

Exhibit No.:
Issue: Application for Designation as an Eligible
Telecommunications Carrier
Witness: Michael K. Kurtis
Sponsoring Party: Missouri RSA No. 7 Limited Partnership
d/b/a Mid-Missouri Cellular
Type of Exhibit: Direct Testimony
Case No.: TO-2003-0531
Due Testimony Prepared: October 29, 2003

MISSOURI RSA NO. 7 LIMITED PARTNERSHIP

d/b/a

MID-MISSOURI CELLULAR

DIRECT TESTIMONY

OF

MICHAEL K. KURTIS **FILED**³

FEB 19 2004

**Missouri Public
Service Commission**

CASE NO. TO-2003-0531

Exhibit No. 4
Case No(s). TO-2003-0531
Date 1-28-04 **Rptr** Pit

1 **DIRECT TESTIMONY**

2 **OF**

3 **MICHAEL K. KURTIS**

4 **APPLICATION OF MISSOURI RSA NO. 7 LIMITED**
5 **PARTNERSHIP d/b/a MID-MISSOURI CELLULAR**

6
7 **CASE NO. TO-2003-0531**
8

9
10 Q. Please state your name and business address.

11 A. Michael K. Kurtis, 1000 Potomac Street, N.W., Suite 200, Washington, D.C.
12 20007.

13 Q. By whom are you employed and in what capacity?

14 A. I am the founder, principal officer and director of Kurtis & Associates, P.C.,
15 which is both a law firm and an engineering consulting firm.

16 Q. Please describe your educational background.

17 A. I received my baccalaureate degree in electrical engineering (1975) and my Juris
18 Doctorate (1978) from Valparaiso University. I am licensed to practice law in the
19 District of Columbia.

20 Q. Please describe your work experience.

21 A. I am both an electrical engineer and a practicing attorney. For the past 25 years, I
22 have practiced telecommunications law, combining my engineering and communications
23 practices in the last 23 of those 25 years. Previously, I was an instructor of electrical
24 engineering at Valparaiso University, an engineering consultant to the Illinois
25 Association of Chiefs of Police, and a systems engineer with Motorola, Inc., working on

Direct Testimony of
Michael K. Kurtis

1 the design of two-way radio systems (cellular and conventional), point-to-point radio
2 systems, propagation studies, field-testing, and equipment design.

3 In 1995, I founded Kurtis and Associates, P.C. ("K&A"), which provides legal
4 and engineering representation to telephone companies, personal communications,
5 cellular, paging, microwave and other wireless communication carriers and
6 entrepreneurs.

7 Q. What professional services have you provided to Missouri RSA No. 7 Limited
8 Partnership d/b/a Mid-Missouri Cellular ("MMC")?

9 A. I have been involved, either directly or in a supervisory capacity, in all facets of
10 providing engineering and legal/regulatory representation to MMC since 1989. In terms
11 of engineering, I have provided to MMC a full array of design, analytic and
12 implementation services with respect to MMC's cellular communications system in
13 Missouri RSA No. 7. Using proprietary propagation and system analysis software, I and
14 my colleagues have analyzed MMC's coverage requirements in Missouri RSA No. 7 and
15 advised MMC concerning infrastructure modifications that would improve and expand
16 reliable coverage provided to subscribers. We then have prepared and circulated requests
17 for proposals to equipment manufacturers and other vendors, analyzed the ensuing
18 responses and, based on our understanding of MMC's business plan, recommended the
19 optimal proposal to MMC's management. We then supervised and evaluated equipment
20 installation and other construction activity, performing initial testing, and all due
21 diligence incident to and necessary for system acceptance. We have been involved in all
22 system design, expansion and coordination of frequency usage with adjacent market
23 licensees.

Direct Testimony of
Michael K. Kurtis

1 In addition to these activities, I have supervised the preparation of numerous
2 applications and other documents filed with the Federal Communications Commission
3 (the "FCC"), and coordinated with FCC staff to facilitate successful processing of these
4 submissions. I have also provided engineering representation in connection with FCC,
5 FAA, state regulatory, and zoning compliance matters.

6 Regarding legal representation, I have advised MMC on all aspects of complying
7 with FCC rules generally pertaining to wireless carriers as well as those that specifically
8 apply to cellular carriers. In addition, I have advised MMC concerning all relevant FCC
9 regulatory initiatives including (but not limited to): the Communications Assistance for
10 Law Enforcement Act of 1994 ("CALEA"); emergency – E911 service (particularly,
11 accuracy requirements for wireless carriers under the FCC's Rules); FCC environmental
12 rules and policies; universal service fund; and wireless number pooling and portability.
13 With respect to these matters, I have prepared or supervised the preparation on MMC's
14 behalf of pleadings, comments, applications and other documents for filing with the FCC
15 or with other regulatory agencies and the courts. I am also involved in the ongoing
16 representation of MMC's interests to other carriers, third parties and MMC's various
17 equipment and service suppliers. On MMC's behalf, I have negotiated or assisted in the
18 negotiating of its several interconnection agreements, as well as its purchase agreements
19 with equipment and service suppliers.

20 Q. Have you previously provided testimony before the Missouri Public Service
21 Commission (the "Commission")?

22 A. Yes, I have. I provided testimony on behalf of MMC in the arbitration of its
23 interconnection agreement with Southwestern Bell Telephone in Case No. TO-99-279.

Direct Testimony of
Michael K. Kurtis

1 Q. What is the purpose of your testimony in this proceeding?

2 A. My testimony will support and expand upon certain statements and factual
3 representations in MMC's Application For Designation As An Eligible
4 Telecommunications Carrier Pursuant To §254 Of The Telecommunications Act Of 1996
5 ("Application") in this docket. In addition, I will demonstrate why grant of the
6 Application is in the public interest.

7 Q. Please provide some background information concerning MMC's cellular service
8 in Missouri RSA No. 7.

9 A. Pursuant to its FCC cellular license (Call Sign KNKN595), MMC provides analog
10 and TDMA-based cellular service in Missouri RSA No. 7, Market No. 510B, which
11 comprises Cooper, Howard, Johnson, Lafayette, Pettis and Saline counties. MMC,
12 pursuant to cellular license KNKR207, is also a cellular carrier in previously unserved
13 territory located in MSA Market No. 24B(2), *i.e.*, the Kansas City MSA, which
14 comprises a large portion of Ray County and a smaller segment of Cass County. MMC
15 claimed small portions of Carroll, Henry and Morgan counties, which were also
16 previously unserved areas, as part of its Missouri RSA No. 7 Cellular Geographic Service
17 Area ("CGSA"). The small segment of MMC's CGSA in Cass County is operated,
18 pursuant to an inter-carrier agreement, as part of the Cingular Wireless network.

19 Several weeks ago, MMC applied for FCC consent to assign that portion of its
20 KNKR207 license covering Cass County to Kansas City SMSA Limited Partnership, an
21 affiliate of Cingular Wireless LLC. In its Application (at footnote 17), MMC voluntarily
22 excluded its subject licensed service area in Cass County from the area for which it was
23 seeking ETC designation. Within the area proposed for ETC designation in its

Direct Testimony of
Michael K. Kurtis

1 Application, MMC operates 26 individual cellular base stations. The antenna towers
2 associated with these base stations are either owned outright by MMC or leased from a
3 third party.

4 Q. Before discussing the communication services MMC provides in its proposed
5 ETC area, please comment on the “rural telephone company” service areas that are
6 included within MMC’s proposed ETC area.

7 A. MMC’s proposed ETC designated area is discussed at paragraph 6 of the
8 Application, which references to Appendices D, E and F of the Application. Appendix D
9 shows (with a broken yellow line) MMC’s composite Cellular Geographic Service Area
10 (“CGSA”) as licensed by the FCC. The composite CGSA is superimposed on a Missouri
11 Telecommunications Industry Association (“MTIA”) map that depicts incumbent local
12 exchange carrier (“ILEC”) exchange boundaries. As discussed below, the MTIA map that
13 was used to prepare Appendix D has since been updated by MTIA. The term “rural
14 telephone company” is defined in Section 153(37) of the Communications Act, 47 U.S.C.
15 § 153(37) as a local exchange carrier that meets any one of that statutory provision’s size
16 or service area criteria.

17 Although it has the right to seek ETC designation in the entire area that falls
18 within the yellow line, MMC has voluntarily excluded the “study areas” of four rural
19 telephone companies whose component exchanges fall partially within MMC’s CGSA.
20 The four excluded rural telephone companies are Alltel, Cass Telephone Company,
21 Chariton Valley Telephone Company and Green Hills Telephone Company. By
22 excluding these four rural companies, MMC has spared this Commission the analysis
23 required by Section 54.207(c)(1)(ii) of the FCC’s Rules that should be undertaken before

Direct Testimony of
Michael K. Kurtis

1 a prospective eligible telecommunications carrier (“ETC”), like MMC, can be deemed an
2 ETC in “an area” served by a rural telephone company. (The analysis is discussed on
3 pages 11-13 of the Application and, according to Section 54.207(c)(1)(ii) must “take into
4 account the recommendations of any Federal-State Joint Board convened to provide
5 recommendations with respect to the definition of a service area served by a rural
6 telephone company.”) In this context, “an area” is interpreted to mean any physical
7 territory that is less than the rural telephone company’s entire study area. Because a
8 CGSA is generally determined by county boundaries and the service area boundaries of a
9 cellular system’s base stations (in accordance with Section 22.911 of the FCC’s Rules),
10 rather than by ILEC exchange boundaries, only a portion (*i.e.*, “an area”) of the four rural
11 telephone companies’ respective study areas are within MMC’s CGSA. MMC is
12 voluntarily excluding those “areas” from the area in which it is requesting ETC status;
13 therefore, this Commission has no need to undertake the FCC Rule 54.207(c)(1)(ii)
14 analysis with respect to the effects on these four companies of granting the Application.

15 As shown on Appendix D to the Application, MMC is also seeking ETC
16 designation in the nine exchanges of its corporate affiliate, Mid-Missouri Telephone
17 Company (“MMTC”), that are wholly within MMC’s licensed CGSA. There are,
18 however, three MMTC exchanges that fall outside the broken yellow line on Appendix
19 D, and MMC cannot and does not seek ETC designation for those exchanges. Thus,
20 MMC is seeking ETC designation in merely a portion of MMTC’s study area. As a
21 result, this Commission must undertake the FCC Rule 54.207(c)(1)(ii) analysis with
22 respect to MMC’s request to acquire ETC status in the nine exchanges of MMTC that are
23 within MMC’s CGSA. The three part analysis with respect to MMTC is set forth on

Direct Testimony of
Michael K. Kurtis

1 pages 11-13 of the Application and shows conclusively that including MMTC's nine
2 exchanges in MMC's designated ETC area is entirely appropriate and justified.

3 The FCC Rule 54.207(c)(1)(ii) analysis focuses principally on whether MMC, in
4 requesting designation in the nine exchanges, is "cream-skimming," which refers to the
5 practice of targeting only the least expensive customers to serve, thereby undercutting the
6 ILEC's ability to provide service throughout its service territory. There is no evidence
7 whatsoever that MMC is engaging in such conduct. Rather, MMC is limiting its
8 proposed ETC-designated area to the territory defined by its CGSA, subject to the
9 revisions set forth in paragraph 6 of the Application. Moreover, because MMC and
10 MMTC share common owners, any cream-skimming will be self-defeating and
11 economically irrational. Nor will MMC's ETC designation in the nine MMTC
12 exchanges in any way jeopardize the special consideration accorded rural telephone
13 companies by the Telecommunications Act of 1996 with respect to these companies'
14 interconnection, unbundling and resale obligations. Were MMC's ETC designation to
15 imperil MMTC's competitive viability, why would the common owners of these two
16 entities have authorized MMC to file the Application?

17 MMC's proposed ETC area also includes areas served by other rural telephone
18 companies, including Alma Communications Company d/b/a Alma Telephone Company
19 ("Alma") and Citizens Telephone Company of Higginsville, Missouri ("Citizens").
20 Unlike the four rural telephone companies discussed above, Alma's and Citizens'
21 respective study areas are wholly within MMC's FCC licensed CGSA. As a result,
22 including Alma's and Citizens' exchanges within MMC's proposed ETC area in no way
23 entails the analysis referenced in Section 54.207(c)(1)(ii) of the FCC's Rules.

Exchanges operated by Spectra Communications Group, LLC d/b/a CenturyTel (“Spectra”) and CenturyTel of Missouri, LLC (“CenturyTel”) are also within MMC’s proposed ETC, as depicted in Appendix D to the Application. In the Spectra/CenturyTel Application To Intervene in this proceeding (filed on or about June 18, 2003), at page 5, these entities assert: “Spectra serves the exchanges of Braymer, Concordia, Harrisburg, Kingston and Lawson. CenturyTel serves the exchanges of Prairie Home, Rocheport and Woolridge.” Regarding the Harrisburg exchange, however, the Commission’s web page listing the exchanges served by Missouri’s largest ILECs (<http://www.psc.state.mo.us/telecommunications-resources.asp>) includes no mention of Harrisburg on the page entitled “Exchanges served by Spectra.” Comparing the most recent exchange boundary map available from the MTIA, which is Attachment I hereto, with Appendix D to the Application, it appears that the Harrisburg exchange has been merged with and subsumed by the adjacent Columbia exchange. The Commission’s web page listing indicates CenturyTel serves the Columbia exchange, as well as the Prairie Home, Rocheport and Wooldridge exchanges.¹ Appendix D to the Application reveals that these four exchanges are partially within the broken yellow line that represents MMC’s composite CGSA. CenturyTel, however, is a non-rural telephone company; as a result, the FCC Rule 54.207(c)(1)(ii) analysis is inapplicable to MMC’s inclusion of these exchanges in its proposed ETC designated area.

Appendix E to the Application failed to allocate the eight exchanges listed under “Spectrum (sic) Communications Group” between CenturyTel and Spectra. Moreover,

¹ The Spectra/CenturyTel Application To Intervene, at page 4, refers to a “Woolridge” exchange. The Commission’s above-referenced web site lists a “Wooldridge” exchange. I assume these references are to the same exchange, and that one reference has simply been misspelled.

Direct Testimony of
Michael K. Kurtis

1 the four exchanges operated by Spectra--- Braymer (partial), Concordia, Kingston
2 (partial) and Lawson (partial)--- should be classified in accordance with Spectra's status
3 as a rural telephone company. Because three of the Spectra exchanges are partially
4 within MMC's proposed ETC designated area and because, as shown by the Commission
5 web page cited above, Spectra operates multiple exchanges in Missouri that are
6 completely outside the proposed ETC area, the FCC Rule 54.207(c)(1)(ii) analysis is
7 relevant to MMC's desire to include four Spectra exchanges in its ETC designated area.
8 That analysis has exactly the same result as indicated above with respect to MMTC.
9 Thus, in requesting designation of the four exchanges, MMC cannot be charged with
10 "cream-skimming" the lowest cost, highest revenue portions of Spectra's study area
11 because MMC's proposed ETC-designated area is defined by its FCC-licensed CGSA, a
12 boundary that MMC is unable to manipulate so as to allow it to pick and choose Spectra's
13 lowest cost exchanges. (This conclusion also applies to the 33 Sprint exchanges that
14 were listed in Appendix E; the USAC data base indicates that, in Missouri, Sprint meets
15 the statutory definition of a rural telephone company. Notably, and in contrast to
16 Spectra/CenturyTel, the Application To Intervene Of Sprint Missouri, Inc. and Sprint
17 Spectrum L.P., filed on June 25, 2003 (at page 2, para. 5) indicates general support by
18 Sprint for MMC's request for ETC status.)

19 There is another factor that supports the view that MMC's inability to serve
20 Spectra's entire study area reflects no intent by MMC to cream-skim. The FCC has
21 ordered rural ILECs like Spectra to disaggregate and target high cost support below the
22 study area level to eliminate uneconomic incentives for competitive entry caused by the
23 averaging of support across all lines served by a carrier within a study area. The

Direct Testimony of
Michael K. Kurtis

1 disaggregating and targeting process results in per-line universal support that is more
2 closely correlated with the actual cost of providing service. Maps on file with the
3 Universal Service Administrative Company indicate that Spectra has disaggregated and
4 targeted its high cost support by creating “low-cost” and “high-cost” zones at the wire
5 center level. See www.universalservice.org/hc/disaggregation/maps/map.asp. As a result,
6 the per-line support available to a competitive ETC providing service in a “low-cost”
7 zone is less than the amount a competitive ETC could receive if it provided service to a
8 wire center in the “high-cost” zone. By disaggregating and targeting support, Spectra has
9 eliminated the economic incentive for cream-skimming its exchanges.

10 Q. Please discuss the communications services that MMC provides in the area
11 proposed for ETC designation in the Application.

12 A. Under Section 214(e)(1) of the Act, to be designated an ETC a carrier must be a
13 common carrier and must offer throughout its proposed ETC area the services that are
14 supported by federal universal support mechanisms under Section 254(c) of the Act as
15 specified in Section 54.101(a) of the FCC’s Rules. Those services are:

- 16 1. Voice grade access to the public switched network;
- 17 2. Local usage;
- 18 3. Dual tone multi-frequency signaling or its functional equivalent;
- 19 4. Single-party service or its functional equivalent;
- 20 5. Access to emergency services;
- 21 6. Access to operator services;
- 22 7. Access to interexchange service;
- 23 8. Access to directory assistance; and
- 24 9. Toll limitation for qualifying low-income consumers.

25 Each of these services is discussed in detail in the Application. With respect to
26 access to emergency services, the discussion in the Application has been supplemented
27 and enhanced by MMC’s responses to the Commission staff’s data requests nos. 11, 12

Direct Testimony of
Michael K. Kurtis

1 and 13. With respect to the toll limitation service for qualifying low-income consumers,
2 MMC's response to data requests nos. 20 and 27 amplifies the material in the
3 Application. The aforementioned data requests and MMC's response thereto are
4 included as Attachment II to this testimony.

5 The Application states (at page 8) that MMC will provide the nine services listed
6 above using its existing network infrastructure---- *i.e.*, the same antenna, cell-site, tower,
7 trunking, mobile switching and interconnection facilities that MMC currently uses to
8 provide cellular service to its existing subscribers. Based on my many years of providing
9 technical and engineering advice to MMC concerning all aspects of its cellular network, I
10 hereby affirm the accuracy of the referenced statement in the Application.

11 Q. How will MMC's provision of the FCC Rule 54.101(a) services differ from the
12 provision of those services by ILECs operating in MMC's proposed ETC area?

13 A. The local calling area that MMC will offer to subscribers will equal or exceed in
14 size the calling area offered by Alma, Citizens and MMTC, which will reduce intra-
15 LATA toll charges associated with the service offered by these wireline carriers.
16 Customers of these carriers placing calls to destinations beyond their local calling areas
17 will incur toll charges, while MMC customers making similar calls within MMC's
18 service area will avoid such charges. (This, however, is not the case for a Lifeline
19 customer whose local calling area will be co-extensive with that of the underlying local
20 exchange carrier.) Finally, MMC will make available multiple local usage plans that
21 prospective customers can select from as part of its universal service offering.

22 Q. Does the existence of "dead spots" in the proposed ETC area preclude MMC from
23 satisfying its commitment to provide the core services set forth in FCC Rule 54.101(a)?

Direct Testimony of
Michael K. Kurtis

1 A. No, it does not. Any carrier or operator that provides commercial mobile radio
2 service is virtually certain to have “dead spots” somewhere in the geographic area in
3 which it provides service. Indeed, with respect to cellular service, the FCC’s Rules (47
4 C.F.R. § 22.99) expressly acknowledge the existence of “dead spots,” which are defined
5 as “small areas within a service area where the field strength is lower than the minimum
6 level for reliable service.” Acknowledging the prevalence of “dead spots,” the very
7 same rule states that “[s]ervice within dead spots is presumed.” Moreover, the FCC has
8 never required an ETC applicant status to demonstrate an ability to provide ubiquitous
9 coverage in the geographic area for which ETC designation was sought. To require a
10 prospective ETC to demonstrate that it can provide the supported services before it
11 receives the ETC designation effectively prohibits these aspiring entrants from providing
12 service. In many cases, it is the fact of high-cost support that allows rural carriers to
13 extend their networks into high cost areas.

14 MMC is committed to extending its existing cellular network into the remote and
15 high-cost regions of its proposed ETC area. The high-cost support that MMC will
16 receive once its Application is granted will allow it to fulfill this commitment.

17 Q. Aside from the issues and topics already discussed in your testimony, what other
18 matters should the Commission consider when it undertakes the public interest analysis
19 required by Section 214(e)(2) of the Act?

20 A. In accordance with controlling precedent, the Commission should consider the
21 effects on competition and consumer welfare resulting from a grant of MMC’s
22 Application. The FCC and many state public utility commissions have recognized that
23 designation of qualified ETCs promotes marketplace competition, which enhances

Direct Testimony of
Michael K. Kurtis

1 consumer welfare by increasing customer choice, and by promoting innovative services
2 and new technologies. Designating MMC an ETC will make it easier for customers in
3 rural Missouri to choose telecommunications service based on pricing, service quality,
4 customer service and service availability. In addition, this designation will facilitate
5 universal service in MMC's proposed ETC area by creating incentives to ensure that
6 quality services are available at just, reasonable and affordable rates.

7 At the same time, the likelihood that consumers in MMC's proposed ETC area
8 will be harmed by a grant of MMC's Application is negligible or non-existent. The strict
9 public interest requirement with respect to areas served by a rural telephone company has
10 been interpreted by the FCC as an expression of Congressional concern that consumers in
11 rural areas continue to be adequately served if an ILEC exercise its right to relinquish
12 ETC status under Section 214(e)(4) of the Act. Because MMC is committed to and
13 capable of providing the core services set forth in FCC Rule 54.101(a) using its own
14 facilities, there is no reason to anticipate that consumers in the proposed ETC area will be
15 inadequately served if one or more ILECs relinquish their ETC designation. Indeed,
16 according to the Alma Application To Intervene, filed June 6, 2003 (at page 4, para. 7),
17 "the requested service area . . . is already served by at least three local exchange
18 companies and up to as many as five wireless providers."

19 Finally, the Commission should keep in mind that designating MMC as an ETC is
20 unlikely to have an adverse or harmful affect on the rural telephone companies providing
21 service in the proposed ETC area. The federal universal support mechanism supports all
22 lines served by all ETCs in rural and high-cost areas. Receipt of high-cost support by
23 MMC will not affect the per-line support amount received by incumbent carriers. To the

Direct Testimony of
Michael K. Kurtis

1 extent MMC provides new lines to currently unserved customers or additional lines to
2 existing wireline subscribers, there will be no impact on the amount of universal service
3 support available to incumbent wireline carriers, rural and non-rural alike, for those lines
4 they continue to serve.

5 Q. Does that conclude your testimony?

6 A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of the Application of)
Missouri RSA No. 7 Limited Partnership)
d/b/a Mid-Missouri Cellular)
For Designation as a Telecommunications)
Company Carrier Eligible for Federal)
Universal Service Support pursuant to § 254 of)
the Telecommunications Act of 1996)

Case No. TO-2003-0531

AFFIDAVIT OF MICHAEL K. KURTIS

CITY OF WASHINGTON)

)

ss.



DISTRICT OF COLUMBIA)

Michael K. Kurtis, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Direct Testimony in question and answer form, consisting of 14 pages to be presented in the above case; that the answers in the foregoing Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.


Michael K. Kurtis

Subscribed and sworn to before me this 31st day of October 2003.

My Commission Expires May 14, 2007

Attachment I

Incumbent Local Exchange Carriers - 2003

-
- LATA Boundaries

Attachment 1

Attachment II

SELECTED MISSOURI PSC STAFF DATA REQUESTS AND MMC'S RESPONSE HERETO

(11) Please describe any and all procedures Mid Missouri Cellular currently has in place to supply E-911 service to its users.

Currently, MMC customers can reach an emergency dispatch, or public safety answering point ("PSAP"), by dialing "911," which will route the call to the appropriate PSAP. Enhanced 911 ("E911"), which includes the capability of providing both automatic numbering information ("ANI") and automatic location information ("ALI"), is required only if a public emergency service provider makes arrangements with the local provider for delivery of such information. A wireless carrier such as MMC is not required to provide E911 services until a local emergency provider has made arrangements for delivery of ALI and ANI from carriers. In preparation to satisfy future requests as expeditiously as possible, MMC has installed all necessary software on its cellular switch for its current analog and TDMA digital technologies to timely meet Phase I of the FCC's E911 requirement pursuant to applicable FCC rules.

- (12) Please list and describe any and all expenditures Mid Missouri Cellular has made in order to provide E-911 service to its users in the future.

As discussed in the response to question 11 above, MMC has installed switch software upgrades to prepare the switch for its role in the provision of E911 Phase I service to MMC's analog and TDMA digital subscribers. To date, these modifications have cost MMC a total of approximately \$50,000. This includes the E911 specific software for the switch, the base software load required to support it, and required hardware upgrades.

- (13) Please list the expected cost of providing E-911 service to Mid Missouri Cellular users. Please include any and all supporting documentation.

The FCC's rules for E911 involve two stages of service: Phase I and Phase II. Item (11) above provides a summary of Phase I requirements. Phase II adds the provision of a calculation of the caller's physical location (geographic coordinates) to the PSAP.

The typical E911 Phase I expenditures include costs for the wireless provider's switching upgrades, facilities to the selective routers associated with each PSAP, use of a Mobility Positioning Center ("MPC"), data links between the switch and the MPC, and miscellaneous professional fees for coordination and engineering. Phase II adds the additional and very costly expenditure of a Position Determining Entity ("PDE"), either handset-based or network-based (as explained below).

The FCC offers wireless licensees with a choice to provide Phase II service using either a handset-based solution or a network-based solution. A handset-based solution requires, among other things, specially equipped subscriber handsets. A network-based solution does not require such handsets, but typically requires additional equipment to be installed for signal measurement purposes at each cell site. Given its cellular site geometry and distances between sites in its rural environment, MMC has stated its intentions to deploy a handset-based solution, which is expected to provide a higher degree of accuracy at a significantly lower capital cost to MMC.

- (20) Please describe exactly how the toll limitation will work for Lifeline subscribers of for any other user who wishes to have toll limitation.

Lifeline service will be mobility-limited to the cell or cell sites serving the lifeline subscriber's residence. MMC will enable a lifeline subscriber with toll restrictions to place calls to telephone numbers that have a rate center within the exchange boundary of the LEC that is certificated to provide service to the subject residence.

Toll restrictions for non-lifeline subscribers will be based upon their calling plan. Where the calling plan allows for mobility, the toll restrictions will apply to the areas where local calls can be placed by any other MMC subscriber without toll restriction in any given serving area.

- (27) Please describe explicitly how toll limitation works with respect to roaming charges.

The lifeline subscriber will be limited in mobility to the MMC cell site(s) serving the subscriber's residence. Accordingly, the lifeline subscriber will be unable to roam and will, therefore, incur no roaming charges or toll charges for calls placed outside of the MMC serving cell site.