

EAST KENTUCKY NETWORK  
101 TECHNOLOGY TRAIL  
IVEL, KY 41642  
PHONE: (606) 874-7550  
FAX: (606) 874-7551



March 22, 2016

Jeff Derouen, Executive Director  
Public Service Commission  
211 Sower Blvd.  
P.O. Box 615  
Frankfort, KY 40602

RECEIVED  
MAR 25 2016  
Public Service  
Commission

Re: Case No. 2015-00377  
East Kentucky Network, LLC d/b/a Appalachian Wireless

Dear Mr. Derouen:

Mr. Allen filed a public comment in the above-reference matter on March 2, 2016. Please find enclosed for filing in your usual manner eleven (11) copies (the original having been sent directly to Mr. Allen) of our response letter to Mr. Allen. If you have any questions or concerns regarding the enclosed, please do not hesitate to contact me.

Very truly yours,

A handwritten signature in blue ink that reads "Cindy D. McCarty". The signature is written in a cursive style.

Cindy D. McCarty

Enclosures

EAST KENTUCKY NETWORK  
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EAST KENTUCKY  
NETWORK



RECEIVED

MAR 25 2016

Public Service  
Commission

March 22, 2016

**VIA CERTIFIED MAIL – RETURN RECEIPT REQUESTED**

W.C. Allen  
112 Canewood Blvd.  
Georgetown, KY 40324

Re: Case No. 2015-00377  
Before the Kentucky Public Service Commission

Dear Mr. Allen,

This letter is in response to your correspondence dated February 27, 2016, to the Kentucky Public Service Commission. You indicated that you and your wife have some concerns about the placement of the tower and that you would like to meet with someone to discuss the same. I have attempted to contact you and left voicemail messages for you on March 14, 2016, and on March 21, 2016. However, my attempts to reach you have been unsuccessful, and my voicemail messages have not been returned.

You indicated in your February 27, 2016 letter that you have some questions about the location of the tower. I am enclosing for your convenience a copy of the map that was attached as Exhibit 10 to Appalachian Wireless's application filed with the Public Service Commission. This map shows, among other things: the tower location; the 500' radius around the tower; the access road; the 200' distance from the centerline of the road; and property boundaries according to the information obtained from the Breathitt County Property Valuation Administrator's ("PVA") records. Please note that these boundaries have not been surveyed, but instead, the map simply reflects the information contained in the PVA records. As you can see from the map, neither the tower nor the road is located on your property. In fact, your property is outside the 500' radius surrounding the tower.

In your letter, you also stated that you would like some data on the microwaves emitted from the tower. We assume that your concerns relate to the radiofrequency ("RF") energy that will be emitted from the cell phone tower. The Federal Communications Commission ("FCC") has adopted guidelines for RF emissions from cell phone towers. The FCC has concluded that the ground-level power density from cell phone towers, i.e. the exposure that would be experienced by someone on the ground beneath a cell tower, is well below the exposure limits established by the FCC. I have enclosed a copy of the FCC Consumer Guide titled *Human Exposure to Radio Frequency Fields: Guidelines for Cellular and PSC Sites*. There is a substantial amount of

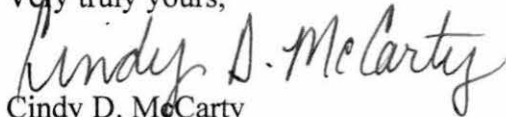
March 22, 2016

Page 2 of 2

information on Radio Frequency Safety on the FCC website, which you may access at <https://www.fcc.gov/general/radio-frequency-safety-0>.

If you still have any concerns about this project, please contact me at your earliest convenience.

Very truly yours,

A handwritten signature in black ink that reads "Cindy D. McCarty". The signature is written in a cursive style with a large initial "C".

Cindy D. McCarty

Staff Attorney

(606) 477-2355 ext. 1006

cmccarty@ekn.com

cc: Public Service Commission



## Human Exposure to Radio Frequency Fields: Guidelines for Cellular and PCS Sites

Primary antennas for transmitting wireless telephone service, including cellular and Personal Communications Service (PCS), are usually located outdoors on towers, water tanks and other elevated structures like rooftops and sides of buildings. The combination of antenna towers and associated electronic equipment is referred to as a "cellular or PCS cell site" or "base station." Cellular or PCS cell site towers are typically 50-200 feet high. Antennas are usually arranged in groups of three, with one antenna in each group used to transmit signals to mobile units, and the other two antennas used to receive signals from mobile units.

At a cell site, the total radio frequency (RF) power that can be transmitted from each transmitting antenna depends on the number of radio channels (transmitters) that have been authorized by the Federal Communications Commission (FCC) and the power of each transmitter. Although the FCC permits an effective radiated power (ERP) of up to 500 watts per channel (depending on the tower height), the majority of cellular or PCS cell sites in urban and suburban areas operate at an ERP of 100 watts per channel or less.

An ERP of 100 watts corresponds to an actual radiated power of 5-10 watts, depending on the type of antenna used. In urban areas, cell sites commonly emit an ERP of 10 watts per channel or less. For PCS cell sites, even lower ERPs are typical. As with all forms of electromagnetic energy, the power density from a cellular or PCS transmitter rapidly decreases as distance from the antenna increases.

Consequently, normal ground-level exposure is much less than the exposure that might be encountered if one were very close to the antenna and in its main transmitted beam. Measurements made near typical cellular and PCS cell sites have shown that ground-level power densities are well below the exposure limits recommended by RF/microwave safety standards used by the FCC.

### Guidelines

In 1996, the FCC adopted updated guidelines for evaluating human exposure to RF fields from fixed transmitting antennas such as those used for cellular and PCS cell sites. The FCC's guidelines are identical to those recommended by the National Council on Radiation Protection and Measurements (NCRP), a non-profit corporation chartered by Congress to develop information and recommendations concerning radiation protection. The FCC's guidelines also resemble the 1992 guidelines recommended by the Institute of Electrical and Electronics Engineers (IEEE), a non-profit technical and professional engineering society, and endorsed by the American National Standards Institute (ANSI), a nonprofit, privately-funded membership organization that coordinates development of voluntary national standards in the United States.

In the case of cellular and PCS cell site transmitters, the FCC's RF exposure guidelines recommend a maximum permissible exposure level to the general public of approximately 580 microwatts per square centimeter. This limit is many times greater than RF levels typically found near the base of cellular or PCS cell site towers or in the vicinity of other, lower-powered cell site transmitters. Calculations corresponding to a "worst-case" situation (all transmitters operating simultaneously and continuously at



the maximum licensed power) show that, in order to be exposed to RF levels near the FCC's guidelines, an individual would essentially have to remain in the main transmitting beam and within a few feet of the antenna for several minutes or longer. Thus, the possibility that a member of the general public could be exposed to RF levels in excess of the FCC guidelines is extremely remote.

When cellular and PCS antennas are mounted on rooftops, RF emissions could exceed higher than desirable guideline levels on the rooftop itself, even though rooftop antennas usually operate at lower power levels than free-standing power antennas. Such levels might become an issue for maintenance or other personnel working on the rooftop. Exposures exceeding the guidelines levels, however, are only likely to be encountered very close to, and directly in front of, the antennas. In such cases, precautions such as time limits can avoid exposure in excess of the guidelines. Individuals living or working within the building are not at risk.

### **Consumer Help Center**

For more information on consumer issues, visit the FCC's Consumer Help Center at <https://consumercomplaints.fcc.gov>.

### **Accessible formats**

To request this article in an accessible format - braille, large print, Word or text document or audio - write or call us at the address or phone number at the bottom of the page, or send an email to [fcc504@fcc.gov](mailto:fcc504@fcc.gov).

Last Reviewed 11/04/15



# CANOE 7.5' QUADRANGLE

APPALACHIAN WIRELESS  
 101 TECHNOLOGY TRAIL  
 IVEL, KY 41642  
 PROPOSED TOWER SITE  
 NEAR WOLFCOAL IN BREATHITT CO



WOODROW AND SUE ALLEN  
 112 COINWOOD BOULEVARD  
 GEORGETOWN, KY 40324  
 DEED BOOK:132 PAGE:15

CHARLES P. AND EULA BACK  
 124 CHARLES BACK RD  
 WHICK, KY 41390  
 DEED BOOK:150 PAGE:32

LINDA BUSH  
 101 BUSH LANE  
 WHICK, KY 41390  
 DEED BOOK:171  
 PAGE:375

LINDA BUSH  
 101 BUSH LANE  
 WHICK, KY 41390  
 DEED BOOK:171  
 PAGE:375

CHARLES P. & EULA BACK &  
 CHARLES TYRON BACK  
 9708 KY HWY 1110  
 WHICK, KY 41390  
 DEED BOOK:208 PAGE:648

TAMMY R. LEE  
 9005 HWY 1110  
 WHICK, KY 41390  
 DEED BOOK:181  
 PAGE:048

ANITA CHRISTINE TURNER  
 10748 HWY 1110  
 WOLFCOAL, KY 41339  
 BOOK 120 P-493

N:3678376.65  
 E:5606516.30  
 Z:1283.44

LAT:37°24'04.8263"  
 ON:83°23'26.1855"

AFFECTED AREA BOUNDARY

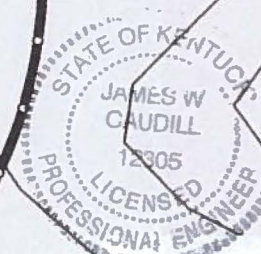
EXISTING ROAD

PROPOSED ACCESS ROAD  
 450' @ 10% GRADE

EXISTING TRAIL

CHARLES & EULA BACK &  
 CHARLES T. BACK  
 9708 KY HWY 1110  
 WHICK, KY 41390  
 DEED BOOK:208 PAGE:648

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 WHICK, KY 41390  
 DEED BOOK:208 PAGE:648



**J W CAUDILL ENGINEERING**

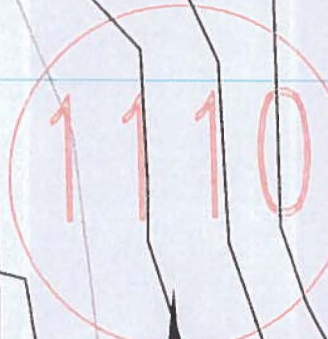
9283 HWY 15 STE. C, ISOM, KY 41824

ENGINEERS CERTIFICATION: I HEREBY CERTIFY THAT THE INFORMATION SHOWN REFLECTS THE INFORMATION OBTAINED AND PROVIDED BY THE BREATHITT COUNTY PROPERTY VALUATION ADMINISTRATION OFFICE IN JACKSON, KY.

*James W. Caudill* 12305 10-21-15  
 JAMES W. CAUDILL P.E.# DATE

### LEGEND

- POWER LINE
- PROPERTY LINE
- ACCESS ROAD
- CREEK
- CEMETERY
- TOWER



### PROPOSED SITE PLAN AND STRUCTURE LOCATION WOLFCOAL TOWER APPALACHIAN WIRELESS

DRAWN JWC	DATE 10/21/2015	WOLFCOAL TOWER SITE OFF STATE HIGHWAY 1110 CHARLES AND EULA BACK TR NEAR WOLFCOAL IN BREATHITT CO.
APPROVED	DATE	
SCALE 1"=200'	SHEET 1 OF 1	PROJECT NO. WOLFCOAL/WC200PVA