers could constitute a potential health hazard to nearby residents or students." Federal Communications Commission, RF Safety FAQ.

Follow on questions were addressed - Mr. Aloisi and Mr. Merris. How would you recognize the World Health Organization's guidelines? Global standards versus the FCC standards. He feels the European

Standards are overly conservative, but is not a medical expert and did not feel it appropriate to comment further on specifics about them since he operates under guidance related to the FCC standards. Even if more conservative standards were applied, the facilities would still comply by a large margin.

Health Canada has stated, “The consensus of the scientific community is that RF energy from cell phone towers is too low to cause health effects in humans.”

The European Commission Scientific Committee on Emerging and Newly Identified Health Risks (SCENIHR) report from 2015 has this conclusion on base stations:

“The totality of evidence of epidemiology studies weighs against cancer risks from base station and broadcast antennas. In particular, large case-control studies modelling RF exposure and investigating the risks of childhood cancers have not shown any association.”

- 4. We’ve asked you to review the results of the recent RF energy studies conducted at the LMS and RES sites – What commentary would you offer the board regarding the results of the testing done at these sites? (administration question)**

Measurements were taken at 500 locations inside and outside the building of LMS (Landisville Middle School) and RES (Rohrerstown Elementary School). With the existing tower being at LMS and no tower yet constructed at RES, the results were still less than 1% of the maximum exposure limit. Therefore, the measurements have proven that the impact of the tower’s presence at the LMS site is inconsequential.

- 5. How would you address claims by some in the community that you alter and push boundaries with respect to energy transmitted by tower facilities relative to what’s allowable by contract established with those who provide you access to install facilities? Supporting evidence? (administration question)**

The claims would be completely inaccurate – Verizon must comply with the FCC standards and guidelines. Every year, all employees must sign off on ethics paperwork that addresses such concerns

Follow on question was addressed – Mr. Otto. Do you have remote ability to change the output at the site of the tower? No – you have to go to the actual cell tower site to alter the transmission power values.

- 6. What efforts has Verizon engaged in to ensure that the general population living/working in close proximity to base station facilities it operates are protected to the maximum possible extent from potential health effects associated with transmissions from their towers? (administration question)**

Verizon maintains compliance with the FCC standards through testing which shows they are operating well below the FCC limits. Verizon also follows a strict code of ethics.

- 16. To manage potential RF exposure risk, does Verizon plan to monitor the site for compliance with the FCC MPE? (community Q)**

James Strong - Verizon has agreed to reimburse the school district for testing at LMS and RES. Verizon will reimburse for 2 tests in the first 2 years at RES (and LMS), and 1 test per year annually thereafter, which would also cover the existing LMS tower, for the lifetime of the facility. Verizon has also agreed to reimburse the school district for 1 test pre-construction at RES.

17. Considering the tower at LMS has been erected and in use for approximately 2 years and there has only been one IH monitoring report completed; (community Q)

How regularly will Verizon monitor LMS moving forward?

Verizon does not typically conduct on site testing. At the request of the district, a test is done prior to the erection of a tower and again upon completion of a tower. Any additional testing would be at the request of the administration. As discussed above, LMS will be tested twice per year for the next 2 years and annually thereafter. The additional test previously done at LMS, was due to community concerns raised directly with Verizon.

How regularly will Verizon monitor the proposed RES?

Testing at RES will be conducted twice in the first 2 years and annually thereafter.

Follow on question was addressed- Mr. Aloisi. On a federal level there is the FCC guideline, but what are Verizon's requirements? Free standing towers have no ongoing requirements for testing. Technicians are there approximately twice a month for maintenance purposes.

47. If the LMS tower is at .46 % (exterior) and .48% (interior) of FCC radiation limits, have you done radiation power density calculations when there are five carriers on each tower? (community Q)

Yes, at other sites. The effects of having 5 carriers on each tower are minuscule due to the amount of other sources within the environment that contribute to the composite electromagnetic field. Antennas are directional, plus there is a margin of safety also factored in to the FCC standard. RF energy transmission is narrow and directional, targeted at the horizon. The tower's transmissions go out with a horizontal signal. The ground level measurements will be substantially the same no matter if there is one antenna or 5, the .46% exposure would be consistent and not accumulate over time and is not effected by the number of antennas. To see a demonstrable difference in RF energy readings, you would need to be directly in front of and within 10 meters of the antenna.

49. What is the fall zone in relationship to the school and its playground, fitness trail, baseball field? (community Q)

The tower is built to self-collapse and has a 105 ft fall zone. The monopole tower is designed to buckle at its midpoint and is rated to withstand sustained winds up to 90 mph. The tower does not possess de-icing capabilities.

51. Some compounds have large tanks of diesel fuel which sometimes leak. spill here. (community Q)

- a. In the event of a spill who will Verizon be required to mitigate the spill clean-up response?**
- b. Will Verizon be informing the School Community about the fuel spill risk?**

The fuel tanks are double walled and have a secondary containment system that is alarm activated. This alarm system is monitored 24/7 by a 3rd party contractor. If there was ever a leak, it would go into the secondary container, which would activate the alarm. Verizon does not feel there is any spill risk due to the safety procedures that have already been set in place. Tanks typically rated for 75 gallons of fuel, but are not usually filled to capacity.

60. Does Verizon have a subcontractor prequalification procedure? (community Q)

a. Will all subcontractors have completed the prequalification?

Phil, Construction Manager- Yes, they only work with sub-contractors that specialize in cell tower sites. All sub-contractors must be pre-qualified, have completed PA background checks.

b. Please provide a copy of the prequalification procedure to assure the community that all subcontractors on site will have been vetted and meet all applicable state and federal safety and environmental requirements.

Phil, Construction Manager- Yes, Verizon does have a prequalification procedure list that all subcontractors must go through. Phil is working on obtaining a copy of that list. James Strong will do his best to have that list to the board by the board meeting in December, however this list may be difficult to obtain. (we did obtain a document from Verizon shortly before Thanksgiving).

Follow on question was addressed- Mr. Maurer. How is the site monitored post construction? Technicians physically check the site once or twice a month and the site is remotely monitored 24/7.

66. The 2002 T-Mobile Study also notes Exposures from Base Stations. Specifically, “In humans, harmful organic effects of high frequency electromagnetic fields as used by mobile telecommunications have been demonstrated for power flux densities from 0.2W/m² (see Chapter 7). Already at values of 0.1 W/m² such effects cannot be excluded. If a security factor of 10 is applied to this value, as it is applied by ICNIRP and appears appropriate given the current knowledge, the precautionary limit should be 0.01W/m². This should be rigorously adhered to by all base stations near sensitive places such as residential areas, schools, nurseries, playgrounds, hospitals and all other places at which humans are present for longer than 4 hours. We recommend the precautionary limit of 0.01 W/m² independent of the carrier frequency. (community Q)

a. Would Verizon reduce the Maximum Expose Limit at the LMS and RES base stations to 0.01W/m²?

b. If so, how frequently would Verizon monitor the base locations for compliance?

c. And lastly, would Verizon consider an addendum to the contract adhering to this as the maximum level of exposure?

No - Verizon finds these differences in power density values to be so small as to be inconsequential – they are obligated to abide by the FCC standards. Therefore questions b and c are not applicable.

Follow on question was addressed- Dr. Adams. If the cell tower were to be moved across Nolt Rd onto the commercial property, what would be the impact on their service coverage areas, per the map shown at the beginning of the presentation? Verizon would need to analyze the data of that area.