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March 31, 2016

VIA ELECTRONIC SUBMISSION

Marlene Dortch
Secretary
Federal Communications Commission
Washington, DC 20554

Re: Application of USCOC Nebraska/Kansas, LLC and Hershey Cooperative Telephone Company For Consent to Assign A Lower 700 MHz Block B License (WT Docket No. 16-14)

Dear Ms. Dortch:

Transmitted herewith, on behalf USCOC Nebraska/Kansas, LLC and its parent company, United States Cellular Corporation, is a redacted version of its Response to the March 17, 2016 letter from John Wilkins, Chief of the Wireless Telecommunications Bureau, to John Gockley of United States Cellular Corporation seeking additional information concerning the above-referenced application.

In the event there are any questions concerning this matter please communicate with the undersigned.

Very truly yours,

Peter M. Connolly

cc (via email):
Scott Patrick (FCC)
Kate Mathews (FCC)
Jim Bird (FCC)

#40113390_v1

WT DKT. 16-14
US CELLULAR RESPONSE

Redacted for Public Inspection

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March 31, 2016

Jon Wilkins
Chief, Wireless Telecommunications Bureau
Federal Communications Commission
Washington, DC 20554

Re: Application of USCOC Nebraska/Kansas, LLC and Hershey Cooperative Telephone Company For Consent to Assign A Lower 700 MHz B Block License (WT Docket No. 16-14) (Confidential Information – Subject to Protective Order in WT Docket No. 16-14 Before Federal Communications Commission)

Dear Mr. Wilkins:

On behalf of USCOC Kansas/Nebraska, LLC and its parent company United States Cellular Company (collectively "USCC"), this will respond to your letter of March 17, 2016 seeking "additional information, documents and clarification of certain matters discussed in the application and other information provided to the Commission."

For convenience, we will reprint each of the Commission's questions before providing our response.

QUESTION 1. On page 1 of the Public Interest Statement, the Applicants claim that USCC "plans to use the 700 MHz spectrum to implement its Long Term Evolution ('LTE') deployment in the relevant license areas." Further, on page 2 of the Public Interest Statement, the Applicants assert that additional 700 MHz spectrum is needed to allow USCC/King Street "to offer their customers a 10 x 10 channel with throughput speeds comparable to those of the larger carriers." For CMA 538 (Nebraska - Keith), provide:

a. A detailed discussion of the Company's plans to provide advanced mobile telephony/broadband services prior to the Proposed Transaction, including a detailed description of the Company's current and planned deployment of LTE, which identifies the spectrum bands and the total amount of spectrum used for LTE deployment.

b. A detailed description of how the Company would use the spectrum that it would acquire under the Proposed Transaction, including its timeline for deployment, to provide

advanced mobile telephony/broadband services to consumers, on a standalone basis and/or in conjunction with any other of the Company's attributable spectrum holdings.

c. A detailed description of how deployment of a 10 x 10 MHz LTE network would improve throughput speeds.

d. A detailed explanation of why the Company needs more than one-third of the suitable and available spectrum below 1 GHz for the provision of mobile wireless services.

e. Provide all documents relied on in preparing the responses to 1(a)-1(d).

Answer to Question 1(a)

The proposed acquisition involves four counties in Nebraska RSA#6,[1] referred to below as the Relevant Area. Attachment A hereto is a map of the Relevant Area. In order to provide competitive service, USCC and its partner King Street Wireless, L.P. ("King Street") plan to utilize the additional 12 MHz of 700 MHz B Block spectrum it seeks to acquire in the Proposed Transaction to upgrade and enhance an existing 700 MHz LTE deployment from a 5 x 5 MHz channel to a 10 x 10 MHz channel. This will allow USCC to provide its existing customers an LTE experience comparable to its competitors.

Attachment B hereto consists of an internal TDS "Power Point" presentation from September 2015 describing USCC's "valuation" of the Hershey Cooperative Telephone Company license in the Relevant Area.

Attachment C hereto consists of a summary of USCC service measurements taken in the Relevant Area in February 2016. The measurements demonstrate the superiority of 10 x 10 MHz over 5 x 5 MHz LTE operations. As shown in the chart, throughput [redacted] (present frequency deployment to be described in greater detail below). However, throughput was measured [redacted]

USCC currently offers CDMA, EVDO, and LTE services in the Relevant Area. These services are deployed on USCC's current spectrum holdings. These consist in part of 25 MHz of A Block cellular spectrum. The cellular spectrum band is now used to support USCC's [redacted] services in the Relevant Area. USCC however cannot expand its LTE services on its cellular spectrum. USCC also holds 12 MHz of 700 MHz C Block spectrum, which it plans to use for LTE operations in the future.

[1] Those counties are Dawson, Keith, Lincoln and Perkins.

Lastly, 12 MHz of 700 MHz A Block spectrum (Band Class 12) in the Relevant Area is licensed to King Street, a Commission licensee in which an affiliate of USCC is a limited partner. [redacted]

The chart below, taken from the pending application, graphically describes USCC's present and proposed spectrum holdings in the Relevant Area together with the King Street spectrum to which USCC has access. As is discussed in the pending application, USCC's maximum attributed spectrum holdings in any county in the Relevant Area do not exceed 61 MHz. This is less than one-third of the 194 MHz wireless spectrum "screen" used by the FCC to evaluate whether any acquisition creates concerns about competition.

License Area	County	ST	County FIPS	Overlap BTA Number/Name	Overlap MTA Number/Name	Overlap EA Number/Name	Proposed USCC Lowerband 700 MHz B Block Spectrum Acquisition (in MHz)	Currently Licensed Attributable USCC Cellular A/B Blk Spectrum (in MHz)	Currently Licensed Attributable USCC 700 MHz A Block Spectrum (in MHz)	Currently Licensed Attributable USCC 700 MHz C Block Spectrum (in MHz)	Total Attributable USCC CMRS Spectrum - Post Transaction Closing
CMA538 - Nebraska 6 Keith (WQMI599)	Dawson	NE	31047	325 - North Platte, NE	045 - Omaha	120 - Grand Island, NE	12 MHz	25 MHz (*U)	12 MHz (*K)	12 MHz (*U)	61 MHz
	Keith	NE	31101	325 - North Platte, NE	045 - Omaha	121 - North Platte, NE-CO	12 MHz	25 MHz (*U)	12 MHz (*K)	12 MHz (*U)	61 MHz
	Lincoln	NE	31111	325 - North Platte, NE	045 - Omaha	121 - North Platte, NE-CO	12 MHz	25 MHz (*U)	12 MHz (*K)	12 MHz (*U)	61 MHz
	Perkins	NE	31135	325 - North Platte, NE	045 - Omaha	121 - North Platte, NE-CO	12 MHz	25 MHz (*U)	12 MHz (*K)	12 MHz (*U)	61 MHz

*K - attributable spectrum held through King Street Wireless, L.P., of which US Cellular holds an indirect, non-controlling 90% interest
*U - spectrum held directly by US Cellular controlled entities

Answer to QUESTION 1(b):
To put it simply, a 10 x 10 MHz LTE deployment provides throughput speeds and additional capacity that are approximately two times the speed and capacity of a 5 x 5 MHz LTE deployment. Attached hereto as Attachment D is a PowerPoint presentation, prepared by USCC, which compares the operations of 1X EV-DO Rev.A, 5 x 5 MHz LTE, and 10 x 10 MHz LTE systems with respect to download speeds, upload speeds, airlink latency, connection setup times, movie download times, MP3 download times, and e-mail and attachment download times. As shown in the chart, 10 x 10 MHz LTE performance is far superior to that of 5 x 5 MHz operations.

In that connection, we would note that the FCC has repeatedly stressed the importance of improving carrier broadband speed to meet its educational and other public interest goals. See, e.g., In the Matter of Modernizing the E-Rate Program For Schools and Libraries Connect America Fund, Second Report and Order on Reconsideration, W.C. Docket Nos 13-184 and 10-90, FCC 14-189, released December 19, 2014, ¶68 ("We require high-cost support recipients to offer high-speed broadband connections sufficient to meet the targets set forth in the E-Rate Modernization Order…").

Answer to QUESTION 1(c):
As noted above, USCC made a judgment that it needed the additional 700 MHz spectrum to improve its network in the Relevant Area and provide an LTE experience comparable to that provided by its competitors.

Answer to QUESTION 1(d):
[redacted] Certain B Block 700 MHz spectrum compatible with USCC's network was available in the Relevant Area and USCC believed that that spectrum was essential to the achievement of an improved network and competitive parity with its larger rivals.

Answer to QUESTION 1(e):
The documents are provided in Attachments A-D and are discussed above.

QUESTION 2. Provide polygons in an ESRI shapefile format representing geographic coverage for USCC in CMA 538 (Nebraska 6-Keith), including each mobile broadband network technology (e.g., CDMA, EV-DO, EV-DO Rev. A, GSM, EDGE, UMTS, HSPA, HSPA+, LTE) deployed in each frequency band (e.g., Lower 700 MHz, Cellular, AWS-1, PCS). Provide all assumptions, methodology (e.g., propagation, projection, field measurements), calculations (including link budgets), tools (e.g., predictive and field measurements) and data (e.g., terrain, morphology, buildings) used in the production of the polygons, and identify the propagation tool used, the propagation model used within that tool, including but not limited to, the coefficients used in the model and any additions, corrections or modifications made to the model.

Answer to Question 2:
The requested ESRI shape files and spectrum coverage maps, along with the relevant "link budgets," are attached hereto as Attachment E. The maps depict USCC's present cellular (Band Class 5) and LTE (Band Class 12) coverage of the Relevant Area. The information provided in the shape files with respect to USCC's CDMA, EVDO, and LTE coverage is described below.

The ESRI shape files are provided for the following types of network coverage in the Relevant Area.

- CDMA Coverage
  We attach analysis of USCC's CDMA 1XRTT reverse link budget. It provides a threshold for expected "In-Vehicle" coverage as identified by Reverse Link Required Effective Isotropic Radiated Power (EIRP). Industry standard coverage prediction tools were used to create predicted coverage plots. The threshold value was then used to create the provided contour showing where USCC expects to have at minimum "In-Vehicle" coverage. The predictions are based on mathematical estimations at a 30x30 meter grid level, and resized to a 180x180 meter due to processing constraints. Actual coverage will vary and depend on many factors typical of radio technologies including but not limited to distance to cell, cell/resource loading, subscriber speed, indoor/outdoor usage, etc.).

- EVDO Coverage
  Similarly, analysis is provided for USCC's EVDO reverse link budget. It provides a threshold for expected "In-Vehicle" coverage as identified by Reverse Link Required Effective Isotropic Radiated Power (EIRP). Industry standard coverage prediction tools were used to create predicted coverage plots. The threshold value was then used to create the provided contour showing where USCC expects to have at least mobile "In-Vehicle" coverage. The predictions are based on mathematical estimations at a 30x30 meter grid level, and resized to a 180x180 meter due to processing constraints. Actual coverage will vary and depend on many factors typical of radio technologies including but not limited to distance to cell, cell/resource loading, subscriber speed, indoor/outdoor usage, etc.).

- LTE Coverage
  Lastly, analysis is provided for USCC's LTE reverse link budget. It provides expected "In-Vehicle" coverage as identified by Reverse Link Required Effective Isotropic Radiated Power (EIRP). Industry standard coverage prediction tools were used to create predicted coverage plots. The threshold value was then used to create the provided contour showing where US Cellular expects to have at least mobile "In-Vehicle" coverage. The predictions are based on mathematical estimations at a 30x30 meter grid level, and resized to a 180x180 meter due to processing constraints. Actual coverage will vary and depend on many factors typical of radio technologies including but not limited to distance to cell, cell/resource loading, subscriber speed, indoor/outdoor usage, etc.).

QUESTION 3. On page 3 of the Public Interest Statement, the Applicants submit that the Proposed Transaction "will undoubtedly improve USCC's network." For Nebraska 6-Keith, provide a detailed discussion of how the Proposed Transaction promotes and preserves meaningful competition, would still allow rival service providers and potential new entrants to provide an effective competitive constraint, and how it would allow the Company to become a more effective competitor. Provide all documents relied on in preparing the response.

Answer to Question 3:
As noted above, the additional 12 MHz of 700 MHz C Block spectrum would better enable USCC to compete in the Relevant Area, now and in the future. Future competition is not something which can be estimated or quantified precisely but competition is now thriving in the Relevant Area and likely will do so in the future.

Attachment B of the instant application, incorporated by reference here, described the spectrum holdings of USCC's competitors in the Relevant Area. They are extensive. For example, in Verizon Wireless holds 700 MHz, Cellular, and AWS spectrum in the Relevant Area, AT&T Wireless holds 700 MHz, AWS, and PCS spectrum, Sprint, T-Mobile and other carriers also hold significant spectrum.

USCC has no current market share data for the Relevant Area but believes, based on regional data, that the numbering information to be reviewed by the Wireless Bureau for the Relevant Area in connection with the Proposed Transaction will demonstrate a healthy degree of competition in the relevant four counties.

It is also worth noting that competition in the Relevant Area has been strengthened by the award of five new wireless licenses covering the relevant counties as a result of the 2015 AWS-3 auction and will be further augmented by the award of new licenses in the 600 MHz auction in 2016.

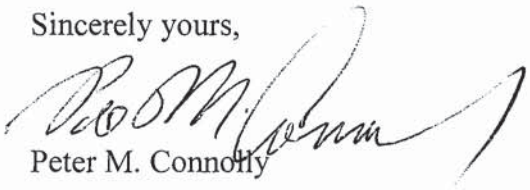
In closing, USCC would also stress that it is one of the few remaining mid-sized wireless carriers, a category which formerly included such strong competitors as Alltel, Midwest Wireless, Western Wireless, Leap, MetroPCS, Atlantic Cellular, and Dobson Cellular. Such carriers once provided disciplining competition to the largest wireless carriers. But they are now gone, absorbed by larger carriers. USCC however has chosen to remain a wireless carrier and is pursuing a long term strategy [redacted].

Also, as the Wireless Bureau has noted in recent orders approving acquisitions of "under 1 GHz" spectrum, the acquisition of such spectrum:

> "by non-nationwide services providers present[s] a significantly lower risk of effectively denying access to low band spectrum by competitors because of their relative lack of resources."[2]

We ask the FCC to permit this relatively small acquisition of spectrum in four counties go forward, precisely to strengthen USCC as a competitor to the "Big Four" and other carriers. The Proposed Transaction will strengthen competition nationally and locally.

Sincerely yours,



Peter M. Connolly

cc: Katherine Harris, FCC (*katherine.harris@fcc.gov*)

[2] See, Application of Cellular South Licenses, LLC d/b/a C-Spire Wireless and Waller Wireless, Inc. for Consent to Assign Licenses, W.T. Docket No. 15.111 DA 16-208. Memorandum Opinion and Order, released February 26, 2016, ¶19.

CONFIDENTIAL INFORMATION SUBJECT TO PROTECTIVE ORDER IN WT DOCKET NO. 16-14 BEFORE THE FEDERAL COMMUNICATIONS COMMISSION

Attachments A through E
Redacted from Public Inspection

Confidential Information Subject to
Protective Order in WT Docket 16-14
Before the Federal Communications Commission