

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

In the Matter of
Southern Company Services, Inc.
Request for Waiver of 47 C.F.R. § 17.47(b)

MEMORANDUM OPINION AND ORDER

Adopted: January 18, 2013

Released: January 18, 2013

By the Associate Chief, Wireless Telecommunications Bureau:

I. INTRODUCTION

1. This Memorandum Opinion and Order addresses the request of Southern Company Services, Inc. ("Southern") for waiver of Section 17.47(b) of the Commission's Rules, 47 C.F.R. § 17.47(b). Section 17.47(b) provides that the owner of any antenna structure that is registered with the Commission and has been assigned lighting specifications pursuant to Part 17 "[s]hall inspect at intervals not to exceed 3 months all automatic or mechanical control devices, indicators, and alarm systems associated with the antenna structure lighting to insure that such apparatus is functioning properly."

2. Southern argues that the quarterly inspections of antenna monitoring systems mandated by Section 17.47(b) of the Rules have been rendered unnecessary because of technological advancements associated with the particular monitoring system that it employs -- the MegaSys Telenium® network management system employing DPS Telecom NetGuardian® Remote Terminal Units ("MST System"). Southern and its affiliates currently own and operate approximately 96 antenna structures that are both subject to the lighting requirements of Part 17 and monitored by the MST System. Southern asks the Commission to waive Section 17.47(b) and instead permit annual inspections of all its antenna structures monitored with this system. For the reasons set forth below, we grant Southern its request for relief, subject to a condition to ensure monitoring for photocell failure and low flash energy.

II. BACKGROUND

3. The Commission and the Wireless Telecommunications Bureau have previously granted waivers of Section 17.47(b) to antenna structure owners who demonstrated that they were operating safe and reliable monitoring systems that provide sufficiently robust monitoring of the control devices, indicators and alarm systems so as to render quarterly inspections unnecessary. Notably, the Airspace

1 47 C.F.R. § 17.47(b).

2 In the Matter of Southern Company Services, Inc. Request for Waiver of 47 C.F.R. § 17.47(b), Request for Waiver, filed July 18, 2012 (Southern Waiver Request) at 2, 4-5.

3 See e.g., In the matter of Requests of American Tower Corporation and Global Signal, Inc., to Waive Section 17.47(b) of the Commission's Rules, WT Docket No. 05-326, Memorandum Opinion and Order, 22 FCC Rcd 9743 (2007) (ATC/GSI Waiver Order); In the matter of Petition of Optasite Towers L.L.C. for Waiver of Section 17.47(b)

(continued....)

and Rules Group of the Federal Aviation Administration has stated that it is not opposed to such waivers “provided the applicant can demonstrate a safe and reliable automatic monitoring system with tracking mechanisms to evaluate the remote monitoring technology.”<sup>4</sup>

4. Southern filed its instant waiver request on July 18, 2012 and, pursuant to a request by the Wireless Telecommunications Bureau, supplemented it via letter on November 20, 2012.<sup>5</sup> Southern asserts in its request that the MST System employs sophisticated, self-diagnostic functions that are sufficiently robust and similar to those used in the monitoring systems employed by previous waiver recipients to warrant the granting of its Request for Waiver.<sup>6</sup> In support, Southern sets forth the relevant features of the MST System in detail.<sup>7</sup>

### III. DISCUSSION

5. Section 1.925 of the Commission’s Rules provides that, with respect to wireless telecommunications services, the Commission may grant a request for waiver if it is shown that: “(i) The underlying purpose of the rule(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public interest; or (ii) In view of unique or unusual factual circumstances of the instant case, application of the rule(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.”<sup>8</sup> As discussed below, we grant a waiver to Southern because we find that application of the quarterly inspection requirements of Section 17.47(b) to the towers in question is not necessary to serve the underlying purposes of the rule, and grant of the waiver is in the public interest. Based on the evidence presented, strict application of the rule to Southern would be unduly burdensome and contrary to the public interest.

6. Southern asserts that the MST System is a “safe and reliable monitoring system with tracking mechanisms to evaluate the remote monitoring technology, and the features of this system provide robust monitoring of control devices, indicators and alarm systems,” within real time, “so as to render quarterly inspections unnecessary.”<sup>9</sup> Specifically, Southern maintains that the MST System

---

(...continued from previous page)  
of the Commission’s Rules, *Memorandum Opinion and Order*, 22 FCC Rcd 18456 (WTB 2007) (*Optasite Waiver Order*); In the matter of Crown Castle USA Inc. Request for Waiver of 47 C.F.R. § 17.47(b), *Memorandum Opinion and Order*, 22 FCC Rcd 21881 (WTB 2007) (*Crown Castle Waiver Order*); In the matter of Request of Global Tower LLC for Waiver of 47 C.F.R. § 17.47(b), *Memorandum Opinion and Order*, 23 FCC Rcd 16531 (WTB 2008) (*Global Tower Waiver Order*); In the matter of TowerSentry LLC Request for Waiver of 47 C.F.R. § 17.47(b) and Joint Petition of Diamond Communications LLC and Diamond Towers LLC for Waiver of 47 C.F.R. § 17.47(b), *Memorandum Opinion and Order*, 24 FCC Rcd 10274 (WTB 2009) (*TowerSentry/Diamond Waiver Order*); In the matter of Request of Mobilitie, LLC for Waiver of 47 C.F.R. § 17.47(b), *Memorandum Opinion and Order*, 24 FCC Rcd 11949 (WTB 2009) (*Mobilitie Waiver Order*).

<sup>4</sup> Brief Comment of Office of Airspace and Rules, FAA, WT Docket No. 05-326, filed December 4, 2006.

<sup>5</sup> See Letter from Jeffrey L. Sheldon, Fish & Richardson P.C., to Jeffrey S. Steinberg, Deputy Chief, Spectrum and Competition Policy Division, Wireless Telecommunications Bureau (November 20, 2012) (*Southern Supplement*). This additional information was provided in response to a request by the Wireless Telecommunications Bureau’s Spectrum and Competition Policy Division. See Letter from Jeffrey S. Steinberg, Deputy Chief, Spectrum and Competition Policy Division, Wireless Telecommunications Bureau, to Jeffrey L. Sheldon, Fish & Richardson P.C. (September 24, 2012).

<sup>6</sup> *Southern Waiver Request* at 4, 8.

<sup>7</sup> *Southern Waiver Request* at 3-9; *Southern Supplement* at 1-6.

<sup>8</sup> 47 C.F.R. § 1.925(b)(3).

<sup>9</sup> *Southern Waiver Request* at 9.

“performs the functional equivalent of a continuous inspection of the alarms, control devices and communications links on all of Southern’s towers that are required to be lit. As a result, Southern is alerted to actual and potential problems almost immediately.”<sup>10</sup> In support of these contentions, Southern describes the following features of the MST System:

(1) *Alarm notification.* At each tower site having aviation obstruction lighting, Southern has deployed a DPS Telecom NetGuardian® Remote Terminal Unit (RTU) that monitors, at a minimum, beacon/strobe failure, sidelight failure, beacon/strobe communication failure, site communication failure, missed flashes, and loss of A/C power.<sup>11</sup> Further, the RTU is capable of monitoring for photocell failure and low flash energy, and Southern plans to verify that the system is configured to transmit alarms for these failures at each tower no later than the next quarterly inspection cycle.<sup>12</sup> If a light is extinguished, or if the RTU loses communication with a sensor, an alarm signal will be sent by the RTU back to Southern’s Infrastructure Operations Center (IOC). IOC personnel will perform remote diagnostics in an attempt to verify whether the light is actually extinguished or whether there is a problem with the monitoring system. If, within 30 minutes, IOC personnel cannot verify that the light is working properly, they will open an Incident Case, request a Notice to Airmen (NOTAM) from the nearest Flight Service Station (FSS) or the designated FAA authority for receiving and processing NOTAM requests, and record with the Incident Case the number assigned to the NOTAM and the initials of the attendant receiving the NOTAM request.<sup>13</sup> IOC personnel will also submit a request to the Field Operations technician responsible for the site to conduct an on-site inspection of the lighting system within next two days. If the Field Operations personnel are unable to correct failure of a light within 15 days after issuance of the NOTAM, the Incident Case will be escalated within the company and IOC personnel will request an extension of the NOTAM.<sup>14</sup>

(2) *24-hour polling.* Southern uses its corporate wide area network (“WAN”) to transport alarm signals from the RTUs to the monitoring system at the IOC. Southern’s WAN consists of an extensive network of microwave radio and fiber optic transport facilities that are designed with redundant paths to ensure uninterrupted service.<sup>15</sup> IOC personnel are alerted almost immediately if there is any loss of communication with an RTU or with any of the sensors.<sup>16</sup> If the system loses communications with an RTU at a communications site with a tower lighting system, the incident is treated as if it were a loss of lighting at the tower site until the IOC can verify whether it is in fact a loss of lighting or just a loss of communications with the RTU. If communication with the RTU is not restored and/or IOC personnel cannot verify within 30 minutes that the tower lights are functioning properly, the IOC will open an Incident Case and request a NOTAM.<sup>17</sup>

---

<sup>10</sup> *Id.* at 4.

<sup>11</sup> *Southern Supplement* at 2.

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

<sup>13</sup> *Southern Waiver Request* at 5-6; Antenna structure owners “shall report immediately by telephone or telegraph to the nearest Flight Service Station or office of the Federal Aviation Administration any observed or otherwise known extinguishment or improper functioning of any top steady burning light or any flashing obstruction light, regardless of its position on the antenna structure, not corrected within 30 minutes.” 47 C.F.R. § 17.48(a). See FAA Circular AC-70/7460-1K, Chapter 2, Light Failure Notification.

<sup>14</sup> *Southern Waiver Request* at 6.

<sup>15</sup> *Southern Supplement* at 5.

<sup>16</sup> *Southern Waiver Request* at 7-8.

<sup>17</sup> *Southern Supplement* at 5.

(3) *Manual contact.* Southern's monitoring system allows technicians to manually contact tower sites, check the status of RTUs and sensors, generate alarms, and clear false alarms. These functions enable technicians to confirm the operational status of any given tower lighting system at any time.<sup>18</sup>

7. The MST System employs an IOC that is staffed with trained personnel capable of responding to alarms 24 hours per day, 365 days per year.<sup>19</sup> Southern also maintains a back-up IOC as part of its disaster recovery process that can be quickly activated in the case of a catastrophic loss of the primary IOC or other emergency.<sup>20</sup> Southern's IOCs are located in Atlanta, Georgia, and Birmingham, Alabama. The geographic separation between IOCs (approximately 120 miles) minimizes the potential for both sites to be adversely affected by the same event. The IOCs are designed with redundancy and failsafe mechanisms, and have special security procedures in place. In the unlikely event that the primary IOC were to fail, the secondary IOC could be initialized in as little as 15 minutes, with full staffing of the secondary IOC dependent on how quickly personnel could be relocated from the primary IOC or additional personnel could be called-in from their homes if the primary IOC were to fail at night. Until the secondary IOC can be fully staffed, system monitoring can be maintained through remote internet access. The IOCs are also equipped with redundant servers that are backed up continuously. Thus, if the primary IOC were to fail or the server at the primary IOC were to go off-line or fail to function properly, switchover to the redundant server at the secondary IOC would occur immediately. In the extremely unlikely event that both IOCs were to fail, Southern would deploy personnel to key sites throughout its operating area, including its communications sites, to monitor and manage critical electric and communications system components, including tower lighting systems.<sup>21</sup> In addition, Southern's IOC has the ability to communicate during sustained outages of commercial electric power through batteries and on-site diesel generators that can run for an extended period without commercial electric power.<sup>22</sup> All of Southern's towers that must be lit per FAA and FCC requirements also have backup power to the lighting systems as well as to the RTUs and other components of the tower light monitoring system. If an antenna site were to suffer a loss of power, or if an RTU were to cease communicating with the IOC for any other reason, the system would signal an alarm, and IOC personnel would immediately investigate the nature of the problem and, if not cleared within 30 minutes, request a NOTAM.<sup>23</sup> Southern has generators that will maintain power at the site without refueling for at least seventy two (72) hours and contracts in place with fuel suppliers throughout its service territory to ensure that generators will be refueled on a timely and continual basis in the event of an extended loss of commercial power.<sup>24</sup>

8. The technology that the MST System employs is similar to that exhibited by the monitoring systems employed by ATC, GSI, Optasite, Crown Castle, Global Tower, Diamond, and Mobilitie, which were each granted waivers based on the efficacy of that technology. These systems are similar in that they all have a continuous and permanent two-way link between the tower site and the response center;<sup>25</sup> timely reporting of potential problems;<sup>26</sup> continuously staffed response centers;<sup>27</sup> 24-

<sup>18</sup> *Southern Waiver Request* at 8.

<sup>19</sup> *Id.* at 6, 8.

<sup>20</sup> *Id.*

<sup>21</sup> *Southern Supplement* at 4.

<sup>22</sup> *Southern Waiver Request* at 6, 9.

<sup>23</sup> *Id.* at 7, 9.

<sup>24</sup> *Southern Supplement* at 3.

<sup>25</sup> *Southern Waiver Request* at 3-4, 8.

<sup>26</sup> *Id.* at 4-5, 7-8.

hour polling of both lighting and communications systems;<sup>28</sup> on demand interrogation capabilities;<sup>29</sup> backup response centers;<sup>30</sup> and essentially uninterrupted communications between the response center and the towers during power outages.<sup>31</sup>

9. In order to ensure reliable monitoring for all conditions that could affect aircraft navigation safety, we limit relief, as agreed to by Southern, to those towers where the system is configured to report both photocell failure and low flash energy as part of the overall monitoring system.<sup>32</sup>

10. Southern states that, particularly for towers in rural and difficult-to-reach locations, quarterly inspection imposes a substantial and unnecessary resource burden. Southern estimates that it spends approximately \$75,000 annually conducting 384 quarterly inspections.<sup>33</sup>

11. For the reasons cited by the Commission in the *ATC/GSI Waiver Order* and by the Bureau in subsequent orders, we conclude, based upon the evidence submitted in the record by Southern, that the *Southern Waiver Request* establishes that quarterly inspections are unnecessary for those towers monitored by the MST System, provided the system is configured at the tower to report photocell failure and low flash energy.<sup>34</sup> We conclude that the MST System is a safe and reliable monitoring system with tracking mechanisms to evaluate the remote monitoring technology, and that features of this system provide sufficiently robust monitoring of the control devices, indicators and alarm systems so as to render quarterly inspections unnecessary. Indeed, such advanced technology provides the benefits of more rapid response where there has been a lighting failure, and thus the public interest is served with respect to aircraft safety. We therefore grant Southern's waiver request.

#### IV. CONCLUSION

12. For the reasons discussed above, we waive Section 17.47(b) to allow Southern to conduct the required inspections on an annual rather than a quarterly basis of its antenna structures monitored by the MST System at which Southern has verified that the alarm outputs are properly configured to report photocell failure and low flash energy to Southern's IOC. The MST System reliably diagnoses problems, including any failures of control devices, indicators and alarm systems, within real time, and therefore renders strict application of the rule unnecessary to serve its underlying purpose. Moreover, our action will relieve Southern of the burden of performing unnecessary quarterly inspections. In addition, granting Southern's waiver will further encourage tower owners to invest in state-of-the-art technologies so that they too will become capable of continuous monitoring of both their lighting systems and control devices.

13. We note that the Commission has released a Notice of Proposed Rulemaking seeking comment on proposed changes to part 17 of the Commission's rules, including Section 17.47(b), and the

---

(...continued from previous page)

<sup>27</sup> *Id.* at 6, 8.

<sup>28</sup> *Id.* at 7-8.

<sup>29</sup> *Id.* at 5, 8.

<sup>30</sup> *Id.* at 6, 8.

<sup>31</sup> *Id.* at 6-8.

<sup>32</sup> *Southern Supplement* at 2.

<sup>33</sup> *Southern Waiver Request* at 2.

<sup>34</sup> *ATC/GSI Waiver Order*, 22 FCC Rcd at 9747, 9748, ¶¶ 11, 17; *Optasite Waiver Order*, 22 FCC Rcd at 18456, ¶ 8; *Crown Castle Waiver Order*, 22 FCC Rcd at 21884, ¶ 9; *Global Tower Waiver Order*, 23 FCC Rcd at 16531, ¶ 9; *TowerSentry/Diamond Waiver Order*, 24 FCC Rcd 10274, at ¶ 10; *Mobilite Waiver Order*, 24 FCC Rcd 11949, at ¶ 8.

waiver that we grant today is subject to any rule changes that the Commission may promulgate in that proceeding.<sup>35</sup>

**V. ORDERING CLAUSE**

14. IT IS THEREFORE ORDERED, pursuant to Sections 4(i), 303(q), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(q), 303(r), and pursuant to Sections 0.131, 0.331, and 1.925 of the Commission's Rules, 47 C.F.R. §§ 0.131, 0.331, 1.925, that the Request for Waiver filed by Southern IS GRANTED subject to the condition stated herein.

FEDERAL COMMUNICATIONS COMMISSION

Jane E. Jackson  
Associate Chief, Wireless Telecommunications Bureau

---

<sup>35</sup> In the Matter of Amendments to Modernize and Clarify Part 17 of the Commission's Rules Concerning Construction, Marking and Lighting of Antenna Structures, RM 11349, *Notice of Proposed Rulemaking*, 25 FCC Rcd 3982, 75 FR 28517 (2010).