

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

NEW CINGULAR PCS, LLC (AT&T) APPLICATION
FOR A CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED FOR
THE CONSTRUCTION, MAINTENANCE AND
OPERATION OF A TELECOMMUNICATIONS
TOWER FACILITY AT 8 BARNES ROAD IN
THE TOWN OF CANAAN (FALLS VILLAGE),
CONNECTICUT. REOPENING OF THIS DOCKET
PURSUANT TO CONNECTICUT GENERAL
STATUTES § 4-181a(b) LIMITED TO COUNCIL
CONSIDERATION OF CHANGED CONDITIONS,
REVISED TOWER SITE LOCATION AND MODIFIED
FACILITY

DOCKET NO. 409A

August 1, 2013

NEW CINGULAR WIRELESS PCS, LLC (“AT&T”)
OBJECTION TO THE TOWN OF CANAAN
INLAND WETLANDS/CONSERVATION COMMISSION:
SUBMISSION OF NEW TESTIMONY AFTER THE CLOSE OF THE HEARING
AND
REQUEST FOR COSTS

The IW/CC’s Submission of New Testimony After the Close of the Hearing Violates AT&T’s
Due Process Rights

Pursuant to Section 4-178 of the Uniform Administrative Procedure Act (“UAPA”) and
Section 16-50j-28(e) of the Regulations of State Agencies (“RCSA”), New Cingular Wireless
PCS, LLC (“AT&T”), by its attorneys, Cuddy & Feder LLP, respectfully submits this objection
to the party Town of Canaan Inland Wetlands/Conservation Commission’s (“IW/CC”)
submission of new written testimony from one of its witnesses after the close of the evidentiary
hearing in Docket 409A.

The IW/CC’s post hearing brief dated July 24, 2013 includes a so-called Appendix D that
is labeled “Response to AT&T, re: IW/CC RF Engineer Findings”. In reality, this “response” is
not legal argument, but rather a written report offered as the testimony of the IW/CC’s witness

Mr. Walter Cooper. In his report and testimony included in Appendix D, Mr. Cooper includes technical statements and information regarding radio frequency propagation that were not offered by the IW/CC at any time during the hearing process and after AT&T's cross examination and rebuttal in the Docket. Clearly, Mr. Cooper has sought to rehabilitate his testimony during the evidentiary process in Docket 409A which was shown to be lacking in credibility and offer reply to the properly offered rebuttal testimony of AT&T's witness Mr. Wells. More importantly, the IW/CC solicited this new written testimony and tried to incorporate it in a post-hearing brief innocuously, despite three hearings and the close of the evidentiary record on June 11, 2013. For the reasons set forth herein, the Applicant respectfully submits that the IW/CC's action, without the benefit of a motion or any good faith basis upon which to violate the CSC's rules, should not be condoned and Appendix D and any references thereto in the IW/CC post-hearing brief discarded and removed from the record in this proceeding.

Section 16-50o(a) of the Connecticut General Statutes ("CGS"), CGS Section 4-178(5) and Section 16-50j-28 of the RCSA provide the right of every party to a proceeding to present evidence and conduct cross-examination for a full and true disclosure of the facts. Section 16-50j-25(a) of the RCSA provides that the purpose of an evidentiary hearing shall be to provide "all parties an opportunity to present evidence and cross-examine all issues to be considered by the Council." Only an Applicant has the right of rebuttal. *Id.* Any new evidence sought to be submitted short of Siting Council permitted post-hearing filings or other governmental findings for which the Council may take administrative notice is clearly improper. RCSA § 16-50j-25(a); RCSA § 16-50j-28(e); *see* RCSA § 16-50j-28(d) (all documentary evidence must be sworn under oath).

It is a fundamental tenant of administrative law that new testimony cannot be admitted as evidence or evaluated by any party to the proceeding after the close of the hearing. Procedural due process requires that all parties to the proceeding have a reasonable opportunity to know the facts which the decision making agency is considering and to know and rebut the claims of any other party to the proceeding.¹ The information included in Mr. Cooper's testimony in Appendix D and cited in the IW/CC's post hearing brief was simply not discussed at all by Mr. Cooper at any time during the evidentiary process and the IW/CC has violated AT&T's procedural due process rights by submitting same *after* the hearing. *See* CGS § 16-50o(a); CGS § 4-178(5); RCSA § 16-50j-28.

Appendix D and any references thereto should be stricken from the administrative record in this proceeding. In the unlikely event that Appendix D is not removed from the record in response to this objection, we respectfully submit the attached information from Mr. Wells regarding Mr. Cooper's post hearing testimony for consideration by the Council. The attached is only offered to the extent the prejudice to AT&T cannot be remedied and in furtherance of its right of rebuttal and as a remedy for the IW/CC's flagrant violation of Siting Council rules and procedures intended to protect all parties due process rights in Docket 409A.

AT&T's position in its present objection to the IW/CC's post-hearing submission of unverified reply testimony is readily distinguishable from the IW/CC's objection to AT&T's request that the Siting Council take administrative notice of documentation from the State Historic Preservation Officer ("SHPO") dated June 28, 2013. The Siting Council routinely takes administrative notice of information provided by other state agencies, including documentation

¹ *Ryker v. Town of Bethany*, 97 Conn. App. 304, 904 A.2d 1227, cert. denied, 280 Conn. 932, 909 A.2d 958 (2006); *Gaiamo v. City of New Haven*, 257 Conn. 481, 512, 513, 778 A.2d 33 (2001); *Cassella v. Civil Service Comm'n of City of New Britain*, 4 Conn. App. 359, 363, 494 A.2d 909 (1985), aff'd, 202 Conn. 28, 519 A.2d 67 (1987); *Pizzola v. Planning & Zoning Comm'n of Town of Plainville*, 167 Conn. 202, 207, 355 A.2d 21 (1974); *Balkus v. Terry Steam Turbine Co.*, 167 Conn. 170, 177, 355 A.2d 227 (1974).

from SHPO. Unlike the IW/CC, AT&T does not offer the SHPO correspondence in rebuttal or reply to any specific testimony, but only as a document for the reference of the Siting Council and all parties and intervenors. Furthermore, unlike the veiled reply testimony offered by the IW/CC, the SHPO letter is produced by a state agency and is subscribed to by an officer of the state.

In accordance with its regulations and state law, the Siting Council has taken administrative notice of sixty-three separate documents in Docket 409A, including several site-specific documents from state agencies. Indeed, the Siting Council took administrative notice of SHPO correspondence after the close of its proceedings in the underlying Docket 409. Moreover, the Siting Council has routinely taken administrative notice of SHPO documentation after the close of its proceedings in other Dockets, including Docket 429. The IW/CC's submission of reply testimony without identifying or allowing AT&T to conduct cross-examination of its source stands in sharp contrast to AT&T's request that the Siting Council take administrative notice of routine SHPO correspondence for the benefit of all parties and intervenors. The IW/CC's submission of unauthenticated testimony violates AT&T's due process rights and therefore, must be stricken.

IW/CC's Request for Costs has No Basis and Should be Denied

AT&T objects to the IW/CC's request that the Siting Council grant its fees and costs on these proceedings. Similar to its attempt to offer new testimony after the close of the hearing through an attachment to a its post hearing brief, the IW/CC's request for costs is without the benefit of a motion or any citation to law. The IW/CC fails to cite any statute, regulation or rule that would provide for its costs and fees in this Docket. Moreover, the IW/CC fails to provide

any basis or evidence to substantiate its request for costs. Further, the Siting Council is not vested by the legislature with authority to award costs. Indeed, in Docket 378, the Siting Council determined that it had no statutory authority to award attorney's fees or costs under the Public Utility Environmental Standards Act. Accordingly, the IW/CC's request for costs should be procedurally and substantively denied.

CERTIFICATE OF SERVICE

I hereby certify that on this day, a copy of the foregoing was sent by overnight delivery to the Connecticut Siting Council.


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Dated: August 1, 2013


Lucia Chiochio

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RESPONSE TO IW/CC'S APPENDIX D POST HEARING TESTIMONY

In response to the statements that Section 1.1307 does not prohibit monitoring of cell site emissions:

Direct quotes from *A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance*, FCC & Local and State Government Advisory Committee, June 2000, pgs 6-7:

“The Commission has determined through calculations and technical analysis that due to their low power or height above ground level, many facilities by their very nature are highly unlikely to cause human exposures in excess of the guideline limits, and operators of those facilities are exempt from routinely having to determine compliance. Facilities with these characteristics are considered "categorically excluded" from the requirement for routine environmental processing for RF exposure. Section 1.1307(b)(1) of the Commission's rules sets forth which facilities are categorically excluded. If a facility is categorically excluded, an applicant or licensee may ordinarily assume compliance with the guideline limits for exposure. However, an applicant or licensee must evaluate and determine compliance for a facility that is otherwise categorically excluded if specifically requested to do so by the FCC. If potential environmental significance is found as a result, an EA must be filed with the FCC.” “In addition, a cellular facility is categorically excluded, regardless of its power, if it is not mounted on a building and the lowest point of the antenna is at least 10 meters (about 33 feet) above ground level. A broadband PCS antenna array is categorically excluded if the total effective radiated power of all channels operated by the licensee at a site (or all channels in any one direction, in the case of sectorized antennas) is 2000 watts or less. Like cellular, another way for a broadband PCS facility to be

categorically excluded is if it is not mounted on a building and the lowest point of the antenna is at least 10 meters (about 33 feet) above ground level. The power threshold for categorical exclusion is higher for broadband PCS than for cellular because broadband PCS operates at a higher frequency where exposure limits are less restrictive. For categorical exclusion thresholds for other personal wireless services, consult Table 1 of Section 1.1307(b)(1).” “The appropriate exposure limits . . . are generally applicable to all facilities, operations and transmitters regulated by the Commission. However, a determination of compliance with the exposure limits . . . (routine environmental evaluation), and preparation of an EA if the limits are exceeded, is necessary only for facilities, operations and transmitters that fall into the categories listed in table 1 [of §1.1307], or those specified in paragraph (b)(2) of this section. All other facilities, operations and transmitters are categorically excluded from making studies or preparing an EA”

In response to the statements that the applicant's assertions about the accuracy of IW/CC's propagation map are not correct:

The area on the IW/CC's propagation map that Mr. Wells was describing is on Route 63 where the highway runs right along the western edge of the base of Cobble Hill. It is part of the main coverage objective for the original proposed site (Docket 409). On the IW/CC propagation map of the A5 Site (unavailable Town owned site), the area in question shows in-building coverage at a distance of nearly 4km (about 2.5 miles) from Site A5. This coverage on the IW/CC plot occurs at a point where the line of sight has just passed through roughly 500 horizontal meters of Cobble Hill at a depth of as much as 40 meters below the surface of the mountain. In this instance, the very much standard RF engineering practice of examining terrain profiles to critical coverage areas makes it perfectly clear that such a strong signal level is virtually impossible at this point. No amount of diffraction that would occur in the real world would make strong signal appear at the base of this mountain on the side opposite the A5 Site.

The propagation analysis presented by AT&T in its propagation maps portray the sort of diffraction that occurs in this area based on actual measured data. Diffraction exists, but the road is, as Rappaport stated, in the deepest, most “obstructed (shadowed) region” at the foot of the mountain on the side opposite the site. Some extremely small amount of diffracted signal might be detectable in this area, but would not be nearly strong enough to provide any usable signal. The IW/CC propagation maps greatly over-predict the coverage due to diffraction in this area. Based on an examination of the terrain profile, IW/CC's propagation maps do not accurately portray the signal level that would be achieved from Site A5.

In response to the statements that the applicant's statements about deterministic propagation models are erroneous:

The existence of many different propagation models and their relative effectiveness was not debated. Mr. Wells did not state that the model used by the IW/CC ignores clutter. He simply explained that it is not good engineering practice to use a propagation model without calibrating

it against measured data from the area under study. He noted that for a deterministic model, or the model used by the IW/CC, to be accurate without calibration against measured data, the clutter data and the model must account for every detail of the clutter including, but not limited to, every tree height, the spacing and type of trees and every building's characteristics.

With respect to the government-issued land cover/land use data, the most current 2006 NLCD (National Land Cover Database) data has 20 clutter categories. Of those, 4 occur only in Alaska in the database (Sedge/Herbaceous, Dwarf Scrub, Lichens, Moss). Of the remaining 16, only 3 are used to describe any type of forest (Deciduous, Evergreen, and "Mixed"). There is no height or density associated with these categories, nor any information on the specific types of trees or any other characteristics. A giant sequoia forest and a Christmas tree farm are both simply "Evergreen". Thus, a propagation analysis run on two such "Evergreen" areas could not produce proper results without comparison to measured data in the area to account for the rather significant variation in tree height.

The creator of the Biby-C model used to create the IW/CC propagation maps was contacted. According to Richard P. Biby, P.E., the model was developed over 13 years ago using drive test data from a wide variety of locations and the best land use data available at that time. However, as with any model, if the Biby-C model is not checked against measured data in the specific area under study, it is not possible to conclude with confidence that one is obtaining the most accurate predictions achievable with the model. A copy of Mr. Biby's email regarding this discussion is attached.

The tool used to produce AT&T's plots uses a highly sophisticated, in-depth analytical approach to propagation modeling that does take into account the actual physics of radio propagation. AT&T conducts tests of local existing coverage for every application submitted to the Siting Council. In nearly every case, the results obtained from the "generic" model can be significantly improved upon by calibrating the model via comparison to measured data. Indeed, extensive measured data is collected and used to adjust over half a dozen model parameters for each clutter category to make the model fit the characteristics of the local RF environment as well as possible. Optimization of the model with measured data is required regardless of choice of model. This is substantiated by Mr. Biby's email regarding the specific mode used by the IW/CC.

In response to the statements that the applicant's coverage objectives are inappropriate, misleading and inconsistent with previous practice:

As consistently testified in numerous proceedings before the Siting Council, AT&T designs its network to provide reliable service at -74 dBm for in-building coverage and -82dBm for in-vehicle coverage. These design signal levels allow users of AT&T's network to reliably access the network.

As demonstrated in this proceeding, repeaters, microcell transmitters, distributed antenna systems and other types of transmitting technologies are not a practical or feasible means of providing service to this area. As noted, these technologies are suited for providing service to a specifically-defined, limited area. The area where coverage is needed in Falls Village requires a technology that can reach a coverage footprint that spans thousands of acres. Thus, these alternative technologies cannot be implemented to provide service to this area.

In response to the statements that the IW/CC and AT&T plots are more similar than may be immediately apparent:

The record demonstrates that AT&T's propagation maps accurately predict the proposed coverage for reliable service. AT&T's coverage analyses by Mr. Wells is based on over 20 years of experience in land mobile communications and on measured data collected in the area where coverage is needed.

The IW/CC propagation maps rely solely on the assertion that the propagation model used (Biby-C) is always correct and need not be calibrated with measured data from the area. Based on the information from the creator of the Biby-C model, calibration with measured data should be done to ensure accurate predictions.

Thus, it is respectfully submitted that AT&T's coverage plots accurately portray AT&T's existing network in this area and accurately predicted coverage from AT&T's proposed facility using measured data from the area.

Chiocchio, Lucia

From: Chiocchio, Lucia
Sent: Thursday, August 01, 2013 3:46 PM
To: Chiocchio, Lucia
Subject: FW: Re your call

From: Richard P Biby [<mailto:rich@biby.net>]
Sent: Wednesday, July 31, 2013 2:53 PM
To: Martin Lavin
Subject: Re your call

Hi Martin,

Thanks for the call regarding the Biby-C propagation model and the RF-CAD propagation tool.

It has been over 13 years since I have actively been involved with the development of the tool, and to the best of my knowledge development was halted in about 2003 and support sometime around 2005. Major features were not upgraded much past my involvement in approximately 2001. Just a little history: I had developed the program as part of Communications Data Systems, Inc., a company I owned. I then sold that company to Crown Castle International, Inc., along with Sitesafe, LLC in 2000, and then served as CTO of Crown Castle International for a number of years before briefly "retiring". I started Above Ground Level magazine in 2004, and remain its publisher. The magazine is dedicated to the antenna siting industry and I remain involved with a number of consulting organizations and propagation related projects today.

The propagation model was based primarily on the Longley-Rice model, and included various small model modifications that address a few anomalies. The larger improvement focused on allowing excess path adjustments for various land use environments in which the receiver may be located. This was done through some extensive measurements (for the late 1990s) in CA, VA and NM. At the time, the land use and land cover data (LULC) was not terribly precise and, if memory serves, there were only 21 codes to which we could assign excess loss values. And the tile size of the LULC data was pretty large by today's standards.

As for the overall accuracy of the model; the point to point, smooth earth accuracy remains pretty good, particularly for a larger area, where both transmitter and receiver are not in the clutter, such as forest or sloping terrain. If at all possible, a "clean" Longley-Rice prediction with excess path attenuation data for the particular market would result, I believe, in a far more accurate prediction and reflect the true expected performance of a site then relying on the Biby-C model. I'm not knocking my own work (and the countless hours my father, Richard L. Biby spent on its development), however, its purpose and position in the industry was reflective of the state of the art in the late 1990s. Now the ability to collect signal strength data and develop a localized correction matrix is in my belief, the proper way to create the most accurate prediction of coverage.

I'm happy to discuss any RF topic with you or anyone else and anytime. It remains an area of great interest to me.

Nice to speak with you again.

Best regards,
Rich

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