

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of

Reassessment of Federal Communications  
Commission Radiofrequency Exposure Limits  
and Policies

ET Docket No. 13-84

Proposed Changes in the Commission’s Rules  
Regarding Human Exposure to Radiofrequency  
Electromagnetic Fields

ET Docket No. 03-137

**COMMENTS OF RF CHECK, INC.**

RF CHECK commends the Commission for undertaking a review of its radiofrequency safety rules and regulations in order “to ensure they have kept pace with current knowledge and changing needs.”<sup>1</sup> We agree that in doing so, it is critical that the FCC’s RF safety approach achieves a balance so that its rules “are compliant with [the FCC’s] environmental responsibilities and requirements and that the public is appropriately protected from any potential adverse effects from RF exposure as provided by [FCC] rules, while avoiding any unnecessary burden in complying with these rules.”<sup>2</sup>

RF CHECK is focused on supporting all segments of the wireless ecosystem that relate to fixed RF transmission sites – licensees, site owners, specially-trained RF workers, the many other workers who encounter sites, governments, public safety and the public – to achieve exactly the same balance. RF CHECK’s patented comprehensive RF safety system offers this

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<sup>1</sup> *Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies; Proposed Changes in the Commission’s Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields*, First Report and Order, Further Notice of Proposed Rulemaking, and Notice of Inquiry, 28 FCC Rcd. 3498 (¶ 1) (2013) (“*NPRM*”).

<sup>2</sup> *NPRM* ¶ 1.

community: (1) analysis of the RF environment at sites around the country; (2) RF training and certification of workers, employers, and site owners; (3) access to a simple web-based interface that provides information needed to work safely near transmitting antennas; (4) recordation of all applicable site activities; (5) easy communication between those who come in contact with sites and licensees to manage access; and (6) security and confidentiality so that access to any carrier or site owner data is limited to non-proprietary information to persons with designated access.

RF CHECK's core competency is to provide RF safety and facilitate FCC regulatory compliance at all wireless transmission sites across the United States. Our expertise provides a depth of knowledge on a subset of the issues that the Commission explores in this proceeding. These brief comments, therefore, concentrate on five issues identified in the NPRM where our work offers real-world insight that we believe will assist the Commission to meet its goal: (1) supervision of transient individuals (third-party workers) in a manner that provides licensees with compliance certainty; (2) safety related to hidden "stealth" antennas; (3) the role of warning signs as only one part of a comprehensive RF safety approach; (4) cooperation between property owners, managers, and licensees; and (5) the need for a compliance system that recognizes the important but necessarily limited ability of the FCC to inspect RF transmission sites.

Paragraph 183: *Supervision of Transient Individuals in a Manner that Provides Licensees with Compliance Certainty*

The NPRM seeks comment on the FCC's approach to "exposure of untrained individuals in controlled environments for short periods of time."<sup>3</sup> In our experience, such workers include electricians, roofers, flashers, painters, HVAC personnel, maintenance workers, firefighters, utility workers, and contractors and employees of licensees who are not specially trained on RF

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<sup>3</sup> NPRM ¶ 175.

safety but must work near RF transmitting antennas. Commission rules require licensees to protect these workers from exposure at each of their sites. We have seen firsthand that as the number of wireless sites increases significantly (including co-location), the types and locations for these sites change, the number of hidden sites increases, and the licensee's ability to protect workers from RF radiation is practically impossible in the absence of a new approach. The Commission, therefore, properly solicits "comment on the expected cost associated with requiring supervision of transient individuals, where licensees would benefit from compliance certainty"<sup>4</sup> in an effort to ensure compliance in a manner that is effective but avoids an unnecessary burden for licensees that are toiling to meet the public's overwhelming demand for all things wireless.

First, because of the large number of RF transmission sites and the large number of untrained transient individuals at those sites who are not under the control of licensees, the Commission should recognize that licensees alone cannot ensure compliance. Instead, only a comprehensive solution that ensures close coordination between licensees, site owners, workers, and those workers' employers will achieve the FCC's goals. It is unrealistic for licensees to somehow control site activity when they have no knowledge of this activity in most cases and no functional ability to control access. If the FCC and all other entities desire to successfully protect workers rather than simply assign blame, RF safety must be recognized as the shared responsibility of the entire wireless ecosystem.

Second, the Commission should seek a solution that ensures that the wide variety of individuals described above who work on rooftops, lighting structures, or other places where RF transmitting antennas are now common, receive simplified RF training and access to site specific

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<sup>4</sup> *NPRM* ¶ 183.

RF safety information prior to site access, recognizing that it simply is not possible for all of these individuals to receive the fulsome training needed for the FCC to classify them as RF safety trained workers.

Third, the Commission’s policies should advance a uniform site safety protocol that is well understood by the diverse set of workers described above. If there are too many different safety approaches with information provided to workers in too many different forms accessible in too many different locations, workers will simply not receive the information they need.

Paragraph 186: *Safety Related to Hidden “Stealth” Antennas*

The NPRM also correctly seeks comment on how the wide deployment of hidden antennas affects its goal of ensuring worker safety near transmission sites. Specifically, the NPRM states “[r]adio transmitters and their antennas have been deployed in a wide variety of forms . . . as trees, chimneys, or panels on a building for aesthetic reasons, and their presence therefore might not be obvious . . . we seek comment on how to simultaneously provide flexibility and certainty to licensees and site owners while at the same time ensuring enforceable compliance with our exposure limits.”<sup>5</sup>

In the past, the vast majority of transmission sites were located in plain sight in relatively inaccessible locations. Each year, however, an increasing number are located in the facade of buildings, nestled in lighting structures, hidden behind RF-transparent but visually obscured fiberglass walls on rooftops, or designed to look like anything but transmitting antennas. These sites allow licensees to comply with often-strict local antenna siting rules, address communities’ aesthetic concerns and adhere to site owner mandates. But stealth sites also make it significantly

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<sup>5</sup> NPRM ¶ 186.

more difficult for workers to identify where RF risks exist. There is abundant evidence that electricians, painters, maintenance workers, roofers, sheet-metal workers, HVAC technicians, and others are performing tasks in close proximity to stealth antennas.

The FCC should react to the emergence of these stealth antennas with rules that advance the use of a private sector, *neutral third-party* to collect and distribute RF safety information related to transmission sites. Such a database would allow workers to identify all RF safety concerns at a location even where visual inspection does not allow effective risk avoidance. In particular, such a system would provide workers with up-to-date RF “maps of the invisible,” keyed to the FCC limits for maximum permissible exposure limits as identified in 47 C.F.R. § 1.1310, prior to entering a property.

Paragraph 190: *The Role of Warning Signs as Only One Part of a Comprehensive RF Safety Approach*

The NPRM also states “that accurate placement of appropriate signage is important.”<sup>6</sup> In RF CHECK’s experience, RF safety signs are only effective as a last line of defense against hazards. Trade workers unaffiliated with licensees are the most vulnerable to RF injuries at wireless sites, and signs by themselves are not effective for this community. Without knowledge of how RF works and how to avoid being over-exposed to RF radiation, workers are at risk even in the presence of signs. The constant change that characterizes the wireless industry means that antenna sites change, power levels change, licensees change, and contact numbers change – but once a sign is hung, it never changes.

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<sup>6</sup> NPRM ¶ 194.

Signs can only be effective in conjunction with a comprehensive, standardized database system in place, where workers will then be able to access the site specific RF safety protocol and “maps of the invisible” to obtain the necessary information to complete the job safely.

Paragraph 193: *Cooperation Between Property Owners, Managers, and Licensees*

The NPRM further states “[w]e also note that our jurisdiction for determination of liability with respect to towers used for communications purposes is not necessarily limited to just licensees. NCRP’s 2002 Letter Report emphasizes the need for building owners and managers to be involved in the implementation of an RF safety program . . . . However, since it is ultimately the licensee that is responsible for compliance, we seek comment on how to better encourage cooperation between property owners, managers, and licensees in the implementation of RF safety programs.”<sup>7</sup>

RF CHECK’s experience shows that cooperation is essential to a successful RF safety approach. The primary aim of RF safety rules should be to protect people against RF radiation injuries by promoting the cooperation needed to achieve this goal, not to assign blame to one party when injury occurs. Nonetheless, although such cooperation is “the right thing to do” to prevent harm, each entity involved will also be motivated to work collectively based on its own interests.

The regulatory motivation for site owners, managers and contractors is to stay in compliance with OSHA regulations so as to avoid agency citations. OSHA regulations clearly delineate specific actions that must be taken by employers “to provide a workplace free from

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<sup>7</sup> NPRM ¶ 193.

serious recognized hazards” such as RF radiation.”<sup>8</sup> Even though the NPRM identifies the licensees as ultimately responsible for site compliance, the Commission should explicitly recognize that a licensee’s compliance with FCC rules does not displace the duties of a “controlling” or “exposing” employer under OSHA regulations.

The regulatory motivation for licensees is to stay in compliance with FCC regulations. Failure to comply may lead to FCC penalties and injunctive action. Furthermore, RF injuries may subject licensees to litigation from injured parties. In February, A.M. Best identified RF radiation from wireless industry antennas as one of the “*Emerging Technologies that Pose Significant Risks with Possible Long-Tail Losses*” due to such litigation.<sup>9</sup>

Paragraph 198: *The Need for a Compliance System that Recognizes the Important but Necessarily Limited Ability of the FCC Directly to Inspect RF Transmission Sites*

The NPRM notes that “[t]he FCC Enforcement Bureau can initiate cases where it appears that RF exposure limits might be exceeded, and where non-compliance is found, the Bureau can require corrective action and impose fines or other sanctions . . . . [E]xamples of where the Commission has declared existing control actions to be inadequate include: signs . . . . , insufficient barriers, and unsecured entryways . . . . [W]e seek comment on this issue.”<sup>10</sup>

The FCC’s Office of Engineering and Technology and the Enforcement Bureau have the unenviable task of overseeing RF safety and compliance at the hundreds of thousands of wireless sites across our nation. Although FCC staff is dedicated and able, the Commission is perpetually

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<sup>8</sup> See Occupational Safety & Health Administration, Employer Responsibilities, available at <https://www.osha.gov/as/opa/worker/employer-responsibility.html>.

<sup>9</sup> A.M. Best Company, Inc., *Emerging Technologies Pose Significant Risks with Possible Long-Tail Losses*, available at <http://www.ambest.com/directories/bestconnect/EmergingRisks.pdf> (Feb. 11, 2013).

<sup>10</sup> NPRM ¶ 198.

underfunded and understaffed for such an enormous mission. It is unrealistic to expect the FCC to field inspect any significant portion of the vast number of transmission sites. Furthermore, as the NPRM recognizes, FCC enforcement has been limited to identifying missing signs and barriers. As discussed above, even well-placed signs and barriers do not effectively protect workers, so FCC enforcement has not, and is highly unlikely to, advance the core safety issues identified in the NPRM.

Instead, the Commission should recognize the need for a comprehensive solution that includes: (1) the establishment of a national standardized RF safety protocol that utilizes a living data repository of all wireless antennas; (2) adequate training for the diverse array of workers who encounter transmitting antennas; (3) access to easily understood site specific RF safety protocols and “maps of the invisible”; and (4) confirmation that workers have received site-specific safety materials prior to performing tasks at wireless sites. Importantly, such a solution must be facilitated by a private sector, *neutral third-party* to be transparent, effective, and sustainable, and must minimize the burden on licensees and site owners. Such a system would allow the FCC to meet its responsibility of protecting workers in a practical way, to monitor compliance without having to field inspect sites and would provide for effortless regulatory compliance of licensees.

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RF CHECK shares the Commission’s goal of protecting the full array of Americans who encounter transmitting antennas. To this end, we are dedicated to serving all segments of the

wireless ecosystem – carriers, site owners, contractors, workers, governments, and public safety  
– and offer any assistance to the FCC that may be constructive to this proceeding.

Respectfully submitted,



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