[FCC Consumer Inquires and Complaints] Re: Emergency RF Interference Complaint – Unauthorized High-Power Microwave Emissions Detected at 10.7777 GHz in Lakewood, Colorado

8 messages

FCC <consumercomplaints@fcc.gov> Mon, May 5, 2025 at 3:33 AM
Reply-to: FCC <consumercomplaints@fcc.gov>
To: Adam Coate <adamcoate@gmail.com>

This ticket (#7822535) has been updated.

Hi Adam,

Your complaint provides valuable information and is shared among FCC bureaus and offices to spot trends and practices that warrant investigation and enforcement action. If the FCC needs more information about your complaint, we will contact you directly.

Thank you for your help in furthering the FCC's mission on behalf of consumers.

This email is a service from FCC Consumer Inquires and Complaints.

Roland Schuetz <greentreefw@aol.com> Tue, May 6, 2025 at 4:06 PM
To: Adam Coate <adamcoate@gmail.com>

A good read Adam,

Let me know when you find out if the towers were licensed.

On May 5, 2025, at 5:57 AM, Adam Coate <adamcoate@gmail.com> wrote:

Hello FCC,

Thank you for your response.

To be clear, I will be needing follow up on this complaint.

Specifically I want to know if these towers are properly licensed under a new call sign. Because the two call signs I found for them (WQBR891 and WLV330) expired on 12/02/2014 and 02/01/2011 respectively.

What's particularly disturbing to me is that WQBR891 appears to be emitting its signal directly at my townhouse, despite its narrow 1.6 degree bandwidth and the fact that my townhouse is not in the path of any of the receiving towers.

Based on the coordinates below related to the WQBR891 transmitter and 3 receivers, I plotted the beam paths of the transmitter to all 3 receivers, and calculated that it would require approximately a 39.6 degree beamwidth for the signal to be hitting my house. That is 24.75 times wider than the 1.6 degree beamwidth that the tower was originally licensed for. Check out the screenshots below to see the problem here.

First screenshot shows the green line depicting the beam path of the transmitter to receiver #1 with a 1.6 degree beamwidth. The red line shows how misaligned the beam would need to be in order to be hitting my house as it currently is.

<Screenshot_20250505_044108_Chrome.jpg>

Second screenshot shows the 39.6 degree beamwidth that would be necessary for this signal to be hitting my house with the edge of its beam. This is 24.75 times wider than the 1.6 degree beam width that the tower was originally licensed for.

<Screenshot_20250505_052243_Chrome.jpg>

We are entering serious legal territory here—particularly since it appears these transmissions may not be licensed at all. If the FCC refuses to cooperate with this investigation, the agency itself may become the subject of legal action.

I am requesting an immediate written response confirming whether WQBR891 and WLV330 are currently licensed to transmit under a different call sign.

WQBR891

Transmitter (DEN1403) 39.726944,-105.055500

Receiver 1 (DEN1411) 39.757889,-105.023833

Receiver 2 (DEN1412) 39.682778,-105.098611

Receiver 3 (DEN1402) 39.756694,-105.080389

My Townhouse 39.729024,-105.051174

Sincerely,
Adam Coate

[Quoted text hidden]

Adam Coate <adamcoate@gmail.com> Mon, May 12, 2025 at 2:16 AM
To: FCC <consumercomplaints@fcc.gov>, Susan Fisenne <Susan.Fisenne@fcc.gov>, Stephanie Kost <Stephanie.Kost@fcc.gov>, Paul Malmud <Paul.Malmud@fcc.gov>, Jennifer Flynn <Jennifer.Flynn@fcc.gov>, foia@fcc.gov, EnforcementBureau@fcc.gov, oetinfo@fcc.gov, ibfsinfo@fcc.gov, Jessica.Rosenworcel@fcc.gov, CommissionerStarks@fcc.gov, CommissionerCarr@fcc.gov, CommissionerGomez@fcc.gov, Mehreen Rasheed <Mehreen.Rasheed@fcc.gov>, Kristi Thompson <Kristi.Thompson@fcc.gov>, Benish Shah <Benish.Shah@fcc.gov>

Date: May 12, 2025

Dear FCC Enforcement Team,

I am submitting **updated technical findings and safety violations** pertaining to my pending complaint (#7822535) involving unlicensed and hazardous RF emissions from the **Crown Castle tower at 5351 W 6th Avenue, Lakewood, CO** ("Edgemont" site, Crown Castle BU #855801).

I. Key Findings – RF Emissions

Using a TinySA Ultra spectrum analyzer with directional antenna, I have **confirmed emissions from this tower in excess of 4.6 dBm at my back patio**, located 1.26 km (0.78 mi) from the tower. Specific readings include:

- **10.0912 GHz** – 4.6 dBm
- **10.7777 GHz** – 19.3 dBm under tower (dropped to -30 dBm after detection)
- **11.5878 GHz** – 1.1 dBm at residential perimeter

These power levels imply **EIRP of over 480,000 watts**, in violation of FCC safety limits and standard operational authorizations.

II. Beamforming and Detection Throttling

Signals display **sub-1° beamwidth precision** and appear to be actively **targeted at my property**. The 10.7777 GHz signal, when detected directly under the tower, immediately dropped by ~50 dB, strongly suggesting **automated suppression behavior** in response to detection.

This supports my allegation that the site is engaged in **targeted RF beamforming activity**, not authorized by any current FCC license.

III. FCC 6409 and NIER Fraud

The 2024 modification permit (TELE24-00035) for this site contains an **FCC NIER Categorical Exclusion statement**, used to bypass formal safety evaluations under **FCC 6409**. However:

- **All historical call signs (WQBR891, WLV330, etc.) are canceled**
- **No public license exists for the GHz-band emissions I have detected**
- **The installed antenna infrastructure includes legacy Ceragon and NEC units**, capable of 10–23 GHz emissions, **not disclosed in the permit**
- Permit documents list “Existing antenna (other carrier) (typ)” with **no call sign, frequency, or power disclosure**

This constitutes **deliberate RF camouflage and fraudulent underreporting of actual power output**, invalidating the NIER exclusion and any claim of compliance with FCC safety regulations.

IV. Request for Immediate Action

I respectfully request the following:

1. **On-site RF inspection** at 5351 W 6th Ave to measure emissions in the 10–12 GHz and 11.5 GHz bands.
2. **Confirmation of whether any STA or license** exists for these emissions.
3. **Review of all safety certifications and NIER claims** used to justify FCC 6409 exemption.
4. Referral to the **FCC Office of Inspector General** if permit or NIER fraud is substantiated.

Please confirm receipt and next steps. This matter involves serious public health and federal safety violations, and must be addressed transparently.

Appendix A below documents the full antenna inventory and transmission infrastructure, confirming that high-frequency equipment capable of emitting in the 10–12 GHz range remains installed—despite being omitted from the publicly disclosed permit.

Sincerely,
Adam L. Coate
5024 W. 8th Ave
Denver, CO 80204
adamcoate@gmail.com
720-419-3488

Appendix A: Antenna Inventory and Transmission Capability Assessment – Edgemont Tower (5351 W 6th Ave, Lakewood, CO)

Crown Castle BU #855801 – Permit: TELE24-00035

I. Publicly Disclosed Active Antennas (per TELE24-00035 Permit)

These antennas are listed in the structural analysis and construction documents filed by Black & Veatch in 2024. Their frequency capabilities are as follows:

- **Ericsson AIR 6419 B77D**
  - Frequency: 3300–3800 MHz
  - Function: Massive MIMO (C-Band 5G)
- **Ericsson AIR 6419 B77G**
  - Frequency: 3300–4200 MHz
  - Function: Extended C-Band / n77/n78 NR
- **Commscope NNH4-65C-R6-V3**
  - Frequency: 698–894 MHz and 1695–2180 MHz

- Function: LTE (Bands 12, 13, 14, 4, 66)

- **Ericsson RRUS 4415**
  - Frequency: 2305–2360 MHz (Band 30 – WCS)
- **Ericsson RRUS 4478**
  - Frequency: 758–798 MHz (Band 14 – FirstNet)
- **Ericsson RADIO 4490HP**
  - Frequency: 699–894 MHz (Bands 5, 12A)
- **Ericsson RADIO 4890HP**
  - Frequency: 1710–2200 MHz (Bands 2, 25, 66)

Important Note: None of these antennas are rated for GHz-band emissions above 4.2 GHz. The highest possible harmonic leakage from these systems would not explain sustained carrier peaks at **10.0912 GHz, 10.7777 GHz, or 11.5878 GHz**.

II. Legacy Microwave Antennas Confirmed in Historical Licensing

These antennas are documented in **canceled FCC licenses WQBR891, WQBR893, WQEG969, and WQBR900**, and correlate with the frequency bands now being detected from the Edgemont tower:

- **NEC TRP-11G-1AA**
  - Frequency: 10.835 GHz, 10.915 GHz, 11.245 GHz, 11.365 GHz, 11.405 GHz
  - Output Power: Up to 57.5 dBm (562 watts EIRP)
  - Use: Microwave backhaul, fixed point-to-point
- **CERAGON FibeAir 1500P-11**
  - Frequency: 11.245 GHz, 11.365 GHz
  - Output Power: ~224 watts
  - Use: Digital microwave (128QAM modulation)
- **CERAGON FibeAir 1500P-23**
  - Frequency: 23.070 GHz, 23.120 GHz, 23.175 GHz
  - Use: High-capacity backhaul
- **NEC nLite 155 / TRP-23G-1A**
  - Frequency: 21.975–23.175 GHz
  - Use: Backhaul with 32QAM/4PSK

These antennas are fully capable of operating in the 10–23 GHz range, matching the real-world measurements taken from the residential location 1.26 km from the tower.

III. Microwave Feedline Infrastructure – Evidence of GHz Transmission

The 2024 engineering packet confirms the continued presence of **waveguide and coaxial feedlines** that are optimized for high-frequency operation:

- **WR-VG86T and WR-VG86ST-BRD Waveguides**
  - Frequency Range: 7–11 GHz
  - Installed from **ground level to top of tower (160 ft)**
  - Use: Point-to-point microwave or directed energy routing
- **Coaxial Cables: LDF5-50A, LDF6-50A, LDF7-50A**
  - Diameter: Up to 1⅝"
  - Frequency Capability: Up to 10 GHz
  - Use: High-power RF delivery beyond what is needed for sub-6 GHz LTE/5G

IV. Analysis and Conclusion

The current **publicly disclosed antenna inventory cannot account for emissions in the 10–12 GHz range**. However:

- The tower is structurally and electrically configured for GHz-range emission.
- Your spectrum measurements **confirm active 10–11.6 GHz emissions**, including anomalous scalar-like modulation.
- The historical antennas (NEC TRP-11G-1AA, Ceragon FibeAir 1500P) are fully compatible with these emissions.
- The waveguide infrastructure remains **wired from ground to peak**, consistent with ongoing microwave usage.

Conclusion: The legacy antennas were either **never removed**, **cloaked via RF camouflage**, or **rebranded in the documentation (e.g., as Samsung or KMW units)** to obscure their function. Combined with real-world RF detection, this strongly suggests **intentional concealment of illegal or STA-authorized high-band operations**.

[Quoted text hidden]

FCC <consumercomplaints@fcc.gov> Thu, May 29, 2025 at 6:57 AM
Reply-to: FCC <consumercomplaints@fcc.gov>
To: Adam Coate <adamcoate@gmail.com>

This ticket (#7822535) has been updated.

Dear Mr. Coate,

Thank you for contacting the FCC with your concerns about radiofrequency (RF) transmitters near your location, and questions of potential interference, RF exposure safety, and licensing.

Regarding RF safety, please know that the FCC shares the concern that Federal regulations protect the health of the public with respect to exposure to RF emissions at all times and in all locations. The policy of the FCC with respect to RF emissions was developed to ensure that FCC-regulated transmitters do not expose the public to levels of RF energy that are considered by organizations expert on human health and safety to be potentially harmful. The U.S. Food and Drug Administration (FDA) maintains that the available scientific evidence does not support adverse health effects in humans due to exposures at or under the current FCC limits. All licensed transmitters must confirm compliance with these FCC limits or prepare an Environmental Assessment on the basis of human exposure to RF energy.

Please be aware that while the FCC takes complaints regarding safety and interference seriously, we do not have the resources to monitor the emissions for all transmitters and locations. The FCC performs RF field investigations only if presented with sufficient information to determine that there is good cause to do so, such as the submission of information sufficient to demonstrate that there has likely been a violation of the FCC's rules. In this process, we do not rely on un-calibrated or non-professional measurements as those tend to be unreliable. The measurements shared might not be indicative of RF emissions concerns and, as measured in units of received power as opposed to RF field strength or power density, are not applicable for comparison to RF exposure limits. The FCC limits on RF exposure are published in Section 1.1310 of our rules (Title 47) available online at https://www.ecfr.gov/current/title-47/chapter-I/subchapter-A/part-1/subpart-I/section-1.1310. When we receive complaints, we generally rely more on detailed descriptions of accessible regions near antennas, accompanied by photographs and approximate distances, as reliable indicators of whether exposure above our limits is possible in these accessible regions.

For typical wireless communications base station antennas (including cell towers and small cells), the power levels are relatively low and the transmitting antennas are located high enough and distant enough from areas accessible to the public that levels of exposure to the public are substantially below the FCC's RF exposure limits. As a general matter, the RF energy transmitted by a conventional cell tower antenna is only likely to exceed the FCC limits for the general public within the spatial region at approximately the same height and within about 10-20 ft directly in front of the antenna. Small cells typically transmit at lower power levels than conventional macro cellular base stations. For small cells, the spatial region where RF exposure limits for the general public could be exceeded typically only extends about 5-10 feet directly in front of each antenna, as opposed to the 10-20 feet stated above for macro cells. Our experience shows that for either category of wireless base station antennas, this spatial region does not extend significantly below the lowest part of the antenna, and levels of exposure at ground level, inside nearby residences, or in other publicly accessible areas nearby tend to be substantially below FCC RF exposure limits. If your home is located over 1 mile away from base station antennas, or if a publicly accessible location near the antenna is at a lower height and 50 feet away, as mentioned in your message, then RF exposure levels at those locations due to those antennas would be well below FCC limits protective of public health and safety.

Most cellular base stations operate under market-based or geographic area licenses. While such licenses and licensees are tracked in our database and must comply with FCC rules, the individual antenna locations operating under market-based or geographic area licenses generally are not tracked in our databases. For additional information or concerns about a particular cell tower or antenna, you may wish to

contact the operator or manager of the antennas. The antenna operator would be required to have confirmed compliance with FCC limits, and they would be encouraged to share confirmation of that compliance upon request.

If you are experiencing interference, please describe your specific devices or communications that are being affected by interference, along with what times interference occurs, and your judgment of whether the interference is consistent, intermittent, noise-like, burst-like, or appears to be from a carrier. As additional background information, there are many possible causes of interference, the most common causes being transmitters and electrical equipment or wiring. It is typically possible for FCC regulated transmitters and devices to operate near residential areas without causing significant interference. The FCC provides additional information on interference with electronic devices online at https://www.fcc.gov/consumers/guides/interference-radio-tv-and-telephone-signals.

We hope that this information is helpful.

[Quoted text hidden]

Adam Coate <adamcoate@gmail.com> Thu, May 29, 2025 at 7:18 AM
To: FCC <consumercomplaints@fcc.gov>, EnforcementBureau@fcc.gov, Paul Malmud <Paul.Malmud@fcc.gov>, FCCOIG@fcc.gov, Mehreen Rasheed <Mehreen.Rasheed@fcc.gov>, oetinfo@fcc.gov, Jennifer Flynn <Jennifer.Flynn@fcc.gov>, Jessica.Rosenworcel@fcc.gov, CommissionerCarr@fcc.gov, CommissionerGomez@fcc.gov, CommissionerStarks@fcc.gov, brendan.carr@fcc.gov, geoffrey.starks@fcc.gov, anna.gomez@fcc.gov

Formal Enforcement Review Request – Complaint #7822535 (Unlicensed GHz Emissions, Permit Fraud, 6409 NIER Misrepresentation)

Date: May 29, 2025

Dear FCC Enforcement Team,

I am submitting this follow-up to **Complaint #7822535** to formally request **enforcement escalation and a field investigation**. The response I received failed to address the core technical violations I documented, including:

I. Calibrated RF Measurements – 10.7777 GHz Emission from Edgemont Tower

Using a **calibrated tinySA ULTRA ZS-407 spectrum analyzer** with an **HTOOL HT8 log-periodic directional antenna**, I have confirmed a **persistent peak of 9.4 dBm at 10.7777 GHz** originating directly from the direction of the **Crown Castle Edgemont tower at 5351 W 6th Avenue, Lakewood, CO**.

By comparison, my cell phone signal at the same location registers around **-90 dBm**. This means the detected 10.7777 GHz signal is approximately **8.7 billion times stronger** than my phone's reception, as measured at my **residential back patio** 0.78 miles from the tower.

II. Comparison to Licensed 5G Antennas – Expected vs. Anomalous Behavior

The officially acknowledged antennas at this site per TELE24-00035 include:

- **Ericsson AIR 6419 B77G** (3300–4200 MHz)
- **Ericsson AIR 6419 B77D** (3300–3800 MHz)
- **Commscope NNH4-65C-R6-V3** (698–894 MHz and 1695–2180 MHz)

I have confirmed these **C-band and sub-6 GHz signals in the 3.3 GHz to 3.9 GHz band** from my property, with peaks around **-50 dBm** and averages near **-60 dBm**, which aligns with expected power levels for **wide-beam 5G antennas** at that distance.

However, the **9.4 dBm 10.7777 GHz signal** is **entirely anomalous**, cannot be attributed to any of the disclosed equipment, and **does not fall within any valid FCC license currently active** at the site.

I have also **photographed six antennas** at the tower that are **not listed on the structural analysis or permit disclosures**, which suggests the existence of **concealed or legacy GHz-band equipment** — most likely **Ceragon or NEC microwave systems** previously licensed under now-expired call signs **WQBR891** and **WLV330**.

III. NIER Fraud Under FCC 6409 – False Power Claims

The TELE24-00035 permit invokes a **Categorical Exclusion from environmental review** by asserting the site operates **below 1,640 watts EIRP**. This claim is demonstrably false:

- The **Ericsson AIR 6419** antennas, according to the manufacturer's documentation, are capable of **73.5 dBm to 79 dBm** output — far exceeding the claimed safe threshold.
- The **undisclosed antennas** appear to be legacy microwave systems capable of **10–23 GHz transmissions**, consistent with the real-world RF measurements I have obtained.

This misrepresentation constitutes **deliberate fraud** under the guise of FCC 6409 exemption, and **invalidates the NIER exclusion claim** currently shielding this tower from proper oversight.

IV. Formal Requests – Immediate Action Items

I am formally requesting the following actions by the FCC:

1. **Enforcement Bureau investigation** into unlicensed GHz-band emissions at 5351 W 6th Ave, Lakewood, CO.
2. **Verification of all currently valid licenses or STAs** for transmissions at **10.7777 GHz** or nearby GHz-band frequencies from this site.
3. **On-site inspection** of the tower to confirm the existence and function of the **six non-permitted antennas**.
4. **Audit and revocation review** of the TELE24-00035 permit if any permit fraud or NIER misrepresentation is confirmed.
5. **Referral to the FCC Office of Inspector General** for review of potential regulatory fraud.

V. Conclusion – Public Safety and Legal Oversight

You are in receipt of **calibrated data, directional measurements, license expiration evidence, and permit inconsistencies**. The FCC now has a clear duty to act.

Failure to conduct an appropriate investigation or to respond substantively within **15 calendar days** will result in escalation to the **FCC Office of Inspector General**, **federal court**, and potentially the **House Oversight and Energy & Commerce Committees**.

Sincerely,
Adam L. Coate
5024 W. 8th Ave
Denver, CO 80204
adamcoate@gmail.com
720-419-3488

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