



Memorandum

TO: West Linn Planning Commission

FROM: Peter Spir, Associate Planner

DATE: March 17, 2010

SUBJECT: Cell tower and public health concerns (CUP-09-02)

Staff received two letters on March 16, 2010 regarding this application from Susan and Terry Kruger and Traci Valera and family. The focus of the writers' concern was health related. They were specifically concerned about the cancer cases on Old River Road they believe are attributable to the proximity of the existing cell tower. They seek denial of the application.

Staff notes that the Federal Communications Commission (FCC) and Congress have pre-empted local zoning boards from using health and safety as a criteria when reviewing applications for cell towers in their jurisdiction. According to the FCC website:

"the Telecommunications Act of 1996 creates a non-rebuttable presumption that towers and their associated antennas that operate within their legally authorized spectrum or limit are safe. This conclusion was made, in part, to prevent local zoning boards from unjustifiably denying tower applications based on health reasons.

According to the FCC website:

"to date, there has been no successful litigation on the part of plaintiffs claiming harmful side effects from exposure to radio frequency emissions caused by cell towers. In addition, courts have not found credible scientific evidence to support this theory."

Staff referenced the American Cancer Society website. The American Cancer Society made a similar finding:

"Do Cellular Phone Towers Cause Cancer?"

Humans generate electromagnetic fields internally as well as externally. The simple collision between 2 molecules is an electrical event. Since there is electrical activity inside the human body, the question arises as to whether radio waves emitted by cellular phone towers can influence cell function, and in particular whether they can cause cancer.

However, several theoretical considerations suggest that cellular phone towers are unlikely to cause cancer.

First, the energy level of radio waves is relatively low. Electromagnetic energy comes in "packages" that are referred to as photons. Photon energy is measured in electron volts (eV), the energy gained by an electron after accelerating over 1 volt. The energy in the photons depends directly on the frequency, and decreases as one moves down the electromagnetic spectrum. X-rays have about 1,000 eV of energy, while the photon energy of radio waves from cellular phone towers is about one millionth of an eV, not enough to alter molecules in the body.

A second issue has to do with wavelength. Radio waves have a wavelength of approximately 1 foot in air, and about 2 inches in body tissue. As a result, RF radiation can only be concentrated to about an inch or two in size. This makes it unlikely that the energy from radio waves could be concentrated on a small bit of tissue, affecting individual cells.

A third issue has to do with the magnitude of exposure. Measurements taken around typical cellular phone towers show ground level power densities well below the recommended limits. Moreover, public exposure near cell phone towers is not significantly different than background levels of RF radiation in urban areas from other sources, such as radio and television broadcast stations.

For these reasons, cell phone antennas or towers are unlikely to cause cancer."

The Centers for Disease Control ("CDC") website contains a great deal of scientific information concerning health effects from radiation exposure from cell towers. According to the CDC, "the risk is extremely low." According to the website of the World Health Organization ("WHO"), which has devoted years of study on EMFs. WHO's conclusion "is that there is no health risk to the EMF radiation to which the public is exposed."

Staff discovered numerous websites that took an opposing view: identifying medical studies (Germany, Israel, etc) which found a correlation between cell tower radiation and increased cancer risk. A January 2008 National Academy of

Science Report "Identification of Research Needs Relating to Potential Biological or Adverse Health Effects of Wireless Communication Device" declared the following:

The National Research Council (NRC), an arm of the National Academy of Science issued a report saying that we don't know enough about the potential health risks of long-term exposure to RF energy from cell phones, cell towers, television towers, and other components of our communications system. The scientists emphasized the unknown risks to the health of children, pregnant women, and fetuses as well as of workers whose jobs entail high exposure to RF (radiofrequency)

Conclusion

Despite the fact that the agencies that have studied the issue are reputable and qualified, there appears to be no definitive evidence to show that cell tower radiation is 100% safe or, conversely, that it causes cancers or other health problems.

Staff notes that approval criteria of the CUP (60.070(A)(1)(b)) asks,

"Is the site large enough to mitigate any possible adverse effect from the use on surrounding properties or uses."

If credible and clear evidence were presented for the Planning Commission to make a finding that cell tower radiation causes health problems and the Planning Commission found that the site is not large enough to provide adequate separation between the tower and adjacent homes on Old River Road and the day care facilities on the subject site, then this criterion would not be met and the application could be denied.

However, if the finding of denial was based on health concerns, the Telecommunications Act would prohibit such a denial.

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March 15, 2010

City of West Linn
Planning Commission
22500 Salamo Road
West Linn OR 97068

Re: File No. CUP-09-02/DR-09-07
Cell Tower located at 19200 Willamette Drive

Dear Commission Members:

I am writing on behalf of several neighbors as well as our own family, as we have significant concerns and disapproval over the current cell tower and the proposed expansion of the cell tower at the end of our street (tower address above).

Certainly you must be aware that there are two sides to every coin, and while some will argue that these towers are safe, there are numerous articles to show the harmful effects of cell tower electromagnetic fields. HAVE YOU LOOKED AT THE SIGN ITSELF???? Obviously the FCC recognizes the potential danger as well.

I believe there is a serious risk to human life, and that the City MUST NOT jeopardize the families in the Old River Drive neighborhood. The existing tower (which I believe is much too close to residents, the church, and the school operating out of the church building) is something that the City should remove – not add to or expand upon.

As residents of this community, we encourage you to consider the harm being done. Please don't look away from this important opportunity to take a stand in support of the health and well being of adults, children and families affected by this tower.

City government should be limiting the location and distance of these towers from homes. We believe this tower should be relocated to a safer zone, and certainly it SHOULD NOT be allowed to expand.

Please do the right thing in this situation.

Sincerely,
Susan & Terry Kruger
18966 Old River Drive
West Linn OR 97068



March 9, 2010

City of West Linn
Planning Commission
22500 Salamo Road
West Linn OR 97068

Re: File No. CUP-09-02/DR-09-07
Cell Tower located at 19200 Willamette Drive

Dear West Linn Planning Commission:

We're writing to voice our concerns and disapproval over the cell tower enlargement proposed for the existing cell tower located at 19200 Willamette Drive.

We actually protested the initial installment of this tower back in 1997. We spent many hours at that time researching available literature and statistics regarding adverse effects of exposure to electromagnetic rays emitted from cell tower installations. We found some frightening evidence. Unfortunately our concerns fell on deaf ears and the cell tower was erected anyways.

During the last 13 years, much more research has been conducted and new information has emerged regarding negative impacts cell towers have on living creatures. However, for every ten articles we could produce referencing ill effects due to EMRs (electromagnetic fields) emitted from cell towers, surely the proponents of the cell tower industry, i.e. cell phone companies, would produce an equal amount saying how safe they are, and how no danger exists.

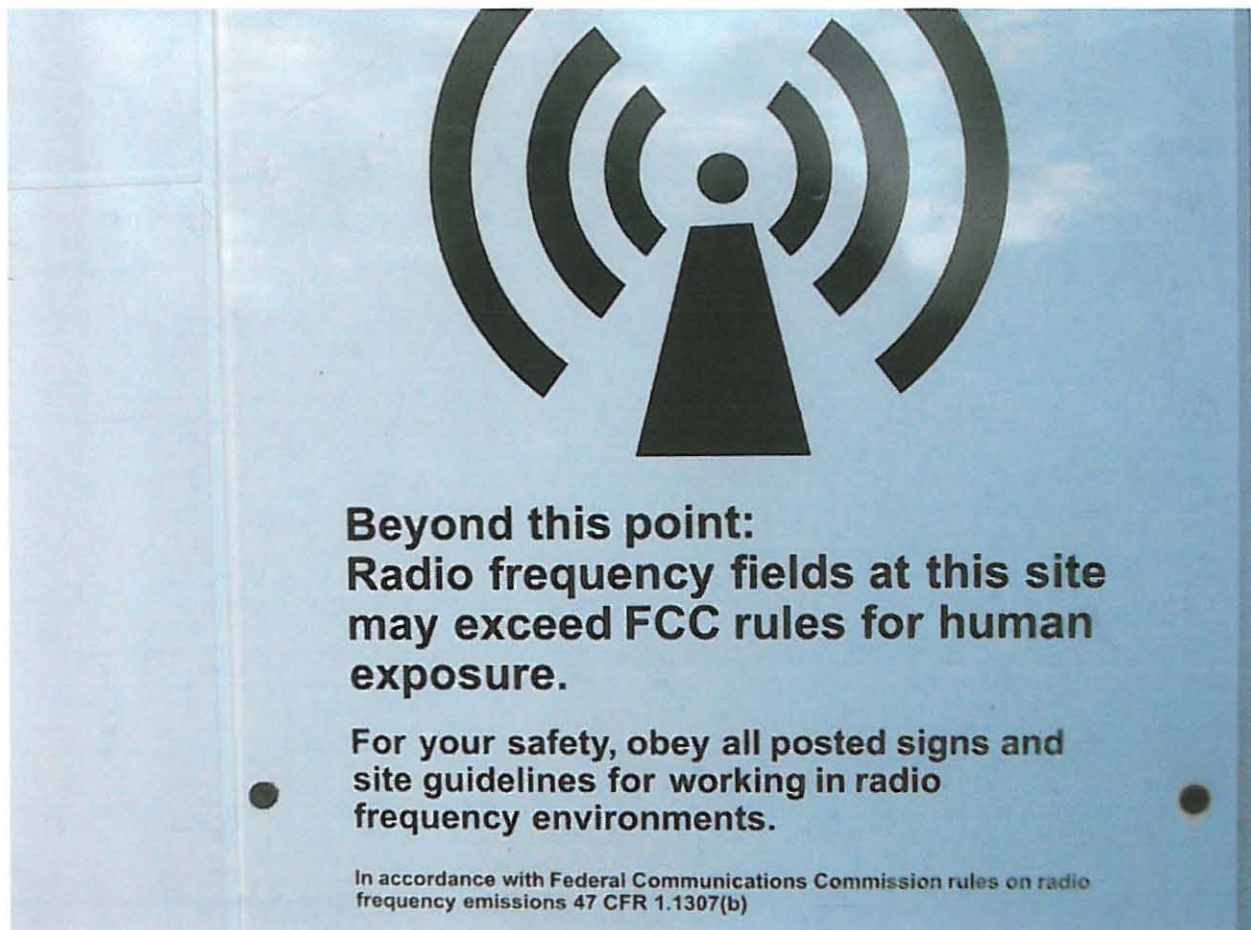
Therefore, the decision to potentially endanger the lives of the West Linn residents that live within close proximity of the cell tower rests with the City. You, the elected representatives, need to consider the welfare of your constituents. How much of a risk and gamble are you willing to take with our lives? Can you put a price tag on it?

We'd like to make you aware of a particular situation. Located directly across the street from this cell tower, live the Stoneking family. They receive more exposure than any other household in our neighborhood. When they look out their front window, the current cell tower is looming in their view. It's only 35-40 feet away. **How do you think they feel everyday when they look at that cell tower and wonder if it could be the reason their 15-year-old son is fighting the biggest battle of his young life – a very aggressive form of brain cancer?** If there is the slightest chance cell tower radiation caused this brain cancer, shouldn't the tower be removed? Ironically, the City is now considering approval of enlarging the tower – which will produce even stronger signals (radiation)!

Not only is this family suffering terribly with their son's cancer, several years ago their pet dog died of cancer. Coincidence? Who knows – but are you willing to keep taking chances with our health & safety? Twelve years ago, we submitted an article to The Oregonian regarding this cell tower. We just re-read it, and chills ran through our veins. Prophetically, the article said..."I wonder what it will take for people to consider the possibility that health hazards connected with cell towers exist. Does everyone on our block have to get cancer first?"

A young boy, just on the cusp of manhood, has been stricken down with brain cancer. Can you look him and his family in the eye, and re-assure them, that this cell tower has absolutely nothing to do with it? Can you guarantee them and the rest of our neighborhood that it's safe? Even if you think the cell tower is safe – as far as we know there has never even been an independent measurement of the RF's to be sure exposures are not exceeding recommended limits.

Everyday young school children from the Columbia Academy, a school located in the Emmanuel Presbyterian Church, play and frolic in a playground directly adjacent to the cell tower. Young children's developing bodies are at the highest risk from radio frequency and microwave radiation. Have you seen the sign that is visible to them – posted on the side of the cell tower? Here it is:



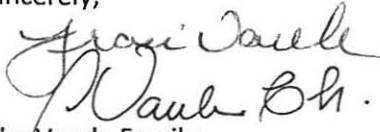
Cell phone companies like to remind people that "everyone" uses a cell phone. You need cell towers to make them work. Well, we'd like to remind you, that cell phones can be put down. Cell phones can be used with a speaker. Cell phones can be turned OFF! People have a choice.

We didn't choose to have this cell tower in our residential neighborhood. We can't choose to "turn it off." A cell tower is on 24-hours a day, 365 days a year. We are constantly exposed.

For the sake of our health, for the sake of our children, please – not only do we request a denial to increase the existing 80-foot tall tower, we request it be dismantled and leave our neighborhood.

We believe cell towers should be limited in the City of West Linn to a certain radius/distance of homes. The City has the power to create an ordinance to this effect. The City has the power to enforce removal of cell towers that are too close to homes. We believe the City of West Linn has moral obligations to its citizens. We hope you believe it too!

Sincerely,



The Varela Family
20286 Old River Drive
West Linn OR 97068

cc:

Emmanuel Presbyterian Church, 19200 Willamette Drive
West Linn, OR 97068-2009

Columbia Academy, P.O. Box 101
West Linn OR 97068

Encl./Oregonian article, dated 11/19/1998



VOICES

West Linn cell-tower OK turns residents into guinea pigs



Traci Varela lives in West Linn.

By TRACI VARELA

Every day as I walk out to meet my daughter Francesca's school bus, I shake my head in disbelief. It's still hard for me to believe that less than 300 feet from our front door stands an 80-foot cell tower. Taller than an eight-story building, it overshadows the trees. It was erected during the summer in the middle of our residential neighborhood.

Like most people, I had never given much thought to cell towers. Sure, I had noticed them along freeways, but when our family purchased land in 1995 to build our dream home in West Linn, we never envisioned a cell tower next to our mailbox. Yet, two months after moving into our new home in May 1997, we received our first notice from the local planning commission, alerting us to the possibility of a cell tower being built on nearby church property.

The initial reactions of my husband and I were against the obvious visual impact such an enormous structure would bring to our neighborhood. After all, we had just completed a challenging two-year home-building experience. We were worried about property values.

Health risks from the cell tower were not forefront in our minds. However, I decided to do some research and began surfing the Internet.

The quantity of articles and the results I found surprised and frightened me. The communications industry wants us to think that cell towers are no more harmful to our health than watching our favorite TV programs. Or standing in front of our microwaves. But my investigation painted a very different picture of what EMRs (electromagnetic

MY TURN

fields emitted from cell towers) can do to our bodies.

Exposure to the radio frequency and microwave radiation emitted from cellular transmitting facilities can have profound adverse effects on biological systems, including an increased incidence of leukemia, lymphoma and brain cancer.

Adverse effects possible

A recent study conducted under the aegis of a research grant award from the National Institutes of Environmental Health Sciences (grant@Ro1-ES-07175) provides conclusive evidence that electromagnetic fields inside cells can activate certain signaling pathways that have been associated with cancer.

I was uncovering some pretty scary stuff, so imagine my dismay when against the appeals of our entire community, the West Linn City Council voted to approve US West's application for this cell tower Dec. 22, 1997.

As a last-ditch effort, I contacted the Rev. Paul Quackenbush, the pastor of the Presbyterian Church, and alerted him of our concerns. After all, it was church land being leased to US West. The church had the power to stop the transaction. But a subsequent meeting with him and our neighbors proved fruitless.

Despite the fact that I had provided him with many articles that presented health hazards associated with cell towers (especially to children), he refused to reconsider his deal with US West. We re-

minded him that the cell tower, which was to be disguised as a bell tower, would stand directly beside their playground! "Sorry," he said, "my hands are tied." US West had convinced him the health risks were nonexistent.

Cell towers appear everywhere

A final petition filed last spring with the state Land Use Board of Appeals also proved unsuccessful. And one sunny July morning, we were greeted with the noise of construction.

As the cell tower's construction progressed, I began to see cell towers everywhere. Driving to the supermarket one day, I counted 10! I was especially surprised at the number of cell towers being erected near schools and churches.

Now it is fall. Our neighborhood cell tower is complete, and all the workers have gone home. The decision-makers who allowed this structure in our neighborhood live somewhere else.

Those of us left behind must experience the consequences from their actions. We will be the guinea pigs to prove or disprove the cellular tower exposure theories. Our children are being constantly exposed to the electromagnetic rays, and the walls of our new home don't stop the invasion.

I wonder what it will take for people to consider the possibility that health hazards connected with cell towers exist. Does everyone on our block have to get cancer first? After all, cellular towers have been banned on school property in San Francisco.

In Royal Oak, Mich., Cellular One's tower was removed from elementary school property last year when the school board bowed to parents' demands.

San Juan County commissioners in Washington

approved a six-month moratorium in September 1997 on all new cellular phone tower applications after hearing testimony from residents that the towers might be a health risk and hurt property values.

Council, church disappoint

And yet in Clackamas County, cell towers are being built next to schoolchildren.

Tomorrow as I walk out to meet my 5-year-old at the bus, I once again will shake my head. I am astonished at the West Linn City Council for ignoring their constituents' desires and disgusted by the Presbyterian Church for putting the monetary gains of its transaction before the health of our children. This 80-foot "bell tower" looms over my daily horizon. For the sake of my children, I hope cancer is not looming over theirs.

For information on electromagnetic radiation, you may contact the EMR Alliance, a nonprofit organization, at: Radio City Station, P.O. Box 1916, New York, N.Y., 10101-1916. Phone: 1-212-554-4073. Fax: 1-212-977-5541. e-mail: Emrall@AOL.com

Do you have an issue you feel strongly about? An experience you want to share? "My Turn" is an opportunity to express yourself. Submissions should be about 800 words, or three typewritten, double-spaced pages. My Turn material should be written exclusively for The Oregonian and is subject to editing. Unsolicited material submitted for publication becomes property of The Oregonian and may be edited for publication. Published material also may be redistributed in other media. Write to: Southwest Bureau, The Oregonian, 15495 S.W. Sequoia Parkway, Portland, Ore. 97224, or send a fax to 968-6061.