

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

In the Matter of
American Tower Corporation
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 American Tower Corporation ("ATC") 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. ATC argues that the quarterly inspections of antenna monitoring systems mandated by Section 17.47(b) of the Rules would be rendered unnecessary because of technological advancements associated with the particular monitoring system that it wishes to employ -- American Tower Corporation's in-house monitoring system ("ATC System"). ATC currently owns and operates nearly 7,000 antenna structures that are both subject to the lighting requirements of Part 17 and would be monitored by the ATC System. ATC 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 ATC its request for relief.

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. One of these waivers

1 47 C.F.R. § 17.47(b).

2 In the Matter of American Tower Corporation Request for Waiver of 47 C.F.R. § 17.47(b), Request for Waiver, filed October 11, 2012 (ATC Waiver Request) at 3.

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) of the Commission's Rules, Memorandum Opinion and Order, 22 FCC Rcd 18456 (WTB 2007) (Optasite Waiver

(continued....)

was granted to ATC for its towers that are monitored by the Eagle Monitoring System.<sup>4</sup> Notably, the Airspace 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>5</sup>

4. ATC filed its instant waiver request on October 11, 2012 and, pursuant to a request by the Wireless Telecommunications Bureau, supplemented it via letter on November 21, 2012.<sup>6</sup> Specifically, ATC requests that the Commission modify its existing waiver so that ATC may utilize a replacement, in-house monitoring system in lieu of the Eagle Monitoring System it currently employs. ATC asserts in its request that the ATC System is the functional equivalent of the Eagle System and incorporates the Eagle System's key features, and therefore the Commission should grant its Request for Waiver.<sup>7</sup> In support, ATC sets forth the relevant features of the ATC System in detail.<sup>8</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>9</sup> As discussed below, we grant a waiver to ATC 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 ATC would be unduly burdensome and contrary to the public interest.

6. The original *ATC Waiver* Request described the Eagle System as having self-diagnostic functions that are sufficiently robust so as to make quarterly inspection unnecessary to ensure that the control devices, indicators, and alarm systems on the towers are operating properly. Specifically, ATC maintained that the Eagle System provides the functional equivalent of a continual inspection of control

---

(...continued from previous page)

*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> See *ATC/GCI Waiver Order*.

<sup>5</sup> Brief Comment of Office of Airspace and Rules, FAA, WT Docket No. 05-326, filed December 4, 2006.

<sup>6</sup> See Letter from Dennis P. Corbett, Lerman Senter PLLC, to Jeffrey S. Steinberg, Deputy Chief, Spectrum and Competition Policy Division, Wireless Telecommunications Bureau (November 21, 2012) (*ATC 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 Dennis P. Corbett, Lerman Senter PLLC (October 26, 2012).

<sup>7</sup> *ATC Waiver Request* at 2.

<sup>8</sup> *Id* at 4-9; *ATC Supplement* at 1-4.

<sup>9</sup> 47 C.F.R. § 1.925(b)(3).

devices from one central location and that users of this system will be alerted to actual and potential problems immediately, in many cases, or at most within 24 hours.<sup>10</sup> ATC asserts that the ATC System is the functional equivalent of the Eagle System and in support of this contention, ATC describes the following features of the ATC System:

(1) *Alarm notification.* The lighting system installed at each tower site is equipped with ATC System software which contacts the Network Operations Center (“NOC”) for every type of alarm.<sup>11</sup> These alarms are captured and archived in the ATC System database. The database has an automated escalation protocol within the NOC to ensure that proper diagnostics are conducted within a 30-minute window. In this 30-minute time frame, the NOC contacts the site from which the alarm originated and performs full system diagnostics to identify the nature of the lighting failure and to determine if a Notice to Airmen (“NOTAM”) should be issued.<sup>12</sup> If the issuance of a NOTAM is required, the proper FAA Flight Service Station (“FSS”) is notified. The ATC System requires a NOTAM number to be entered before the technician can complete his/her task. This number is provided verbally by the relevant FSS. All calls made to the FSS are recorded for accuracy and training purposes. In most cases, the repair technician is able to diagnose the problem before visiting the site to determine if any specialized equipment or parts are required, thereby accelerating ATC's resolution of the NOTAM-triggering problem. The ATC System also includes a battery back-up so that even if power is lost at a tower site, the NOC will still receive an alarm and maintain two-way communication with the tower site to confirm power outage to the site and determine if a NOTAM should be issued.<sup>13</sup>

(2) *24-hour polling.* The ATC System is programmed to proactively contact each monitored site once every 24 hours. This call is automated and initiates a complete system diagnosis of the lighting system. This diagnosis is completed for all lighting phases (i.e., night, day, twilight) regardless of the time of day the test call is conducted. This process ensures the lighting system is both working and communicating properly with the ATC System. If any alarms or discrepancies are identified the ATC System immediately generates an alarm, triggering the NOC personnel to perform further in-depth analysis. The ATC System is programmed to attempt to contact the site up to 11 times if the initial attempt fails. If, by the 11th attempt, contact is not made, the ATC System generates an alarm and a NOC technician attempts to contact the site manually. The NOC technician attempts to contact the site a minimum of three times. If the NOC technician is unable to connect to the tower a "maintenance urgent" trouble ticket is opened, a NOTAM is issued if applicable, and the trouble ticket and NOTAM are emailed to the appropriate ATC site manager. In addition, the appropriate ATC site manager is also notified by telephone of the no communication situation. During its polling cycle, the ATC System completes a full diagnostic review of all lighting modes and confirms the proper working condition of the lighting system. The ATC System documents this data in an electronic database and all information is maintained for five years. If the automated diagnostic review is not

<sup>10</sup> *ATC/GSI Waiver Order*, 22 FCC Rcd at 9745, ¶ 6.

<sup>11</sup> *ATC Waiver Request* at 5; *ATC Supplement* at 1-4.

<sup>12</sup> 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>13</sup> *ATC Waiver Request* at 5; *ATC Supplement* at 4.

successfully completed due to a phone line disconnect, an alarm is immediately generated and an NOC technician manually contacts the site.<sup>14</sup>

(3) *Manual contact.* The ATC System allows technicians to perform a manual diagnostic review of any tower monitored by the system from any computer with an Internet connection. This function allows the NOC, ATC Operations, and ATC compliance staff to contact any tower and review operational status of its lighting system.<sup>15</sup>

7. The ATC System has been designed to mirror critical aspects of the Eagle System. As with the Eagle System, the ATC System uses an on-site controller device at each tower that is connected to the tower lighting system. One component of the controller is a computer board that continuously monitors the status of the tower lights. Each controller is connected by telephone line, cellular line or microwave V-SAT to a centralized and dedicated network of computers located at ATC's NOC in Cary, North Carolina. When the controller detects a problem with the tower lighting system, it immediately contacts the NOC, which is staffed with trained technicians 24 hours per day, 365 days per year. The ATC System is able to provide NOC technicians with all of the information that an onsite visit could provide, and do so immediately, rather than requiring a technician to travel to the tower.<sup>16</sup> The ATC System also employs a "virtual" backup NOC in case of a loss of power or functionality at the Cary, North Carolina NOC.<sup>17</sup> The virtual NOC is always in operation and can be run in tandem with the physical NOC.<sup>18</sup> In the event that the NOC in Cary, North Carolina is unable to function properly, ATC has established a formal protocol directing all relevant ATC employees to relocate to separate locations (e.g., a home-based office or other location) to remotely log into the secured virtual NOC via an internet virtual private network ("VPN") connection. From this Internet cloud-based virtual NOC, ATC NOC personnel are able to access all information and perform all of the functions that are traditionally undertaken within the ATC System at the physical NOC. In addition, upon the activation of the virtual NOC, the ATC NOC manager or shift leader is able to rapidly identify which ATC technicians are then present in the virtual NOC and monitoring the ATC System. This functionality allows ATC management to confirm that the virtual NOC is adequately staffed and schedule ATC technicians to monitor and operate the virtual NOC as needed.<sup>19</sup>

8. In addition to its similarity to the Eagle Monitoring System that ATC currently uses, the technology that the ATC System will employ is similar to that exhibited by the monitoring systems employed by 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>20</sup> timely reporting of potential problems;<sup>21</sup> continuously staffed response centers;<sup>22</sup> 24-hour polling of both lighting and communications systems;<sup>23</sup> on demand interrogation capabilities;<sup>24</sup> backup response centers;<sup>25</sup> and

<sup>14</sup> *ATC Waiver Request* at 5-6; *ATC Supplement* at 4.

<sup>15</sup> *ATC Waiver Request* at 6.

<sup>16</sup> *Id.* at 4-5.

<sup>17</sup> *Id.* at 6-8.

<sup>18</sup> *Id.* at 8.

<sup>19</sup> *Id.* at 6-7.

<sup>20</sup> *Id.* at 5, 9; *ATC Supplement* at 4.

<sup>21</sup> *ATC Waiver Request* at 2, 8, 9; *ATC Supplement* at 1-4.

<sup>22</sup> *ATC Waiver Request* at 4, 9.

<sup>23</sup> *Id.* at 5-6, 9.

essentially uninterrupted communications between the response center and the towers during power outages.<sup>26</sup>

9. ATC states that, particularly for towers in rural and difficult-to-reach locations, quarterly inspection imposes a substantial and unnecessary resource burden. ATC estimates that without this waiver, it would spend millions of dollars annually conducting tens of thousands of quarterly inspections.<sup>27</sup>

10. 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 ATC, that the *ATC Waiver Request* establishes that quarterly inspections are unnecessary for those towers to be monitored by the ATC System.<sup>28</sup> We conclude that the ATC 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 ATC's waiver request.

#### IV. CONCLUSION

11. For the reasons discussed above, we waive Section 17.47(b) to allow ATC to conduct the required inspections of its antenna structures monitored by the ATC System on an annual rather than a quarterly basis. The ATC System is designed to reliably diagnose problems, including any failures of control devices, indicators and alarm systems, within real time, and therefore will render strict application of the rule unnecessary to serve its underlying purpose. Moreover, our action will relieve ATC of the burden of performing unnecessary quarterly inspections. In addition, granting ATC'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.

12. 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 waiver that we grant today is subject to any rule changes that the Commission may promulgate in that proceeding.<sup>29</sup>

#### V. ORDERING CLAUSE

13. 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

---

(...continued from previous page)

<sup>24</sup> *Id.* at 6, 9.

<sup>25</sup> *Id.* at i, 6-9.

<sup>26</sup> *Id.* at 5, 6, 9; *ATC Supplement* at 4.

<sup>27</sup> *ATC Waiver Request* at 2, 4, 10.

<sup>28</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; *Mobilitie Waiver Order*, 24 FCC Rcd 11949, at ¶ 8.

<sup>29</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).

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 ATC IS GRANTED.

FEDERAL COMMUNICATIONS COMMISSION

Jane E. Jackson  
Associate Chief, Wireless Telecommunications Bureau