

Before the  
Federal Communications Commission  
Washington, D.C. 20554

In the Matter of )  
 )  
State of Maryland ) WT Docket No. 02-55  
and Sprint Nextel )  
 )  
Mediation No. TAM-12374 )

MEMORANDUM OPINION AND ORDER

Adopted: June 14, 2007

Released: June 14, 2007

By the Associate Chief, Public Safety and Homeland Security Bureau:

I. INTRODUCTION

1. In this *Memorandum Opinion and Order*, we address a case referred to us for *de novo* review from Wave 1, Phase 2 mediation by the 800 MHz Transition Administrator (TA) and involving issues in dispute between the State of Maryland (Maryland) and Sprint Nextel Corporation (Sprint). The issues in dispute are (1) the level of system testing necessary for Maryland to verify that it has received comparable facilities after reconfiguration; and (2) the reasonability of Maryland’s claim for internal labor costs. Based on our *de novo* review of the mediation record, the recommended resolution submitted by the TA-appointed mediator in this case, and the parties’ position statements, we find that: (1) Sprint is required to pay for RF testing at the transmitter site before and after rebanding, but is not required to pay for additional drive testing of the mobile environment, and (2) Maryland is entitled to compensation from Sprint for the full amount of its claimed internal costs not associated with drive testing.

II. BACKGROUND

2. The *800 MHz R&O* and subsequent orders in this docket require Sprint to negotiate a frequency relocation agreement (FRA) with each 800 MHz licensee that is subject to rebanding.<sup>1</sup> The FRA must provide for relocation of the licensee’s system to its new channel assignment at Sprint’s expense, including the expense of retuning or replacing the licensee’s equipment as required. Sprint must provide the relocating licensee with “comparable facilities” on the new channel(s), and must provide for a seamless transition to enable licensee operations to continue without interruption during the retuning process.

3. In the instant case, Maryland operates a single-site, five-channel trunked radio system in the 800 MHz NPSPAC band (callsign WPTX572), which supports the Maryland Department of Corrections.<sup>2</sup> In negotiations, the parties could not reach agreement on the level of system testing needed to ensure that

<sup>1</sup> See Improving Public Safety Communications in the 800 MHz Band, *Report and Order, Fifth Report and Order, Fourth Memorandum Opinion and Order, and Order*, 19 FCC Rcd 14969, 15021-45, 15069 ¶¶ 88-141, 189 (2004) (*800 MHz Report and Order*); Improving Public Safety Communications in the 800 MHz Band, *Supplemental Order and Order on Reconsideration*, 19 FCC Rcd 25120 (2004) (*800 MHz Supplemental Order*); and Improving Public Safety Communications in the 800 MHz Band, *Memorandum Opinion and Order*, 20 FCC Rcd 16015 (2005) (*800 MHz MO&O*).

<sup>2</sup> See TA Recommended Resolution (RR) at 3.

Maryland would receive comparable facilities after rebanding.<sup>3</sup> The parties were also unable to agree on Maryland's internal labor costs.<sup>4</sup> As a result, the parties entered into mediation. At the conclusion of the mediation period on December 14, 2006, the issues regarding system testing and internal labor costs remained unresolved.<sup>5</sup> On December 22, 2006, the mediator forwarded the mediation record and his Recommended Resolution to PSHSB.<sup>6</sup> Maryland filed position statements on December 11, 2006 and December 12, 2006.<sup>7</sup> Sprint filed a position statement on December 14, 2006.<sup>8</sup>

**A. Testing for Comparable Facilities – Parties' Positions and Mediator Recommendation**

4. *Maryland Position.* Maryland contends that a comprehensive series of system tests are needed to ensure that Maryland receives comparable facilities after rebanding.<sup>9</sup> Specifically, Maryland proposes to conduct both RF measurements at the WPTX572 transmitter site and a series of drive tests of the spectrum environment in which the system's mobile radios operate.<sup>10</sup> The proposed transmitter-site measurements would include a detailed set of RF tests both before and after rebanding.<sup>11</sup> The drive tests consist of: (1) a test to determine channel propagation and the reliability and quality of the audio signal throughout the service area, both pre- and post-rebanding; and (2) a 30-day post-rebanding monitoring test across all system channels to first establish, and then verify, that the audio signal quality meets an established threshold.<sup>12</sup> Maryland also proposes an additional test once Wave 4 licensees have completed their reconfiguration because its facilities are located within 70-miles of certain Wave 4 licensees.<sup>13</sup> Maryland estimates the cost of all of these tests to be \$37,888.20, of which \$7,560 is for the cost of the vendor (Motorola) to perform the testing and \$30,328.20 is for the State's internal labor costs to support the testing.<sup>14</sup>

5. Maryland asserts that all of these tests are needed to ensure that there is no degradation in the operation of its 800 MHz public safety communications system.<sup>15</sup> Maryland contends that under the

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<sup>3</sup> *Id.* at 2.

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> Transmittal of Record and Request for Confidential Treatment (December 22, 2006). On January 17, 2007 an erratum was submitted.

<sup>7</sup> See Proposed Resolution Memorandum of the State of Maryland (December 11, 2006) (Maryland PRM on Testing) and Proposed Resolution Memorandum on Cost Issue of the State of Maryland (December 12, 2006) (Maryland PRM on Cost Issues).

<sup>8</sup> See Proposed Resolution Memorandum of Nextel Communications, Inc on Reconfiguration Costs (December 14, 2006) (Sprint PRM on Cost Issues) and Reply of Nextel Communications, Inc. to the Proposed Resolution Memorandum of the State of Maryland on Testing (December 14, 2006) (Sprint PRM on Testing).

<sup>9</sup> Maryland PRM on Testing at 10-11.

<sup>10</sup> *Id.*

<sup>11</sup> *Id.* at 10.

<sup>12</sup> *Id.* at 11.

<sup>13</sup> *Id.*

<sup>14</sup> RR at 3.

<sup>15</sup> Maryland PRM on Testing at 10.

Commission's rules defining comparable facilities, Sprint must provide for the same level of interference protection and voice quality on the new system as existed on the old system.<sup>16</sup> Maryland acknowledges that its proposed tests are more extensive than the level of testing recommended by the TA for a system of this size and complexity, but contends that the TA's recommended tests are insufficient to ensure comparability under the Commission's standard.<sup>17</sup> Maryland also cites to the *Montgomery County* case, in which PSHSB authorized Montgomery County to conduct RF site, fleet, and acceptance testing for a system of similar size and complexity.<sup>18</sup>

6. *Sprint Position.* Sprint contends that Maryland's proposed drive testing to assess the mobile environment is unnecessary and inconsistent with both the TA's testing guidelines and Commission precedent.<sup>19</sup> Sprint notes that under the TA's guidelines, RF testing at the transmitter site is considered sufficient for a simple, single-site system of the type involved in this case.<sup>20</sup> Sprint also contends that drive testing is not needed to ensure the same level of interference protection after rebanding because the Commission's interference rules are based on distance between transmitters rather than coverage or voice quality.<sup>21</sup> Sprint notes that in the *Montgomery County* case cited by Maryland, the Bureau specifically rejected the County's request for drive testing.<sup>22</sup> Sprint also cites the Bureau's *State of Maryland* decision, in which the Bureau rejected a prior claim by Maryland that drive testing was necessary with respect to two of its Channel 1-120 systems.<sup>23</sup> Sprint contends that \$3,876 is sufficient to cover the cost of RF testing at the transmitter site.

7. *Mediator Recommendation.* The mediator recommended finding that Maryland is entitled to conduct RF testing at the transmitter site as specified in the TA guidelines, but not additional drive testing.<sup>24</sup> The mediator found that drive testing is not necessary given the size and level of complexity of the licensee's system.<sup>25</sup> Consequently, the mediator recommended crediting Maryland for the \$3,876 offered by Sprint to cover the cost of RF testing at the transmitter-site.<sup>26</sup>

## B. Internal Labor Costs -- Parties' Positions and Mediator Recommendation

8. *Maryland Position.* Maryland seeks payment for 411 hours of internal labor at an estimated cost of \$29,327.40 for activities other than internal costs associated with the disputed drive tests discussed above.<sup>27</sup> Maryland asserts that it has made a good-faith estimate of the minimum it believes is required to

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<sup>16</sup> *Id.* at 11.

<sup>17</sup> *Id.* at 8-10.

<sup>18</sup> *Id.* at 8, citing In the Matter of Montgomery County and Sprint Nextel, *Memorandum Opinion and Order*, WT Docket 02-55, 21 FCC Rcd 13086, 13090 (*Montgomery County Order*).

<sup>19</sup> Sprint PRM on Testing at 2-3.

<sup>20</sup> *Id.* at 7-8.

<sup>21</sup> *Id.* at 7.

<sup>22</sup> *Id.* at 4.

<sup>23</sup> *Id.* at 5, citing In the Matter of State of Maryland and Sprint Nextel, *Memorandum Opinion and Order*, WT Docket 02-55, 21 FCC Rcd 11939, 11942 ¶ 10 (*State of Maryland Order*).

<sup>24</sup> RR at 11.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.* at 10-11.

<sup>27</sup> Sprint PRM on Cost Issues, Appendix at 5-7.

reconfigure its systems and has provided a reasonable level of documentation to substantiate that estimate.<sup>28</sup> Maryland states that the information it provided is an estimate of “not to exceed” costs and that it would expect and support an audit of actual costs incurred.<sup>29</sup>

9. *Sprint Position.* Sprint contends that Maryland has provided insufficient documentation to justify its internal cost estimate.<sup>30</sup> Sprint disputes the reasonableness of Maryland’s estimates for such tasks as contract preparations, system planning, regional coordination and hours spent in negotiations.<sup>31</sup> Sprint proposes to reimburse Maryland for 296 hours of internal labor at an estimated cost of \$23,508.90.<sup>32</sup>

10. *Mediator Recommendation.* The mediator recommended that the Commission credit Maryland for 316 hours of internal labor.<sup>33</sup> The mediator based this figure on the number of hours recommended by Sprint with certain upward adjustments.<sup>34</sup>

### III. DISCUSSION

#### A. Testing for Comparable Facilities

11. For the reasons set forth below, we find that Sprint is required to pay the full cost of RF testing at the transmitter site before and after rebanding.<sup>35</sup> However, we conclude that drive testing of the mobile environment – which typically entails considerably more expense than transmitter-site testing -- is not necessary to ensure that Maryland will receive comparable facilities in this case. The comparable facilities standard entitles Maryland to a post-rebanding system that is equivalent to its pre-rebanding system in terms of: (1) system functionality, (2) channel capacity; (3) quality of service; and (4) operating costs.<sup>36</sup> Maryland is also entitled to undertake testing procedures to verify that it has received comparable facilities. But such testing procedures are limited to what is reasonable and necessary to accomplish this task.

12. Maryland contends that it needs to conduct the proposed drive tests to confirm that the signal strength and geographic coverage of its system will be the same after rebanding as it was prior to rebanding.<sup>37</sup> However, Maryland’s proposal exceeds the TA’s guidelines for testing signal strength and coverage. The TA’s guidelines outline three test procedures that may be used depending on the nature of

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<sup>28</sup> Maryland PRM on Cost Issues at 9.

<sup>29</sup> *Id.* at 7.

<sup>30</sup> Sprint PRM of Cost Issues at 5.

<sup>31</sup> *Id.* at 8-10.

<sup>32</sup> *Id.*, Appendix at 5-7.

<sup>33</sup> RR at 11.

<sup>34</sup> *Id.* at 11-12.

<sup>35</sup> Sprint has offered \$3,876 to cover the cost of RF testing at the transmitter site. However, we do not limit Maryland’s recovery to this amount. If Maryland’s actual costs for RF testing at the transmitter site come to more than the \$3,876 offered by Sprint, Maryland is entitled to recover the full amount of such costs.

<sup>36</sup> 47 CFR § 90.699(d). *See also 800 MHz Report and Order*, 19 FCC Rcd at 15077 ¶ 201.

<sup>37</sup> Maryland PRM on Testing at 10-11.

the system and the complexity of the retuning process.<sup>38</sup> The first and most common procedure (Method 1) is RF testing of the transmission facilities before and after rebanding. The TA indicates that this procedure is appropriate for systems where retuning involves no substantial changes to the antenna or the power feed to the transmitter.<sup>39</sup> The second procedure (Method 2) is line-of-sight signal measurements at designated locations around the transmitter site. The TA recommends performing this type of test (in addition to Method 1) when retuning involves some modification of the antenna configuration.<sup>40</sup> The third procedure (Method 3) is drive testing to determine the system's pre-retuning and post-retuning signal strength in the field. The TA recommends this procedure only in the case of large, complex systems, *e.g.*, those using simulcast technology, or systems that require extensive changes to the antenna and other transmission subsystem elements.<sup>41</sup>

13. Applying the TA testing guidelines to the Maryland system, we conclude that only Method 1 testing is required to verify the signal strength and coverage of the system. Maryland is retuning a single-site five-channel system, and the system relocation will involve retuning rather than replacement of equipment. The retune will not involve any reconfiguration of the antenna or other transmission facilities that would require use of Method 2 or Method 3 under the TA guidelines.<sup>42</sup> Nor has Maryland shown any other facts or circumstances regarding its system to suggest that we should not apply the TA's testing guidelines here. Maryland argues that Method 1 is insufficient to test comparability in the case of trunked systems.<sup>43</sup> However, the fact that Maryland's system is trunked is not a justification for additional testing, because whether a system is trunked or conventional has no impact on its signal strength or coverage.

14. Maryland also asserts that the drive testing it proposes is needed to ensure that its post-retuning system will provide "the same quality of service as the facilities being replaced," as provided in Section 90.699(d)(3) of the Commission's rules.<sup>44</sup> We disagree. Section 90.699(d)(3) defines "service quality" as "the same level of interference protection on the new system as on the old system."<sup>45</sup> The rule also provides that in the case of voice service, "voice quality on the new system must be equal to the new system," and reliability of service is an "integral" factor.<sup>46</sup> In the case of a simple system retune of the type involved here, transmitter-site testing before and after rebanding is sufficient to ensure that this

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<sup>38</sup> 800 MHz Band Reconfiguration Handbook (TA Reconfiguration Handbook) at 97-100 (available on the TA's website at [http://www.800ta.org/content/PDF/reconfiguration\\_materials/handbook.pdf](http://www.800ta.org/content/PDF/reconfiguration_materials/handbook.pdf)).

<sup>39</sup> *Id.* at 98. Under this method, measurements are performed at each component of the transmission system to determine the loss at each component and the transmit power entering the transmission feed line. Measurements include the return loss of the transmission line and antenna. The same measurements are made both before and after retuning.

<sup>40</sup> *Id.*

<sup>41</sup> *Id.* at 99. Simulcast systems use two or more base stations operating on the same channel with overlapping coverage. In a simulcast system, a channel change can require certain adjustments to the relative phase of the signal from respective transmitters so that a dead spot does not develop because the two signals cancel one another in the overlap area. The TA's guidelines provide that signal strength measurements in the overlap area may be necessary to validate the adjustments. Thus, the TA Handbook provides for drive testing for complex systems where extensive changes are made to the antenna and other transmission subsystem elements.

<sup>42</sup> Sprint PRM on Testing at 8.

<sup>43</sup> Maryland PRM on Testing at 8, 10.

<sup>44</sup> *Id.* at 10-11.

<sup>45</sup> 47 CFR § 90.699(d)(3).

<sup>46</sup> *Id.*

standard is met. With respect to interference protection, the 800 MHz rules protect licensees (both pre- and post-rebanding) by requiring co-channel systems to be spaced at least seventy miles apart.<sup>47</sup> Because interference protection is based on base station separation rather than signal contours, testing is not needed to verify that Maryland will receive the same level of interference protection on its new channels that it received on its old channels.<sup>48</sup>

15. With respect to voice quality and reliability, Maryland's post-rebanding system will use the same transmitters and mobile/portable radios as its pre-rebanding system, with the only change being the channels to which the system is tuned. Given the limited nature of the changes to Maryland's system, testing at the transmitter site is sufficient to verify that the system provides the same voice quality and reliability after rebanding. Our decision in this case is consistent with our prior decisions in the *Montgomery County* and *State of Maryland* cases. Both orders involved non-complex systems, and in both cases, we concluded that drive testing was not required to ensure that the licensee received comparable facilities.<sup>49</sup> Maryland has not presented facts in the record to support a different result in this case.

16. Finally, we note that the purpose of reconfiguration of the 800 MHz band is to eliminate the interference-prone interleaving of ESMR and public safety systems in the 800 MHz band.<sup>50</sup> The reconfigured 800 MHz band will permit future public safety radios to be more interference resistant.<sup>51</sup> This is particularly true with respect to low-site ESMR and cellular telephone signals.<sup>52</sup> After reconfiguration, a public safety licensee will be entitled to avail itself of the unique interference protection standards and interference abatement rules and procedures that are valuable components of the re-channelization process.<sup>53</sup> As a result, the Maryland systems will also receive enhanced post-rebanding protection against interference caused by low-site systems without the need for the type of testing proposed by Maryland.

## B. Internal Labor Costs

17. We find that Maryland is entitled to funding for the 411 hours of internal labor costs it has requested for work other than the drive testing-related internal costs discussed in Section III.A above. In reviewing Maryland's claim for internal costs in this case, we apply the standard that the Commission has recently clarified for determining whether licensee relocation costs are the "minimum necessary" to accomplish rebanding, and therefore must be paid by Sprint.<sup>54</sup> In the *Rebanding Cost Clarification Order*, the Commission stated that the term "minimum necessary" cost does not mean the absolute lowest

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<sup>47</sup> Co-channel spacing may be less than seventy miles if stations use smaller antennas and lower their power in accordance with the Commission's short-spacing table. 47 CFR § 90.621(b) (4).

<sup>48</sup> See in the Matter of State of Maryland and Sprint Nextel, *Memorandum Opinion and Order*, WT Docket 02-55, 21 FCC Rcd 11939, 11943 ¶ 12 (*Maryland MO&O*).

<sup>49</sup> *Montgomery County Order*, 21 FCC Rcd at 13090 ¶ 16.

<sup>50</sup> *800 MHz R&O*, 19 FCC Rcd at 15047-15048 ¶ 147.

<sup>51</sup> *Id.* at 15046 ¶ 145.

<sup>52</sup> *Id.* note 389.

<sup>53</sup> *Id.* at 15021-15045 ¶¶ 88-141.

<sup>54</sup> Improving Public Safety Communications in the 800 MHz Band, *Memorandum Opinion and Order*, FCC 07-92, rel. May 18, 2007 (*Rebanding Cost Clarification Order*).

cost under any circumstances, but the “minimum cost necessary to accomplish rebanding in a reasonable, prudent, and timely manner.”<sup>55</sup> This standard takes into account not just cost but all of the objectives of the proceeding, including timely and efficient completion of the rebanding process, minimizing the burden rebanding imposes on public safety licensees, and facilitating a seamless transition that preserves public safety’s ability to operate during the transition.<sup>56</sup>

18. We find that the internal costs claimed by Maryland meet this standard. As we stated in our recent *Manassas* decision, in assessing licensee claims for internal costs, we give reasonable deference to a public safety licensee’s decisions concerning internal staffing.<sup>57</sup> Public safety licensees typically have limited internal resources to address the multiple demands on their time imposed by the remanding process. Therefore, with respect to internal planning costs, we will not substitute our judgment for the licensee’s with respect to specific deployment of internal resources provided that the licensee has demonstrated that its overall internal planning costs are reasonably related to the administrative burdens that are imposed in it by the planning process.

19. In this case, Maryland has supplied an itemized list of its estimated internal costs, with estimated hours and labor rates for each cost.<sup>58</sup> Maryland also states that it is willing to base its final compensation on an audit of actual costs incurred.<sup>59</sup> Finally, we note that the difference in the amount sought by Maryland and the amount offered by Sprint for internal staff activity is approximately \$6000. In the *Rebanding Cost Clarification Order*, the Commission stated that payment of disputed costs is appropriate “where such payment will avoid greater expense to negotiate and/or mediate the dispute and will further the goal of timely and efficient rebanding.”<sup>60</sup> Under these circumstances, we conclude that it is appropriate for Sprint to pay such costs rather than to spend more substantial resources for prolonged mediation.

#### IV. ORDERING CLAUSES

20. Accordingly, pursuant to the authority of Sections 0.191 and 0.392 of the Commission’s rules, 47 C.F.R. §§ 0.191, 0.392; Section 4(i) of the Communications Act of 1934, as amended, 47 U.S.C. § 154(i), and Section 90.677, of the Commission’s Rules, 47 C.F.R. § 90.677, IT IS ORDERED that the issues submitted by the Transition Administrator are resolved as discussed above.

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<sup>55</sup> *Id.* at ¶ 6.

<sup>56</sup> *Id.* at ¶ 8.

<sup>57</sup> City of Manassas, Virginia and Sprint Nextel, WT Docket 02-55, *Memorandum Opinion and Order*, DA 07-1999, rel. May 4, 2007 at ¶ 14.

<sup>58</sup> Sprint PRM on Cost Issues, Appendix at 5-7.

<sup>59</sup> Maryland PRM on Cost Issues at 7.

<sup>60</sup> *Rebanding Cost Clarification Order* at ¶ 6.

21. IT IS FURTHER ORDERED that the Transition Administrator shall convene a meeting of the parties within seven days of the date of this Order for the purpose of negotiating a Frequency Relocation Agreement consistent with the resolution of issues set forth herein.

FEDERAL COMMUNICATIONS COMMISSION

David L. Furth  
Associate Bureau Chief  
Public Safety and Homeland Security Bureau