Before the

Federal Communications Commission (FCC)

Washington DC 20554

In the Matter of RF Exposure Issues Subject to D.C. Circuit Remand in Environmental Health Trust v. FCC[1]	ET Docket No. 13-84

COMMENTS OF THE NATIONAL CALL FOR SAFE TECHNOLOGY, INC.

ON BEHALF OF AMERICANS INJURED AND DISABLED

FROM ELECTROMAGNETICE FIELDS (EMFs), RADIOFREQUENCY (RF) RADIATION AND

WIRELESS RADIATION EXPOSURE

(ELECTROMAGNETIC RADIATION SYNDROME – EMR SYNDROME)

October 20, 2026

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The purpose of this submission is to lay the groundwork for immediate, high-level discussions regarding risk management steps that are presently available under existing laws and regulations in the United States. Actions taken from such discussions will allow the highest-

[1] https://docs.fcc.gov/public/attachments/DA-26-997A1.pdf

level, experienced personnel with subject matter expertise within the appropriate Federal and State agencies, to be brought to bear to protect public health and the environment. Our organization, with expertise across all aspects of this important risk management subject matter, is available to participate in or to support such discussions and subsequent actions.[2]

Understanding the history of how the present regulatory void regarding *Information and Communications Technology*, including *Radio Frequency Radiation*, evolved such that public health and the environment are not protected is critically important. Attached to this submission is an extensive narrative that was part of an *Imminent Hazard Petition* submitted to the *FDA* in 2021 by another organization not associated with ours. However, while not the subject of this present submission, that prior submission includes in its first fifty pages, a reliable and comprehensive history, from the 1980s to the present day, of the evolution of U.S. government regulatory involvement in the *Radio Frequency Radiation* safety issue. This history is an important part of the risk management foundation that the country now desperately needs.

It is also important to be informed on how the consuming public is perceiving the issue of safety from *Radio Frequency Radiation* emitted from common devices including smart phones, WiFi, emergency response devices, laptops, other emerging technologies, and the infrastructures necessary to deliver the technologies which impact in some measure the entire U.S. population, including young children. In the footnote below is an active link to a documentary film which has been released and viewed by the public.[3] This film is important as it provides insights into what the general public sees and what that public expects.

It is critically important to recognize that private sector entities across the range of industry responsible for delivering *Information and Communications Technology* to both business and the public, as well as entities focused on risk management, have within their reach a range of risk management tools at the ready. One challenge for those sectors of technology delivery are that they are not provided incentives for practicing risk management within the products they distribute such as mobile devices, those engaged in manufacturing protective tools available to the consuming public, and the overall need for these entities to see value in competing on safety.[4]

Our collective experience shows that there is significant overlap among citizens, government, and business where there is agreement that risk management is a critically important aspect of

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[2] The National Call for Safe Technology (NC4ST) is a 501(c)(4) non-profit, national coalition, and with its partners has spanned over 2 million people and organizations over at least 30 states, promoting safer wireless technology and wired connections.

[3] *Generation Zapped* (2016) https://www.youtube.com/watch?v=5p4vRB5uU0A.

[4] It is noteworthy that historically, solutions to public health problems that were necessarily addressed by such prior laws as the *Clean Air Act*, the *Clean Water Act*, the *Toxic Substances Control Act*, the *Occupational Safety and Health Act*, and the *Superfund* laws, were encouraged through incentivizing sectors of industry that made risk management tools.

the way forward for the country where privacy, security, safety, and control of emerging *Artificial Intelligence* are involved. The mistakes made historically with wireless technology are either a lesson learned or a harbinger of worse things to come.

Our message here is that we have within our reach the tools necessary to fix these technology triggered problems and manage the attendant risks. We simply need to engage the will to do so. We welcome the opportunity to discuss these crucial issues with the FCC.

Americans for Responsible Technology
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Date: December 21, 2021

The Honorable Xavier Becerra
Secretary
U.S. Department of Health and Human Services
200 Independence Avenue, S.W.
Washington, D.C. 20201

The Honorable Janet Woodcock
Acting Commissioner
U.S. Food and Drug Administration
10903 New Hampshire Ave.
Silver Spring, MD 20993

Via Electronic Mail

Re: CITIZEN PETITION FOR IMMINENT HAZARD RULING by the Department of Health and Human Services (HHS) concerning the current official policy of the Food and Drug Administration (FDA) regarding the safety of human exposure to non-ionizing radiofrequency (RF) radiation.[1]

I. SUMMARY

Petitioner AMERICANS FOR RESPONSIBLE TECHNOLOGY (ART), a not-for-profit coalition of more than 150 allied organizations and other petitioners Environmental Health Trust, Consumers for Safe Cell Phones, California Brain Tumor Association, Tahoe Stewards, Manhattan Neighbors for Safer Telecommunications, Sally Jewell Coxe and Robert Strayton

[1] *Environmental Health Trust, et al., Petitioners v. Federal Communications Commission and United States Of America, Respondents* the United States Court of Appeals for the District of Columbia Circuit Argued January 25, 2021, Decided August 13, 2021, No. 20-1025. ("EHT v FCC") "The phenomenon of radio waves and microwaves moving through space is described as 'RF radiation.'" (pg. 3) https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFDF7/$file/20-1025-1910111.pdf

hereby respectfully request that the Secretary of the Department of Health and Human Services (HHS), within 30 days, issue a Declaration with enabling regulations, that an Imminent Hazard to public health currently exists, and to promptly ensure that this Declaration is communicated affirmatively to all public and private entities that are affected by the Imminent Hazard. We submit this Petition in the form required by 21 CFR Section 10.30 pursuant to 21 U.S. 321(g), and Sec. 21 CFR 2.5, for the following reasons:

1. The FDA has not clarified its present official safety policy relating to non-medical devices emitting radiofrequency (RF) radiation.

2. There is widespread public belief and reliance by federal agencies and state governments, physicians, health care providers, fire departments and other critical services, and businesses of all kinds that such FDA health-based standards exist, and that all wireless devices on the market are compliant with those protective standards, when there is no evidence that such a policy has actually been adopted following well established procedures and regulations under the Administrative Procedures Act (APA).

3. Public exposure to non-ionizing RF radiation is growing at an exponential rate, causing a significant percentage of the American public, including our most vulnerable citizens—children, elderly and disabled persons, persons with implanted medical devices and pregnant women—to be regularly and continuously exposed to RF emissions. Meanwhile, scientific studies are documenting biological harm at levels far below the current 25-year-old Federal Communications Commission (FCC) exposure guidelines that only protect from the heating of human tissue.

4. Petitioners and millions like them are being seriously harmed, and left with no recourse or means of escape, unless and until the HHS and FDA immediately address and rectify the present climate of regulatory chaos. (See Declarations in Appendices 2 and 3.)

In sum, Petitioners respectfully request that the HHS Secretary: (i) declare an Imminent Hazard pursuant to CFR 21 Part 2 Sec. 2.5 (Imminent Hazard to the Public Health) within 30 days, and (ii) communicate affirmatively to all private and public entities affected by the Imminent Hazard the present uncertainty relating to whether the FDA's official policy and regulations concerning RF radiation emitted from non-medical devices are APA-compliant. (See Appendix 1 for proposed Preamble, Rule, and Sub-rules.)

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II. ACTION REQUESTED

Petitioner requests that the Secretary of HHS direct the FDA to (i) within 30 days declare an Imminent Hazard, and (ii) promptly adopt and implement an expedited APA-compliant rulemaking process. These expeditious steps are long overdue, especially given the recent court comments about the inadequacy of specific FDA's statements relied on by the FCC. Statements, omissions, and actions taken by other agencies, industry and the public in reliance on presumed-to-be-established, but in fact non-existent, FDA APA-compliant safety standards for human exposure to RF radiation are false, misleading and dangerous to the public health during a time of unprecedented public exposure, and create an Imminent Hazard to the public health.

III. INTRODUCTION

On August 13, 2021, the United States Court of Appeals for the District of Columbia Circuit in its ruling in *Environmental Health Trust et al. v The Federal Communications Commission (FCC)*[2] cited three statements attributed to the FDA by the FCC that the FDA had established official national RF safety standards upon which the FCC can rely.

The Court disagreed with the FCC's contention that such statements or actions by the FDA were determinative, ruling:

[2] *Environmental Health Trust, et al., Petitioners v. Federal Communications Commission and United States Of America, Respondents* the United States Court of Appeals for the District of Columbia Circuit Argued January 25, 2021, Decided August 13, 2021, No. 20-1025.

> "We find them [the three statements] to be of the conclusory variety that we have previously rejected as insufficient to sustain an agency's refusal to initiate a rulemaking.
>
> "The statements from the FDA on which the Commission's order relies are practically identical to the Secretary's statement in *American Horse* and the Commission's statement in *American Radio*. They explain that the FDA has reviewed certain information—here, 'all,' 'the weight,' or 'the totality' of 'scientific evidence.'
>
> "And they state the FDA's conclusion that, in light of that information, exposure to RF radiation at levels below the Commission's current limits does not cause harmful health effects. But they offer 'no articulation of the factual… bases' for the FDA's conclusion. Am. Horse, 812 F.2d at 6 (internal quotation marks omitted).
>
> "In other words, they do not explain why the FDA determined, despite the studies and comments that Petitioners cite, that exposure to RF radiation at levels below the Commission's current limits does not cause harmful health effects. Such conclusory statements 'cannot substitute for a reasoned explanation,' for they provide 'neither assurance that the [FDA] considered the relevant factors nor [do they reveal] a discernable path to which the court may defer.' *Am. Radio*, 524 F.3d at 241. They instead represent a failure by the FDA to address the implication of Petitioners' studies: The factual premise — the non-existence of non-thermal biological effects — underlying the current RF guidelines may no longer be accurate."

The origin of the developing national health emergency which is the basis for this Petition, is the apparent absence of official FDA safety standards, and the misleading and false claims being attributed to the FDA concerning its official policy on the safety of RF emissions from a range of devices and systems for communication and information exchange. The hazard is growing as our country is now blanketed with these devices, which include but are not limited to cell towers, rooftop and pole mounted antennas, smartphones, Over-the-Air Reception Devices (OTARD), smart meters, Wi-Fi, Internet of Things, and other wireless devices and systems.

In their daily routines Americans are exposed to RF radiation from numerous sources:

1. Their own cell phones, and the cell phones of others near them.

2. Wi-Fi routers in their homes, in their places of work, and in the cafés, bars, restaurants, and retail stores they frequent.
3. Cell towers placed in their communities to service cell phones and wireless devices.
4. Domestic wireless devices such including household surveillance cameras, heating and cooling controls, smart meters, and major and even minor appliances such as coffeemakers which are now dubbed "smart devices."

In short, the average American is exposed to constant RF radiation exposure wherever he or she is, no matter what time it is, 24 hours a day, even in their own homes.

This widespread acceptance of wireless communications, however, depends upon two important factors: 1) the utility, convenience and security of the services provided; and 2) a belief that continuous exposure to RF radiation from multiple sources has been evaluated in an APA-compliant rulemaking and policy-making process by federal health agencies and found to be safe.

The latter assumption becomes all the more critical as millions of new antennas go up around the nation. Those antennas will be placed on utility poles near residences in front yards and on street corners, normally at second-floor level, to service the emerging fifth generation or 5G wireless network.

Petitioners' Request

Specifically, Petitioners request that the HHS Secretary:

(i) declare an Imminent Hazard on an expedited basis based on the apparent absence of official standards as well as continued misstatements, made by many commentors and decisions makers, that FDA has established RF safety standards through required administrative procedures, when nothing in the public record establishes that it has adopted such standards; and

(ii) promptly work to ensure that this declaration is communicated affirmatively to all public and private entities that are impacted by the Imminent Hazard.

Given that Petitioners are asking for a simple decision — clarification of FDA official policy concerning the credible creation of RF safety standards — an Imminent Hazard declaration and a subsequent expedited ruling by the Secretary to resolve the present Imminent Hazard is urgent and reasonable.

Under the rules proposed in this Petition, the HHS, or the FDA on its own initiative, should make the following clarifications:

(i) No Established APA-Compliant HHS and FDA RF Standards for Human Exposure to Non-Medical Wireless Devices Currently Exist. Neither HHS nor the FDA have completed the requisite work required to research, establish or enforce official, APA-compliant, human health safety standards for exposures to RF emissions from a wide range of devices and systems, currently in operation as well as anticipated in the future, and thus have no official safety standards upon which the public can rely;

(ii) Increasing Public Exposure Combined with the Apparent Absence of APA-Compliant FDA Standards is Creating a Imminent Hazard. Regarding the rapidly proliferating deployment of wireless devices and networks, the assertion that the FDA has established or enforced official RF safety standards promulgated through an official safety standard-setting process for RF emitting devices is false, misleading, and imminently dangerous to the public health.

The Secretary's authority and obligation to declare an Imminent Hazard and rectify false claims is well established. As analyzed in detail in the Statement of Grounds, the HHS' general authority to prohibit false or misleading statements relating to the sale of a device is contained in

21 U.S. Code 331 (2). Sec. 21 CFR 2.5 of the FDA's own rules which explicitly authorize the agency to address an Imminent Hazard to public health. It states:

> The *imminent hazard* may be declared at any point in the chain of events which may ultimately result in harm to the public health. The occurrence of the final anticipated injury is not essential to establish that an *imminent hazard* of such occurrence exists. (Emphasis added.) The general authority of the HHS Secretary over radiative devices is contained in 21 U.S. Code § 360kk (Performance standards for electronic products) (a) 1 states:
>
> "The Secretary shall by regulation prescribe performance standards for electronic products to control the emission of electronic product radiation from such products **if he determines that such standards are necessary for the protection of the public health and safety."** (Emphasis added.)

To summarize, a public health crisis currently exists. It originates from the apparent absence of official standards for exposure, massive increases in exposure for the public, especially vulnerable populations, and misleading and false claims being attributed to an official policy of the FDA. These misleading and false claims self-propagate, acquiring a life of their own, as each new misleading assertion further distorts the truth, so that the public no longer knows what is safe and what is not. The HSS Secretary has the immediate means to rectify this Imminent Hazard to the public, which is to issue the proposed declaration and rule. In any event, the Secretary must act.

Important Recent Developments

On November 30, 2021 the FDA publicized a Request for Nominations for voting members of a Public Advisory Committee known as the Technical Electronic Product Radiation Safety Standards Committee (TEPRSSC) within the Center for Devices and Radiological Health. The named Committee was originally established by a 1968 Act of Congress. See Jan. 26, 2021 letter from Ashley S. Boizelle, Deputy General Counsel of the FCC.[3]

[3] https://ehtrust.org/wp-content/uploads/20-1025-FCC-response-to-Court-from-oral-argument.pdf

Pursuant to the Act, the Committee was established "to provide consultation before the [FDA] prescribes any performance standard for an electronic product." The Committee has no role when the FDA acts, as here, to "(A) collect and make available, through publications and other appropriate means, the results of, and other information concerning, research and studies relating to the nature and extent of the hazards and control of electronic product radiation; and (B) make such recommendations relating to such hazards and control as [it] considers appropriate."[4]

This minor step of re-constituting a dormant advisory committee is not an APA-compliant rulemaking because, as the FCC Counsel Boizelle's letter makes clear, neither the Committee nor its Radiation Working Group has the authority to make FDA policy:

> "In this case, the FCC, by Notice of Inquiry, sought the views of interested members of the public and expert federal agencies on the issue of whether it should reexamine its radiofrequency emission limits. JA 161-363. It specifically sought the views of the Director of the FDA's Center for Devices and Radiological Health, Dr. Jeffrey Shuren. JA 8184. No statute or regulation required the FCC to seek out the views of the Committee, or otherwise intrude into the process by which the FDA (or any other federal agency) decides to formulate its views on a matter upon which the FCC has sought comment. Indeed, FDA regulations generally prohibit federal employees from conferring with the Committee directly. 21 C.F.R. § 14.31(d).

As mentioned previously, the DC Circuit Court of Appeals on August 13, 2021 found that the conclusory and arbitrary opinion by Dr. Jeffrey Shuren, Director of the FDA's Center for Devices and Radiological Health, does not, and cannot represent or constitute official FDA policy regarding RF safety standards. (See *Environmental Health Trust et al. v. FCC* pp. 11-15.) Yet, the FDA has not moved with urgency to declare an Imminent Hazard, nor to establish an expedited, APA-compliant rulemaking.

[4] 21 U.S.C. § 360ii(b)(1); see FCC Br. at 23.

Hence, the Request by the FDA to reactivate the (TEPRSSC) must be scrutinized carefully. Taken on its face, Petitioners applaud the FDA for reactivating this Committee, especially if it accomplishes its stated goal of enlisting leading expertise to help the agency and other federal agencies develop balanced RF safety standards that adequately protect the public. However, the Request does not address the Imminent Hazard claim, nor the requested expedited rulemaking of the present Petition. In fact, interpreting the FDA's Request as a legitimate response to the issues raised herein entails the distinct additional risk that it will increase and deepen the Imminent Hazards created by widespread misinformation, because other federal agencies, the Congress, state and local governments, and the general public may believe and detrimentally rely upon the mirage that the FDA has actually done something to credibly and legally rectify the deficiencies in its failure to establish APA-compliant regulations regarding RF, when it has not. Worse, relying solely on the advisory committee, which has no rulemaking powers, will create impermissible delay while the house is burning.

IV. RULE AND SUB-RULES

AMERICANS FOR RESPONSIBLE TECHNOLOGY and associated petitioners request the HHS and the FDA to adopt the following RULE and SUB-RULES, as set forth in Appendix 1.

A. Declaration of Imminent Hazard to Public Health

At present there is considerable confusion regarding the FDA's official policy regarding RF safety standards and regulations. On August 13, 2021, the DC Circuit Court of Appeals in the case of *Environmental Health Trust et. al v. FCC* made clear (pp. 11-15) that the FDA itself must

clarify its own position regarding RF safety based on substantial new scientific evidence in the record. This request for the Declaration of an Imminent Hazard is intended to begin the process of clarifying and remedying the current confusion and misperception regarding RF radiation safety.

HHS, and its regulatory agency the FDA, with declared jurisdiction over RF radiation emitting devices, have apparently neither established nor enforced official safety standards for today's rapidly proliferating technologies, as evidenced by the confusion between the federal judiciary and the Federal Communications Commission (FCC) on this very point. Yet the ubiquitous and densifying deployment continues. RF devices, including smart phones, smart meters, wearable wireless devices, cell towers, laptop computers, routers, autonomous vehicles, earth and base stations, and Internet of Things-related products are proliferating everywhere.

The public record shows that there exist no official FDA standards regulating the safety of the above radiation-emitting devices, systems and processes that might, and which evidence suggests do in fact,[5] adversely affect the health and wellbeing of members of the American public. More specifically, no HHS agency, including the FDA, has engaged in the rigorous procedures required by the Administrative Procedure Act (APA) for such broadly applicable and consequential decisions. These include widely-practiced government hazard evaluations, exposure assessments, risk assessments, RF and EMF dose-response modeling, and other scientific procedures, as well as the APA-required Public Notice and Comment process, with public hearings, Public Boards of Inquiry, that lead to the official adoption and enforcement of safety standards. There has been no official process or procedure to formulate, adopt, and promulgate any official policy or rulemaking relating to RF exposures and public safety, as

[5] See Appendix 1 for Declarations setting out harms from RF emissions and footnotes to this petition.

prescribed by the APA or any other authority. Notably, IEEE, the "world's largest technical professional organization dedicated to advancing technology for the benefit of humanity"[6] in its official publication *IEEE Microwave Magazine* for January 2022 includes an article, *Health Safety Guidelines and 5G Wireless Radiation,* that validates that material gaps exist in studies across the full range of wireless mobile bands, and that there are "significant anomalies" in even recently updated safety recommendations.[7] The FCC's recently updated safety recommendations were remanded in federal court, and those recommendations were based on the FDA's apparently non-APA-compliant process.

Moreover, the FDA has continued to portray prominently its direct role in ensuring the public health is protected from RF devices. Its website shows images of people operating such devices in a manner that suggests that such usage has been carefully studied and determined by the FDA to be safe. [see Figure 1].[8]

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[6] www.ieee.org

[7] IEEE Microwave Magazine: For the Microwave & Wireless Engineer, Volume 23, Number 1, January 2022. *Health Safety Guidelines and 5G Wireless Radiation,* by Dr. James C. Lin. https://ieeexplore.ieee.org/document/9632507
Dr. Lin is Professor Emeritus in the Department of Electrical and Computer Engineering at the University of Illinois Chicago. He is an expert on the biological interactions of wireless radiation. He is a fellow of the American Association for the Advancement of Science and the Institute of Electrical and Electronics Engineers (IEEE). Since 2006 he has been the Editor-in-Chief of the *Bioelectromagnetics* journal published on behalf of the Bioelectromagnetics Society (BEMS), an international organization of biological and physical scientists, physicians and engineers.

[8] From: https://www.fda.gov/radiation-emitting-products/cell-phones/scientific-evidence-cell-phone-safety. See generally: "Are you carrying your cellphone too close to your body?", by Nara Schoenberg, Chicago Tribune, January 26, 2017.

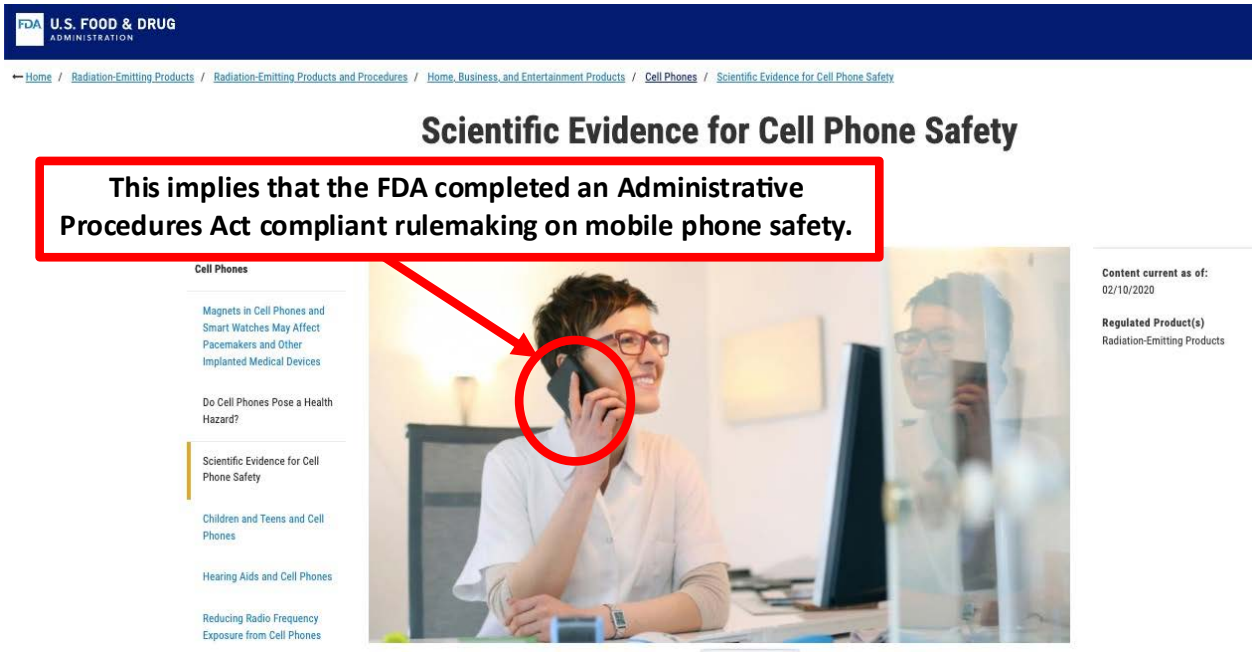


Figure 1

Because of the lack of affirmative regulatory action by HHS or FDA, it is false and/or misleading and violative of the principles of truthful and science-based decision-making that underpin the Food, Drug and Cosmetic Act, for any agency, governmental organization, business entity, or individual to refer to as policy, rely on, or claim to rely on so-called safety standards for RF exposure established by the FDA. The goal is to warn the public not to take comfort in an unjustifiable sense of security based on the belief that the FDA has officially established safety standards for RF emissions. In fact, the FDA has not done so.

The FDA claims regulatory subject matter jurisdiction, knowledge, and responsibility over risk management for wireless communication devices, and has done so from the early 1980s until the present time. It is therefore reasonable for other regulatory agencies, state and local governments, healthcare professionals, non-profit organizations, businesses, consumers, and the public to expect and rely upon the FDA to speak definitively on RF wireless device and systems

safety. Further, speculative or conclusory statements or opinions issued *ex parte* by agents of the FDA or other agencies within the authority of HHS, not based upon rigorous, science-based and comprehensive risk analysis as prescribed under the APA and other regulatory precedents for such subject matter, cannot henceforth be considered or relied upon as official U.S. government policy.

An immediate Declaration of Imminent Hazard is warranted, justified and required to protect the public from further harm – immediate or long-range – due to unsafe levels of exposure to RF radiation.

V. STATEMENT OF GROUNDS

A. Introduction

The FDA has failed to follow the required APA notice and comment rulemaking process when evaluating and establishing safety standards, according to the prescribed practice within the federal government for assessment of risks, in this case for RF emissions and consequent human exposure from wireless information and communication technology devices. Expedited rulemaking is long overdue. Available evidence suggests that the FDA has neither established nor enforced appropriate safety standards for non-medical devices and systems that emit RF radiation. If the FDA had done so, there would have been a public record that included specific protocols and public notice provisions as required under both the APA and the common regulatory requirements for exposures from devices and systems to the general public.[9] The FDA

[9] Another federal agency, the Federal Communications Commission (FCC), has conducted such a public inquiry regarding human exposure to RF radiation, but since the Commission admits it has no expertise in human health matters or public health experts on staff who can analyze complex biological studies, not surprisingly, its findings have been dismissed by the federal court as "arbitrary and capricious." See generally, *EHT v. FCC.*

has yet even to convene a formal meeting of the Radiofrequency Interagency Work Group to consider this issue, or to establish a Public Board of Inquiry, or to conduct Notice and Comment rulemaking, or follow well-established risk analysis and management procedures. Yet, the impression in the broad reaches of the public is that the FDA has indeed followed appropriate procedures for setting standards and indeed engages in enforcement of such standards, and that FDA personnel monitor the use of RF emitting devices and systems such that the public health is protected. This impression of public safety guarantee, which has been propagated both explicitly and implicitly across U.S. regulatory agencies, has led both the public and private sectors to make safety decisions that are ill-informed and potentially dangerous.

1. **Detrimental Reliance on Misleading and False Claims**

As noted above, large segments of American society today believe, and are being encouraged to rely upon the FDA's prominent, though grossly misleading website images and statements assuring the safety of RF exposure, even as related to children. Those conditions leave the impression that the FDA has established and rigorously monitored and modified safety standards; and that presumably it has followed the APA notice and comment rulemaking process covering public exposure to RF emissions from devices that manipulate biologically active waveforms as a means of communication and information transfer. Making conclusory or speculative unsupported statements asserting or implying that the FDA has established through proper procedures an official policy position on the safety of potential hazards presented by RF radiation, when in fact it has not, is false and misleading and is creating an Imminent Hazard to public health.

2. **No Science-Based, Comprehensive Risk Assessment Process Has Been Completed**

The FDA's intentions with respect to RF safety standards are unclear, as the agency has yet to indicate publicly or officially any intended actions or which best practices for risk assessment, hazard evaluation, and risk management the agency is using to make, and support unofficial professional opinions propagated through FDA personnel on the safety of RF; or pursuant to what authority FDA officials are being permitted to rely upon in publicly stating such opinions. Indeed, by commission or omission, the FDA is creating the impression that it is protecting the public from RF radiation exposures, when it is not. Rather, the agency has supported and not corrected the dissemination of false and misleading information. For example, the FDA repeatedly states the unsupported conclusion on its website, in personal communications by FDA officials, and in press releases, that the scientific evidence does not establish that RF exposure can be harmful. It makes these unofficial statements without indicating that the scientific and medical evidence also fails to establish that the current growing exposure of RF in workplaces, schools, homes and public places through devices and delivery systems is safe. Other federal agencies, the medical community, wireless companies, and state and local governments are openly relying upon and justifying their own potentially harmful actions to the public while encouraging the wireless industry and others to rely on the proposition that the FDA has officially determined standards and has concluded that current exposures of the general public to RF are safe. Yet, the public record shows that the FDA has made no such official findings or conclusions, nor that the agency has implemented any appropriate pre- and post-market monitoring of the health effects of RF radiation-emitting non-medical devices.[10]

[10] The FDA must have some experience with non-thermal biological effects associated with RF emitting medical devices, because it has clearly asserted jurisdiction and regulated wireless medical devices for many years.

3. **FDA is Actively Encouraging or Allowing its Employees to Encourage False Claims about its Role in Establishing RF Emissions Safety Standards, and is Improperly Assigning the Burden of Proof of RF Harms to the Public**

As previously noted, the FDA continues to publish misleading and false statements on its website regarding RF safety. The website refers to the paucity of proof of harm caused by devices emitting RF. It does not indicate what evidence it has relied on, or the source of that evidence, to support its implied conclusions. It does not reveal that its statements and images on its website, upon which the general public, including health professionals, are relying, were created without APA-compliant risk assessments, hazard evaluations, dose-response modeling, risk management recommendation derivations and other protocols including notice-and-comment rulemaking. It does not indicate an awareness of evidence that fails to support the unqualified safety of RF/RMF emitting devices and systems, and it does not cite the legal basis on which it has decided to place the burden of proof on the public to prove causation of such harms, rather than upon the producers of these RF emitting devices and systems to show safety according to established rules and protocols.

The producers and purveyors of wireless technology, as with all commercial products, are in a far better position than the public to assess these risks, and are in a far better position than the public to assess the severity of these risks and to recommend mitigations of the risks. By

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Regarding medical devices, the FDA currently grants categorical exclusions from complying with NEPA's requirement to prepare an Environmental Impact Statement for some medical devices under some conditions. (See: 21CFT25.34) However, this regulation, which presumably complied with APA requirements, omits any reference to non-medical devices as listed in this Petition. Hence, the natural implication is that applications involving these RF radiation-emitting non-medical devices are not subject to such a NEPA exclusion, unless and until the FDA conducts a similar APA-compliant process to adopt this regulation amendment. The same omission on RF radiation-emitting non-medical devices is also evident in the FDA's present regulations pertaining to Premarket Notification Procedures (See: Section, 807.81, Subpart E). Such continuing regulatory uncertainty is itself contributing to the Imminent Hazard, which is the focus of this Petition.

statute and practice, manufacturers, producers and purveyors of technology have a general duty to protect those who come into contact with their products and services. The FDA itself does not indicate which standards and practices it is using to assess risks and to prescribe risk management mitigation. Whatever the standards the FDA is using, at the very least, the agency is required under the APA to disclose these procedures and practices to the public. But as of this date, none of these disclosures has occurred.

In the case of *Environmental Health Trust, et al., Petitioners v. Federal Communications Commission*, in the United States Court of Appeals for the District of Columbia Circuit, the Court made clear the non-official status of FDA statements on RF emissions and exposures in dismissing the Federal Communications Commission's reliance on these FDA opinions and statements in defending its RF rules. Further, the Court pointed out the inadequacy of the FDA's review methodology in reaching those opinions. The Court, in citing three specific instances of the FDA opining on RF health effects, stated specifically:

> "…they do not explain why the FDA determined, despite the studies and comments that Petitioners cite, that exposure to RF radiation at levels below the [Federal Communication] Commission's current limits does not cause harmful health effects. Such conclusory statements cannot substitute for a reasoned explanation, for they provide neither assurance that the [FDA] considered the relevant factors nor [do they reveal] a discernable path to which the court may defer. Am. Radio, 524 F.3d at 241. They instead represent a failure by the FDA to address the implication of Petitioners' studies: The factual premise—the non-existence of non-thermal biological effects—underlying the current RF guidelines may no longer be accurate."

4. **Irreversible Actions**

In spite of the FDA lacking an official policy establishing any "safety" standards for RF exposure and the devices producing such radiative emissions, many other federal agencies including the Federal Communication Commission, the National Aeronautics and Space Administration, the Department of Defense, the Department of Commerce, the Environmental

Protection Agency, the Council on Environmental Quality, the Occupational Safety and Health Administration, and the U.S. Air Force, health care providers, and municipal governments are taking critical and essentially irreversible actions that evidence suggests might directly compromise the health and well-being of their communities, all based on their misinformed belief that the FDA has already made a determination of safety for RF emissions and consequent exposures from the full range of devices and systems that employ such technology. These actions are based on the core premise and belief that the FDA has established official RF safety standards through an APA-compliant process, and that adhering to those standards provides adequate margins of safety for their constituents. The FDA has never officially evaluated the totality of the science for and against the assertions of safety for RF emissions and exposures according to APA-compliant protocols, yet it posts unsupported conclusions on its website.

5. **Industry Compliance Defense Based on False Claims**

The wireless telecommunications industry is taking advantage of the present state of regulatory uncertainty, ambiguity, and inaction by the FDA. Industry representatives and counsel are routinely and consistently representing that wireless devices and delivery infrastructure have the FCC and FDA imprimatur of safety, and wireless companies are claiming legal rights and defenses based on this premise. Indeed, the FCC has adopted formal, industry-friendly "shot clock" regulations to accelerate the proliferation and densification of RF macro and small cell towers and transmission antennas from densely populated residential communities to pristine national forests. Further, state legislatures such as California's[11] are seeking to pass new laws to accelerate tower and antenna densification near vulnerable locations such as school classrooms and daycare centers, based on the prevailing false and unproven premise that the FDA has set

[11] See e.g. California Telecom Bills Crushing Local Government Control (Physicians for Safe Technology, May 12, 2021).

safety standards in an APA-compliant rulemaking process and is actively monitoring and enforcing compliance with these standards. None of this is true.

Telecommunication companies are asserting that the governmental regulatory system, including the FCC, with the FDA's imprimatur, has established safety standards for RF emitting devices and infrastructure, such that the industry can do as it pleases, so long as the industry is in compliance. However, because the FDA's official policy is unclear, and the derivative referrals by the FCC to the non-existent FDA policy are commonplace, the entire matter of compliance is in question. Local community boards across the country are capitulating to wireless companies, convinced that the 1996 Telecommunications Act and the FCC's maximum thermal emission guideline that it is based upon preempt any legal right to defend themselves. In that the FCC is claiming that the FDA has provided its scientific imprimatur of safety on the FCC's thermal standards, and the FDA is not repudiating these claims, the FDA itself is contributing significantly to the confusion, and to local municipalities making erroneous decisions based on misrepresentations of current federal government RF policy.

B. A History Of The FDA's Role In RF Emissions Regulation

Microwave weaponry and advanced wireless communication technologies have been in accelerated development within the Department of Defense since World War II. During this period government contractors involved in that work, including such technology leaders as Motorola Inc. and Bell Telephone Laboratories (Bell Labs) were closely monitoring the commercialization potential of selected applications of that technology in the civilian marketplace. Although portable satellite phone technologies had been in use from the 1960s, the concept of cellular phones, where a new transmission infrastructure was required to facilitate functionality, began to be adopted into public use in 1984.

At that time the newly formed Center for Devices and Radiological Health (CDRH) within the FDA became the regulatory agency of record for cell phones defined as radiation emitting devices under the law.[12] The first significant act of the CDRH regarding wireless technology was the critical decision over whether radiation-emitting cell phones should be treated in the same way as other radiation-emitting devices, and thus subject to pre-market testing prior to release into the consumer marketplace and subsequent post-market surveillance after deployment.

The CDRH decision in 1984, based primarily on input from the commercial electronics industry-controlled Institute of Electrical and Electronics Engineers (IEEE), was to grant a variance that relieved the wireless phone industry of the requirement for pre-market testing of cell phones based on a so-called "low power exclusion." The rationale for this variance was derived from advice given to the CDRH by IEEE based on downward dose extrapolations from historical studies of microwave ovens. Those extrapolations suggest that the power necessary to transmit and receive cell phone signals was below thermal induction limits, and therefore not biologically active.[13] Without heating of tissue, it was postulated that there was no viable mechanism for cell phones to cause health effects in users. Without any regulatory process or public disclosure, the variance was granted by the FDA. Cell phones were allowed into the commercial marketplace in 1984 without any pre-market testing, post-market surveillance,

[12] The Center for Devices and Radiological Health was the result of a 1980 merger of the FDA's Bureaus of Radiological Health and Medical Devices.

[13] Microwave oven technology is wholly distinct from cell phone and other wireless communications technology in numerous functional characteristics, including the absence of reception capacity and the requirement for high intensity power driving heating of foodstuffs within a closed compartment. The field intensity to cause such heating effects are many thousands of times higher than power levels needed to drive wireless communication device signals, and therefore mostly irrelevant to common use of wireless devices.

systems for adverse event reporting, or any other regulatory monitoring by the FDA or any other regulatory agency.[14]

In 1992 questions were raised by the media, tort lawyers, and by consumer groups about the potential for cell phones to cause brain cancer.[15] The public concern led to Congressional hearings under then Congressman Ed Markey of Massachusetts who at the time was Chair of the Sub-Committee on Telecommunications and Internet.[16] Pursuant to Congressional interest, the FDA again exercised its jurisdiction based on the assertion that cell phones were radiation-emitting devices. The grant to cell phone companies by the FDA in 1984 of an exemption from the requirement of pre-market testing was shielded from public view. By 1992 the FDA adopted a more public role, prompted in large part by the Congressional interest and Congress' need for explanations.[17]

The FDA's assertion of its jurisdiction over cell phones in 1993[18] was bold and included implied admonitions that, without proper data produced by the wireless industry to support safety, the 15 million cell phones in use at the time could be recalled by the FDA under its authority granted in the Radiation Control for Health and Safety Act of 1968. In a July 19, 1993 letter from Dr. Elizabeth Jacobson, FDA's Deputy Director for Science for the Center for

[14] It is noteworthy that as the build-out of cellular phone infrastructure advanced during that same time period, concern was raised that equipment on cell phone towers emitted radiation into the environment, prompting involvement of the Environmental Protection Agency and the Department of Energy to begin exploring the health and environmental impact of those emissions.

[15] The triggers for this interest were disclosures made on a CNN Larry King Live television segment where neurologist Dr. David Perlmutter displayed an X-ray of a brain tumor in one of his patients, Susan Reynard, showing the proximity of the tumor to the placement of her cell phone next to her head. Her husband brought a wrongful death suit against cell phone manufacturer Motorola. Further insight into this aspect can be found in the book, *Cell Phones: Invisible Hazards in the Wireless Age* by Dr. George Carlo and Martin Schram.

[16] Those hearings made clear that cell phones had not been pre-market tested, and that there was not a sufficient database to assess definitively whether cell phones posed a danger to consumers. In response, the cell phone industry pledged up to $25 million to study the issue.

[17] Indeed, the FDA was pressured for explanations, as it was its decision to exempt cell phones from pre-market testing that was central to the argument about brain cancer risk and cell phones.

[18] See Health Effects of Cellphone & Cell Tower Radiation: Implications for 5G. *Center for Family and Community Health, UC Berkeley* - November 3, 2021. https://www.coeh.berkeley.edu/webinar-archive/21web1103

Devices and Radiological Health, to then president of the Cellular Telephone Industry Association (CTIA) Thomas Wheeler, the FDA's regulatory jurisdiction and role was made clear.

In pertinent part, Dr. Jacobson's letter to Mr. Wheeler stated:

> "I am writing to let you know that we were concerned about two important aspects of your press conference on July 16 concerning the safety of cellular phones, and to ask that you carefully consider the following comments when you make future statements to the press.
>
> First, both the written press statements and your verbal comments during the conference seemed to display an unwarranted confidence that these products will be found to be safe. In fact, the unremittingly upbeat tone of the press packet strongly implies that there can be no hazard, leading the reader to wonder why any further research would be needed at all. (Some readers might also wonder how impartial the research can be when its stated goal is "a determination to reassure consumers." And when the research sponsors predict in advance that "we expect the new research to reach the same conclusions, that the cellular phones are safe.")…
>
> We are even more concerned that your press statements did not accurately characterize the relationship between CTIA and the FDA... [S]ince it is not yet clear whether we will help to direct the research program, it is premature to state that we will credential the research.
>
> To sum up, Mr. Wheeler, our role as a public health agency is to protect health and safety, not to "reassure consumers." I think it is very important that the public understand where we stand in evaluating the possibility that cellular phones might pose a health risk."

Changes in authority and responsibility prescribed in the Telecommunications Act of 1996 (TCA) created further confusion regarding the ongoing role of the FDA with respect to wireless technology risk assessment and management. It is widely accepted that the TCA transferred some portion of regulatory authority for wireless device safety regulation to the Federal Communications Commission (FCC).[19]

[19] Legislative language in the Telecommunications Act of 1996 is nebulous with respect to the intent of Congress regarding the ongoing role of the FDA, the Environmental Protection Agency, the National Institute for Occupational Safety and Health, and the Occupational Safety and Health Administration with respect to the safety of wireless devices and wireless technology overall. Prior to the passage of the 1996 Act, each of those agencies had

In so doing, the TCA appeared to change some of the FDA's official role with respect to wireless technology health effects and risk management to an advisory capacity to the FCC. Nonetheless, data development and information flow from various research studies and other programs addressing wireless health concerns remained directed to the FDA, and to the other relevant government agencies with expertise in risk assessment and management. A special Interagency Working Group (IAWG) on wireless health effects was convened by the FDA in 1993 and chaired by the FDA through at least 1999.[20]

6. **Historical Subject Matter Expertise**

As the regulatory agency of record since the early 1980s, the FDA also has within its files and based on experience, historical subject matter knowledge that would support more comprehensive risk analyses and risk management recommendations, following minimally rigorous standards as required under the APA.

One key scientific data resource for the FDA was a comprehensive program funded by the wireless industry through an independent trust. Following an expression of Congressional interest and the exercise of regulatory authority by the FDA, the wireless industry, under the auspices of the CTIA, funded a $28.5 million program under an independent entity referred to as the Wireless Technology Research (WTR). The WTR's purpose was to address the problem of cell phone safety and the management of attendant risks.[21]

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significant authority in managing hazards associated with wireless technology. In any event, IEEE, in an official publication, IEEE Microwave Magazine, noted that there are significant gaps and anomalies in human health regulations as related to RF.

[20] It is noteworthy that following the apparent transfer of some regulatory authority to the FCC under the TCA in 1996, career professionals with experience and competency in wireless technology biological effects began to rotate out of CDRH, thinning the expertise and leaving only a small contingent of qualified subject matter professionals remaining at the FDA even to the present time.

[21] The industry funded program was initially established as advisory to the CTIA trade association and later, pursuant to recommendations from a U.S. General Accounting Office study of the cell phone issue, was re-constituted as an independent program funded by the wireless industry through a blind trust under the name Wireless Technology Research or WTR.

From 1993 through 1999, the FDA oversaw the work of the independent WTR program, and established and managed an Interagency Working Group (IAWG) that included all relevant government agencies.[22] The IAWG met to receive briefings from the WTR quarterly from 1993 through 1999. The IAWG also held regular meetings with the management of the WTR and the WTR's independent Peer Review Board which was managed through the Harvard University School of Public Health. The FDA was involved in each step of the research and risk management process.[23] As such, the FDA was clearly the point agency and well positioned to provide input into the WTR program regarding research direction and interpretation, peer-review, and public disclosures. The agency was informed at all stages of findings. Such communications, interactions and access to emerging research findings were intended to keep the FDA in a position to promulgate regulations to protect the public as needed based on those independent scientific evaluations.

The work of the WTR was completed in 1999 and delivered to the FDA and the IAWG in 56 separate peer-reviewed reports. The results of the peer-reviewed WTR work were made public in three book publications which acknowledged the support and input provided by the FDA and the IAWG as integral to the process.[24]

One finding from the WTR work was especially troubling to the wireless industry. It showed genetic damage in human blood after 24 hours of exposure across all types of cell phone

[22] Members of the IAWG included the FCC, EPA, NIOSH, OSHA, NTIA, NIH, NCI, NTP and other agency representatives invited over the seven-year span of the WTR work. Absent from the IAWG was any formal involvement of the Department of Defense.

[23] The process was comprehensive and included development of the WTR Research Agenda; ongoing review and assessment of existing and emerging scientific literature; development of exposure systems for in vivo and in vitro studies; development and approval of all WTR Requests for Proposals; progress reports on ongoing studies of the WTR; draft reports when analyses were completed; and final reports when submitted to the WTR by contractors.

[24] The three book references for compilations of the WTR work are as follows: "Cell Phones: Invisible Hazards in the Wireless Age" by Dr. George Carlo and Martin Schram, 2001; "Wireless Phones and Health: Scientific Progress" edited by George L. Carlo, 1998; "Wireless Phones and Health II: State of the Science", edited by George L. Carlo, 2001.

signals in use at the time. Following this finding, a Cooperative Research and Development Agreement (CRADA) was entered into by the wireless industry and the FDA. The purpose of this 2001 agreement, which served as another direct input of science to the FDA, was to replicate the genotoxicity studies mentioned above that were conducted through the WTR.[25] Although the results of the CRADA were never published in the peer-reviewed literature by the FDA, the previous original findings of genetic damage by the WTR were published in the peer-reviewed journal *BioElectroMagnetics* in 2002. Those results were, in fact, replicated under the CRADA, thereby confirming genetic damage in human blood from cell phone signals.

Following the delivery of the final WTR reports to the FDA and the IAWG in February 1999, the establishment of the CRADA with the industry trade association CTIA was intended to keep research into the effects of wireless technology moving forward. The CRADA agreement put the FDA in an advisory role with the principal work being overseen by investigators financially supported directly by the CTIA. Following the corroboration of the genetic damage findings of the WTR, the CRADA changed focus from actual research to defining what research needed to be done. Pursuant to this new direction of the CRADA, the FDA's Center for Devices and Radiological Health (CDRH) proposed that the National Toxicology Program (NTP) conduct a study of the potential carcinogenic effects of radio frequency radiation emissions of wireless communication devices as a high priority. This request, conveyed via letter to the NTP on May 19, 1999, prompted the studies on 2G and 3G phones that were only completed and

[25] Under a Cooperative Research and Development Agreement, the sponsoring industry provides funding while professionals either within the government agency, the FDA in this case, or contractors overseen by the government agency, conduct the research.

published as Technical Reports in November 2018. This work was completed 19 years after its inception.[26]

7. **Present Regulatory Ambiguity and Uncertainty**

The FDA has been both an active and passive participant in the building of the scientific database that could be used for assessing risks associated with RF exposures from cell phones, other wireless devices, and connectivity systems.[27] However, there is no evidence in the public record that FDA relied on, consulted, considered, or made use of the information about wireless hazards that is in its files. The agency does not explain how its website came to convey the notion that wireless devices and delivery systems raise no problems of safety when datasets within its files question those conclusions.

Notwithstanding the limited evidentiary record within the FDA, the FCC routinely and emphatically refers to and allows unsubstantiated statements on its official website, implicating the authority of the FDA, such as the following direct quote with respect to cell phones:

> "According to the FDA and the World Health Organization (WHO), among other organizations, to date, there is no consistent or credible scientific evidence of health problems caused by the exposure to radio frequency energy emitted by cell phones. The FDA further states that "the weight of the scientific evidence does not support an increase in health risks from radio frequency exposure from cell phone use at or below the radio frequency exposure limits set by the FCC."[28]

There is no public record that FDA tests or evaluates any electronic performance,

[26] See report here. The NTP studies of exposure to RFR used by cell phones (900 MHz) found: clear evidence of an association with tumors in the hearts of male rats; some evidence of an association with tumors in the brains of male rats; some evidence of an association with tumors in the adrenal glands of male rats; significant increases in DNA damage in the frontal cortex of the brains of male mice; significant increases in DNA damage in the blood cells of female mice; significant increases in DNA damage in the hippocampus of male rats.

[27] As such, it is without obvious logic that the cancer assessment document that was released by the FDA in 2019 (and that has underscored FDA public reassurances of safety regarding cell phones and other wireless devices and their carcinogenic potential) included science only published during the years 2008 to 2018. This time frame excluded the majority of the science that the FDA had a direct hand in developing. Further, it is especially confusing as the majority of studies that the FDA had a hand in directing historically, revealed conclusions contrary to inferences derived from the FDA's most recent public pronouncements.

[28] https://www.fcc.gov/consumers/guides/wireless-devices-and-health-concerns

emissions data, or any other data regarding the ever-expanding and densifying information and communications technology products and systems now in use, nor that it has the technical expertise internally to do so since many of its RF technical experts have been rotated out of the agency. Nevertheless, the FCC website states:[29]

> "Working closely with federal health and safety agencies, such as the Food and Drug Administration, the FCC has adopted limits for safe exposure to radiofrequency (RF) energy. These limits are given in terms of a unit referred to as the Specific Absorption Rate (SAR), which is a measure of the amount of radio frequency energy absorbed by the body when using a mobile phone. The FCC requires cell phone manufacturers to ensure that their phones comply with these objective limits for safe exposure. Any cell phone at or below these SAR levels (that is, any phone legally sold in the U.S.) is a **'safe' phone**, as measured by these standards. The FCC limit for public exposure from cellular telephones is an SAR level of 1.6 watts per kilogram (1.6 W/kg)." (Emphasis added.)

No evidence exists that the FDA or the FCC has used APA-compliant notice and comment processes to adopt officially any safety risk management program for the fleets of modern networks and cell phones that continue to be marketed to the public, and installed in ever-densifying architectures, let alone any of the many other types of RF emission-radiating devices causing human exposure, such as smart meters, OTARD antennas, baby monitors, routers, wearable devices, wireless doorbells, security cameras and other Internet of Things devices. There is no evidence of FDA or FCC pre-market approval studies, post-market monitoring, on-going risk/benefit evaluation, or any other standard regulatory process for RF-emitting devices and systems that are customary for other products and systems that emit RF into workplaces and the general environment. For any of these distinct exposure scenarios from varied devices, there is no evidence or public record of a rigorous and legal APA-compliant rulemaking process.

[29] Specific Absorption Rate (SAR) for Cellular Telephones - FCC

There is no evidence that the FCC or the FDA has followed APA procedures in adopting safety standards for RF based on accepted best practices and procedures even followed by the wireless technology providers themselves, nor for comprehensive risk assessment and management. Rather, in a self-reinforcing manner, the FCC and FDA together are citing each other's *ad hoc* website statements that are misleading to the public. It is noteworthy that such statements, including assertions, implications, and innuendos implying that cell phone RF emission levels are legally as well as medically safe, are being challenged in a number of lawsuits.[30]

a. Children and Teens and Cell Phones

Figure #2 on the FDA's present website[31] illustrates the FDA's position on cell phone usage by children and teenagers.



Figure 2

[30] See april_walker_complaint|Lundy|Wrongful Death.pdf

[31] https://www.fda.gov/radiation-emitting-products/cell-phones/children-and-teens-and-cell-phones [Last accessed, December 20, 2021].

The subtext is especially problematic. It states:

"Current scientific evidence does not show a danger to any users of cell phones from radio frequency (RF) energy, including children and teenagers. There are also simple steps that anyone, including children and teenagers, can take if they would like to reduce RF exposure."

This language raises several questions the FDA must address:

- Does the FDA mean to imply that cell phone use in this manner is safe? If the agency's position is that such use is in fact safe, the FDA must provide appropriate documentation and not avoid the question by claiming that undefined "scientific evidence" does not show "danger."

- The FDA appears to be making a clear statement concerning the safe use of cell phones by children and teenagers. But then the FDA continues by citing the European MOBI-KIDS study, where early indication seems to suggest real concerns on how children and teens are currently using cell phones. From the FDA's website:

  "A large epidemiological study of the effects of cell phones in young adults aged between 10 and 24 was completed across 14 countries in Europe (the MOBI-KIDS study). Although the study was completed in 2016, the results have not yet been published. As with all other information, the FDA will continue to monitor scientific information and assess the results of this study as it becomes available."

- The FDA's apparent position on exposure to children runs counter to the DC Circuit Court's ruling in *EHT v FCC* cited previously:

  "Under this highly deferential standard of review, we find the Commission's order arbitrary and capricious in its failure to respond to record evidence that exposure to RF radiation at levels below the Commission's current limits may cause negative health effects unrelated to cancer. (As we explain below, we find that the Commission offered an adequate explanation for its determination that exposure to RF radiation at levels below the Commission's current limits does not cause cancer.) That failure undermines the Commission's conclusions regarding the adequacy of its testing procedures, particularly as they relate to children, and its conclusions regarding the implications of long-term exposure to RF radiation, exposure to RF pulsation or modulation, and the implications

> of technological developments that have occurred since 1996, all of which depend on the premise that exposure to RF radiation at levels below its current limits causes no negative health effects. Accordingly, we find those conclusions arbitrary and capricious as well." (pg. 9-10)
>
> "Second, the Commission equally failed to provide a reasoned explanation for brushing off record evidence addressing non-cancer-related health effects arising from the impact of RF radiation on children… In dismissing those concerns, the Commission again relied on a conclusory statement from the FDA that "[t]he scientific evidence does not show a danger to any users of cell phones from RF exposure, including children and teenagers"… So once again, the Commission's failure to provide a reasoned or even relevant explanation of its position that RF radiation below the current limits does not cause health problems unrelated to cancer renders its explanation as to the effect of RF radiation on children arbitrary and capricious." (pg. 20-21)

b. Administrative Guidance Does Not Constitute Official Policy

The present confusion regarding official FDA policy, safety standards, and enforcement regarding cell phones and other wireless devices and systems is compounded by published Guidelines and other pronouncements, in which the FCC and FDA are referencing each other and creating the public impression of official imprimatur. One example is the October 23, 2015 FCC Guideline on "RF Exposure Procedures And Equipment Authorization Policies For Mobile And Portable Devices".[32]

As a matter of administrative law, it is questionable that administrative guidance can constitute official policy. Clearly the full strictures of the Administrative Procedure Act should apply, especially when such guidance presents significant dangers to the public. (See: Richard A. Epstein, The Role Of Guidances In Modern Administrative Procedure: The Case For De Novo Review.) The FDA follows the procedures required by its "Good Guidance Practice" regulation to issue FDA guidance. FDA guidance describes the agency's current thinking on a regulatory

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32 https://apps.fcc.gov/kdb/GetAttachment.html?id=f8IQgJxTTL5y0oRi0cpAuA%3D%3D&desc=447498%20D01%20General%20RF%20Exposure%20Guidance%20v06&tracking_number=20676

issue. The FDA website explicitly states: "Guidance is not legally binding on the public or FDA." The Good Guidance Practice regulation can be found at 21 CFR 10.115.

The FCC and FDA have for a long time been cross-referencing, implying and creating the public impression that such Guidance is official federal government policy, while at the same time publicly stating that it has no legal effect.[33] This state of dangerous ambiguity is especially deserving of the critical public and judicial review that Professor Epstein is recommending.

Impact of the FDA's Ambiguity on Medical Practice

The present state of regulatory uncertainty is also confusing to physicians, other medical professionals, and clinicians who are making medical decisions for patients based on the misguided premise that the primary health authorities in the country, HHS and the FDA, have definitively spoken on the issue of RF radiation safety. Given its stature, the pictorial endorsement evident in Figures 1 and 2 above is tantamount to offering a medical opinion that use of cell phones in this manner is safe. While HHS and the FDA fail to provide reasoned public safeguards, other countries are taking action to remedy this exact problem. For example, the Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) has been sufficiently concerned about misleading the medical community that the agency has published a disclaimer on its website to the effect that no physician can construe or rely upon any website statement as tendering medical advice or sanctioning any medical procedure, decision making, or treatment.[34]

Unlike ARPANSA, the FDA has not issued any such disclaimer, or any other guidance to practicing clinicians and health professionals. Many physicians and health officials in the U.S.

[33] "Guidance is not legally binding on the public or FDA." *What is the difference between the Federal Food, Drug, and Cosmetic Act (FD&C Act), FDA regulations, and FDA guidance?*
[34] See ARPANSA's Disclaimer.

are currently not considering RF effects in differential diagnoses and treatment regimens, believing the FDA has already pronounced on the safety of RF exposure. These health practitioners and officials have been led to believe that RF exposure is not a clinically relevant concern. The scientific literature is replete with peer-reviewed studies suggesting just the opposite. This misplaced reliance on the expectation that the FDA has an integral role in providing useful information to clinicians about RF exposures of patients is confounding to clinicians, and dangerous to patients.

8. **FDA Dismissal of Its Own National Toxicology Program (NTP) Study**

Without any APA-compliant process evident in the FDA's public record as justification, FDA official, Dr. Jeffrey Shuren, has publicly discounted, misrepresented, and dismissed the conclusions of the ten-year $30 million taxpayer-funded study by the National Toxicology Program (NTP) originally nominated by the FDA pursuant to the 1999 CRADA with CTIA. The NTP study concluded that there is clear evidence of carcinogenicity from RF exposure in rats.[35] Dr. Shuren, the present Director of the FDA's Center for Devices and Radiological Health, has inexplicably continued to trivialize, discount, and distort the actual findings of the NTP Report, and to permit other federal agencies, most significantly the FCC, to rely on his statements that were not supported by an APA-compliant notice and comment rulemaking process at the FDA, appear to be scientifically unsupported, and which are the basis for the August 13, 2021 rebuke by the DC Court of Appeals in *EHT et al. v. FCC*.

Dr. Shuren has issued the following inaccurate and misleading statement, which the FCC and other federal agencies are now publicly recognizing as official FDA policy:

[35] In any other regulatory process where carcinogenicity in animal models specifically designed to predict human cancer risk show positive results, regulatory enforcement actions to mitigate any risks would be mandatory.

> "The conclusions relating to public health risks reached by the FDA's scientists differ from those of the NTP, and the FDA determination is that the study did not demonstrate that cell phones cause cancer."[36]

This FDA official's "conclusions" were not peer-reviewed, otherwise challenged scientifically, or put through any rigorous review process, as would be required by the APA in any credibly authorized process for setting standards and regulations. In publishing unsupported opinion without using an APA-compliant rulemaking and policymaking process, the FDA has effectively shifted the burden of proof of ensuring safety or determining adverse risk to the public away from the industry manufacturers and signal carriers to the consumers. By his words and pronouncements, Dr. Shuren is misleading the public into believing "the study (sic) did not demonstrate that cell phones cause cancer." The Imminent Hazard rules previously cited state clearly:

> "The occurrence of the final anticipated injury is not essential to establish that an Imminent Hazard of such occurrence exists."

Without following APA requirements for establishing safety standards for RF, it is impossible for the public or other interested parties to alert themselves to the possibility of danger from RF, as suggested by the NTP study.[37] It is noteworthy that had the NTP results been gleaned through the APA-accepted methods in pre-market safety testing, the rebuttable presumption of a cancer risk would be operative and the burden on the industry purveyors of the technology to prove safety. In the present post-market situation, if after many more studies are conducted, the FDA ultimately concedes that the overwhelming preponderance of the evidence demonstrates that cell phones actually cause cancer, a possibility not ruled out by Dr. Shuren's

[36] Scientific Evidence for Cell Phone Safety | FDA.
[37] See e.g., Turin Court of Appeal Verdict 3-12-19 (translated from Italian).

extra-official opinionizing, the damage done while waiting for such a determination to be made will be irreversible. The lives lost will be irretrievable.

9. **Detrimental reliance on FDA statements regarding wireless technology safety**

c. How reliance is undermining RF monitoring and enforcement

Reliance by the cell tower providers, site developers, installers, and management companies, as well as local municipalities and counties across the country on the FCC's own unsubstantiated and conclusory statements is supporting self-justifying lax and indifferent monitoring, and virtually no enforcement by the FCC itself of its own aggregate thermal guidelines. As an illustrative example, a detailed radiofrequency (RF) emission field study was conducted by Cardinal Communications on November 3, 2021 at an apartment building in Washington, D.C. where mobile network base stations are operating on and near the premises. The report's conclusion is, using a conservative analysis, that the Federal Communications Commission (FCC) Human RF exposure guidelines **appear to be regularly exceeded in a publicly accessible area**. (See Declaration of Sally Coxe which includes an Executive Summary of the Report.)

d. Cascading Reliance from Authoritative Organizations

Many trusted federal and state agencies, public service organizations, and health care professional associations, each and collectively with very broad reach into the U.S. population, rely on advice emanating from the FDA's pronounced authority on RF safety.[38] Such reliance is based on both the credibility traditionally accorded to the FDA, and the FDA's own representations and implications that convey the impression that someone — the FDA, or if not the FDA, most certainly its closely allied agency the FCC — is effectively monitoring the safety

[38] It is noteworthy that the wireless industry boasts of more than 300 million wireless phones in operation daily in the U.S. Such facts suggest that the entire U.S. population is potentially being reached.

of wireless technology. But no federal agency, or group of federal agencies, actually is. The following are prominent examples that detail the potential reach of the misinformation attributed to the FDA regarding RF and portend the potential scope of the Imminent Hazard now befalling the U.S. population:

The American Cancer Society (ACS). The ACS, a nationwide community-based voluntary health organization dedicated to eliminating cancer as a major health problem, quotes the FDA on the ACS website as the nation's safety authority with respect to wireless technology.[39]

Example reference to FDA's authority:

> "More recently, the US Food and Drug Administration (FDA) issued a technical report based on studies published between 2008 and 2018, as well as national trends in cancer rates. The report concluded: "Based on the studies that are described in detail in this report, there is insufficient evidence to support a causal association between radiofrequency radiation (RFR) exposure and [tumor formation]."

Neither the FDA nor the ACS pointed out that there is insufficient evidence to rule out a causal association between RF exposure and tumor formation, as was found in the NTP study.

American Heart Association (AHA). The AHA is a nonprofit organization in the United States that funds cardiovascular disease medical research, educates consumers on healthy living, and fosters appropriate cardiac care in an effort to reduce disability and deaths caused by cardiovascular disease and stroke. With respect to wireless technology safety, the AHA cites the FDA's expertise and authority on AHA website.[40]

Example reference to FDA's authority:

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[39] https://www.cancer.org/cancer/cancer-causes/radiation-exposure/cellular-phones.html
[40] https://newsroom.heart.org/news/magnets-in-iphoneR-series-12-can-interfere-with-some-implanted-cardiac-devices

> "On May 13, 2021, the U.S. Food and Drug Administration issued an update regarding magnet technology in portable electronics such as cell phones and smart watches that have magnets: the FDA recommends keeping all electronic devices with magnets at least six inches away from implanted medical devices, such as pacemakers and defibrillators. Apple offers the same guidance regarding its MagSafe products."

Centers for Disease Control and Prevention (CDCP). The Centers for Disease Control and Prevention is a federal public health agency under the Department of Health and Human Services whose function is to "protect America from health, safety and security threats, both foreign and in the U.S." With respect to wireless technology safety, the CDCP defer to the FDA, the FCC, and the WHO as the sources in their "Frequently Asked Questions About Cell Phones and Your Health" section on its website.[41]

Federal Communications Commission (FCC). The FCC describes itself on its website as a regulator of interstate and international communications by radio, television, wire, satellite, and cable in all 50 states, the District of Columbia and U.S. territories. An independent U.S. government agency overseen by Congress, the Commission is the federal agency responsible for implementing and enforcing America's communications law and regulations. However, with respect to wireless technology safety, it defers to the FDA.[42]

Example references to FDA's authority:

> "According to the FDA and the World Health Organization (WHO), among other organizations, to date, there is no consistent or credible scientific evidence of health problems caused by the exposure to radio frequency energy emitted by cell phones. The FDA further states that 'the weight of the scientific evidence does not support an increase in health risks from radio frequency exposure from cell phone use at or below the radio frequency exposure limits set by the FCC.[43]

[41] https://www.cdc.gov/nceh/radiation/cell_phones._faq.html
[42] https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety.
[43] See fda.gov/radiation-emitting-products/cell-phones/scientific-evidence-cell-phone-safety.

> "The FDA is, however, the lead federal health agency in monitoring the latest research developments and advising other agencies with respect to the safety of RF-emitting products used by the public, such as cellular and PCS phones."[44]

National Cancer Institute (NCI). As the federal government's principal agency for cancer research and training, NCI leads, conducts, and supports cancer research across the nation to advance scientific knowledge and help all people live longer, healthier lives. Nonetheless, with respect to wireless technology and cancer, the NCI defers to the FDA.[45]

Example reference to FDA's authority:

> "The US Food and Drug Administration (FDA) notes that studies reporting biological changes associated with radiofrequency radiation have failed to be replicated and that the majority of human epidemiologic studies have failed to show a relationship between exposure to radiofrequency radiation from cell phones and health problems. FDA, which originally nominated this exposure for review by the NTP in 1999, issued a statement on the draft NTP reports released in February 2018, saying 'based on this current information, we believe the current safety limits for cell phones are acceptable for protecting the public health.'"[46]

Oregon Health Authority (OHA). The Oregon Health Authority is overseen by the Oregon Health Policy Board (OHPB), a nine-member citizen board. OHA is responsible for the many of the state's major health systems including the Medicaid program known as the Oregon Health Plan, the Oregon State Hospital, public health, behavioral health, and the Public Employees Benefit Board and Oregon Educators Benefit Board. Its wireless technology health risks report defers to the FDA among others as the authority on wireless technology health effects.[47]

Example reference to FDA's authority:

> "Overall, the available epidemiology research examining RF health effects does not provide sufficient evidence to conclude that RF exposure in school settings is associated with adverse health effects. However, as mentioned above, more

[44] https://www.fcc.gov/engineering-technology/electromagnetic-compatibility-division/radio-frequency-safety/faq/rf-safety
[45] https://www.cancer.gov/about-cancer/causes-prevention/risk/radiation/cell-phones-fact-sheet.
[46] Ibid.
[47] https://www.oregon.gov/oha/ERD/Documents/SB283-Wireless-Tech-Health-Risks.pdf.

> research is needed. This is in line with conclusions on RF exposures and health by the U.S. Food & Drug Administration, the Centers for Disease Control and Prevention, the National Cancer Institute and other agencies that work to protect population health."

Every one of these examples creates the erroneous impression that the FDA has officially established safety standards after applying widely accepted risk analysis, monitoring and evaluation standards, and doing so using APA standard regulatory processes, to all RF-emitting devices, when it has not applied such standard processes to many RF-emitting devices.

e. Media Reliance on FCC/FDA Misleading and False Claims

The mainstream media have in many cases unquestioningly accepted and disseminated to the public the misleading and false claims made by the FDA. Countless media reports, precipitated by new studies and other events, carry the misleading message that the FDA is the lead agency on the safety of wireless technology with definitive policy. This is not the case and the false impression continues to be propagated far and wide through the national media. This creates an Imminent Hazard through the very broad dissemination of false and misleading information about nonexistent FDA standards for devices emitting RF radiation.

Recent media coverage and reference to the FDA's statements about cell phone safety centers around two issues:

1. The release of results from a National Toxicology Program study on cellular radiation exposure.
2. Possible cell phone interference with certain implanted medical devices.

Appendix 4 documents the media's reliance on the FDA for information about cell phone safety which reporters include in news stories widely seen by the public. Any declaration of an Imminent Hazard should be disseminated at least as widely.

f. Unsafe Schools and Insecure Learning Environments

The federal government and many states have strong policies requiring safe learning environments for children and teachers in schools.[48] The FCC's and FDA's misleading and false claims about the FDA's official policy on RF safety is powerfully and measurably undermining a national priority that has bi-partisan political support and a broad national consensus on its importance. On the local level, thousands of school officials, parents, and children are being directly affected in the following ways, among others.

- **Failure to Connect Symptoms with RF Exposure.** Parents, teachers, school administrators and nurses are failing to connect the dots when children are evidencing serious acute symptoms, well documented in the scientific and clinical literature to be correlated with RF exposure, right before their eyes: headaches, dizziness, nausea, anxiety, brain fog and cognitive impairment. False assurances of safety by the federal government are creating an atmosphere of disempowerment, such that parents and school administrators do not even recognize, much less take action when their own children are possibly being injured by RF-emitting devices and systems.
- **False Assumptions**. School administrators and their lawyers, parents, and teachers are assuming that continuous, cumulative, and aggregate exposure of children in their care from RF is safe, often because wireless company representatives that have an interest in selling these products are telling them so. These telecom companies are citing scientific "evidence" confirmed by the FDA that RF radiation from these devices and systems pose no serious risk of harm to children and teachers.

[48] See e.g. September 30, 2021 — Senators Markey and Blumenthal, Rep. Castor Reintroduce Legislation to Protect Children and Teens from Online Manipulation and Harm

- **Official FCC and FDA Policy.** School administrators, parents, and teachers are assuming that the FCC and the FDA have adopted an official policy on RF safety using an APA-compliant rulemaking backed by competent scientific and medical analysis, when there is no convincing evidence that these agencies have done any such thing.
- **Hands Are Tied.** School officials, faced with extreme pressure from parents to "modernize" their schools, and with funding from the government, are implementing new wireless technologies, using the FDA and FCC as shields against any concerns about health. Moreover, school administrators believe they have no choice, literally that their "hands are legally tied," because they trust that the FCC and FDA have spoken, and that the Telecommunications Act of 1996 preempts basic civil rights and remedies.

C. Supplemental Legal Authority

Prior sections of this Petition have cited primary legal authority for the HSS Secretary immediately to correct an Imminent Hazard based on misleading and false claims that are attributed to the FDA. The following are supplemental supporting authorities for the Petition.

10. **Performance Standards for Radiative Products (21 U.S. Code § 360kk)**

The Secretary of HHS, in close coordination with the FDA Commissioner, has a clear affirmative statutory obligation to establish performance standards for radiative devices. This Petition alleges that the Secretary and Commissioner are directly or inadvertently allowing the misleading belief that the FDA has in fact issued such regulations, when it has not. The situation must be immediately corrected to avoid further increasing harms.

Section § 360kk requires the HHS Secretary to promulgate performance standards for radiative devices. This has not happened, at least for many RF-emitting devices and systems.

Section § 360kk begins:

> **(a) Promulgation of regulations**
>
> (1) The Secretary shall by regulation prescribe performance standards for electronic products to control the emission of electronic product radiation from such products if he determines that such standards are necessary for the protection of the public health and safety. Such standards may include provisions for the testing of such products and the measurement of their electronic product radiation emissions, may require the attachment of warning signs and labels, and may require the provision of instructions for the installation, operation, and use of such products. Such standards may be prescribed from time to time whenever such determinations are made, but the first of such standards shall be prescribed prior to January 1, 1970. In the development of such standards, the Secretary shall consult with Federal and State departments and agencies having related responsibilities or interests and with appropriate professional organizations and interested persons, including representatives of industries and labor organizations which would be affected by such standards, and shall give consideration to—
>
> (A) the latest available scientific and medical data in the field of electronic product radiation;
>
> (B) the standards currently recommended by (i) other Federal agencies having responsibilities relating to the control and measurement of electronic product radiation, and (ii) public or private groups having an expertise in the field of electronic product radiation;

11. ***Environmental Health Trust et al. v. FCC***

The HHS Secretary has exclusive non-delegable authority to determine and to declare an Imminent Hazard to the public. In the present case, the Imminent Hazard is presented by the misleading and false claims allowed and encouraged by the FDA. Untold numbers of Americans are bearing the consequences of widespread actions across the country made in unquestioning reliance, and almost universal acceptance of this false premise that continues unchallenged by the HHS and the FDA.

On August 13, 2021 the DC Circuit Court of Appeals in *Environmental Health Trust v. FCC* made several rulings that are critical to this Imminent Hazard Petition. The central questions in the *Environmental Health Trust v. FCC* case were:

1) How much diligence under the Administrative Procedure Act must an administrative agency, in this case the FCC and FDA, dedicate in assessing critical questions of national health and wellbeing?

2) What record must an agency produce as evidence that it seriously addressed the risks involved?

3) What deference should the federal courts give to the decisions reached by that agency?

The central findings of the case that are most pertinent to the question of Imminent Hazard are:

- Not only the FCC, but also the FDA acted arbitrarily and capriciously, in violation of the Administrative Procedure Act, by allowing and encouraging the perception, without any evidentiary basis, that it had concluded that RF exposure below the current FCC thermal guidelines for the general public, in particular children, was safe.
- And by inference, no one can take comfort or should rely on the converse proposition — that RF exposure below the present FCC thermal guideline is safe — at least regarding illnesses and other adverse effects from RF exposure outside cancer, which the Court treated as a special and exceptional case. Because the majority opinion is directly relevant to the question of the Secretary's declaration of an Imminent Hazard it is excerpted in full here (pp. 10-15 of *EHT v FCC*).

> "That failure undermines the Commission's conclusions regarding the adequacy of its testing procedures, particularly as they relate to children, and its conclusions

regarding the implications of long-term exposure to RF radiation, exposure to RF pulsation or modulation, and the implications of technological developments that have occurred since 1996, all of which depend on the premise that exposure to RF radiation at levels below its current limits causes no negative health effects. Accordingly, we find those conclusions arbitrary and capricious as well. Finally, we find the Commission's order arbitrary and capricious in its complete failure to respond to comments concerning environmental harm caused by RF radiation." (page 10)

"We do not agree that these statements provide a reasoned explanation for the Commission's decision to terminate its notice of inquiry. Rather, we find them to be of the conclusory variety that we have previously rejected as insufficient to sustain an agency's refusal to initiate a rulemaking."

"The statements from the FDA on which the Commission's order relies are practically identical to the Secretary's statement in American Horse and the Commission's statement in American Radio. They explain that the FDA has reviewed certain information—here, "all," "the weight," or "the totality" of "scientific evidence." And they state the FDA's conclusion that, in light of that information, exposure to RF radiation at levels below the Commission's current limits does not cause harmful health effects. But they offer "no articulation of the factual . . . bases" for the FDA's conclusion. Am. Horse, 812 F.2d at 6 (internal quotation marks omitted). In other words, they do not explain why the FDA determined, despite the studies and comments that Petitioners cite, that exposure to RF radiation at levels below the Commission's current limits does not cause harmful health effects. Such conclusory statements "cannot substitute for a reasoned explanation," for they provide "neither assurance that the [FDA] considered the relevant factors nor [do they reveal] a discernable path to which the court may defer." Am. Radio, 524 F.3d at 241. They instead represent a failure by the FDA to address the implication of Petitioners' studies: The factual premise—the non-existence of non-thermal biological effects—underlying the current RF guidelines may no longer be accurate."

"When repeated by the FCC, the FDA's conclusory statements still do not substitute for the reasoned explanation that the APA requires. It is the Commission's responsibility to regulate radio communications, 47 U.S.C. § 301, and devices that emit RF radiation and interfere with radio communications, id. § 302a(a), and to do so in the public interest, including in regard to public health, Banzhaf v. FCC, 405 F.2d 1082, 1096 (D.C. Cir. 1968). Even the FCC itself recognizes this. See 2019 Order, 34 FCC Rcd. at 11,689 ('The Commission has the responsibility to set standards for RF emissions'); 2013 Notice of Inquiry, 28 FCC Rcd. at 3,571 (explaining that the Commission opened the notice of inquiry "to ensure [it] [was] meeting [its] regulatory responsibilities" and that it would 'work closely with and rely heavily—but not exclusively—on the guidance of other federal agencies with expertise in the health field' in order to "fully discharge [its] regulatory responsibility") (Emphasis added.). And the APA requires that the FCC's decisions

> concerning the regulation of radio communications and devices be reasoned. The FCC's purported reasoning in this case is that it chose to rely on the FDA's evaluation of the studies in the record. Absent explanation from the FDA as to how and why it reached its conclusions regarding those studies, however, we have no basis on which to review the reasonableness of the FCC's decision to adopt the FDA's conclusions. Ultimately, the FCC's order remains bereft of any explanation as to why, in light of the studies in the record, its guidelines remain adequate. The FCC may turn to the FDA to provide such an explanation, but if the FDA fails to do so, as it did in this case, the FCC must turn elsewhere or provide its own explanation. Were the APA to require less, our very deferential review would become nothing more than a rubber stamp."[49]

The very malady the DC Circuit in *EHT v. FCC* is seeking to correct is compounded *each day* that the FDA fails to correct the misrepresentations and false claims surrounding its uncertain policy on RF radiation exposure.

g. DC Circuit Court of Appeals Ruling on Non-thermal Biological Effects of RF Radiation on Humans, Excluding Cancer

The DC Circuit Court of Appeals' ruling and explanatory obiter opinion is crystal clear on the non-thermal biological effects of RF radiation on humans. It excluded cancer, in which it allowed that the FCC's treatment of cancer met minimum APA requirements. The Court required special vigilance, as noted above, regarding RF exposure of children.

> "Under this highly deferential standard of review, we find the Commission's order arbitrary and capricious in its failure to respond to record evidence that exposure to RF radiation at levels below the Commission's current limits may cause negative health effects unrelated to cancer." (pg. 9)

> "The statements from the FDA on which the Commission's order relies are practically identical to the Secretary's statement in American Horse and the Commission's statement in American Radio. They explain that the FDA has reviewed certain information—here, "all," "the weight," or "the totality" of "scientific evidence." And they state the FDA's conclusion that, in light of that information, exposure to RF radiation at levels below the Commission's current limits does not cause harmful health effects. But they offer "no articulation of the factual . . . bases" for the FDA's conclusion. Am. Horse, 812 F.2d at 6 (internal

[49] The EHT case has strong support in *Keetoowah Band of Cherokee Indians v. FCC*. United Keetoowah Band of Cherokee Indians v. FCC, No. 18-1129, 2019 WL 3756373 (D.C. Cir Aug. 9, 2019) https://drive.google.com/file/d/1hG0Br4wnOWonq-f3XYoVLQLUwbj8pIlu/view?usp=sharing

> quotation marks omitted). In other words, they do not explain why the FDA determined, despite the studies and comments that Petitioners cite, that exposure to RF radiation at levels below the Commission's current limits does not cause harmful health effects. Such conclusory statements "cannot substitute for a reasoned explanation," for they provide "neither assurance that the [FDA] considered the relevant factors nor [do they reveal] a discernable path to which the court may defer." Am. Radio, 524 F.3d at 241. They instead represent a failure by the FDA to address the implication of Petitioners' studies: The factual premise—the non-existence of non-thermal biological effects—underlying the current RF guidelines may no longer be accurate." (pg. 14)
>
> "The Commission's failure to provide a reasoned explanation for its determination that exposure to RF radiation at levels below its current limits does not cause negative health effects unrelated to cancer renders the order arbitrary and capricious in three additional respects." (pg. 19)

The DC Court's opinion alone provides a mandate for the FDA to address the widespread misconceptions and actions taken in its name that are the very opposite of the central ruling in *EHT v. FCC.*

D. Declarations and Findings

The Declarations in Appendices 2 and 3 attest to the cost —the Imminent Hazard—that results when misinformation and disinformation on a fundamental public health policy are permitted to continue unchecked. Taken together, these Declarations poignantly express what it is like to have one's life fundamentally altered by RF exposure. These calamities could have been avoided, but for the false sense of security that the FDA is actively monitoring RF safety, which it is not. The Declarations include the warnings of local organizations that are desperately trying to protect vulnerable populations like newborn babies, school children, and people with frailties, illnesses or compromised immune systems, as well as critical services such as firefighters living in fire stations next to macro cell towers, who are being placed at risk as a result of reliance by city councils or fire departments on misleading and false claims attributed to current FCC/FDA policy that chronic RF exposure is safe in all circumstances. At a minimum,

the failure of HHS and the FDA to clarify that it has not established safety standards for RF emissions makes it impossible for individuals who suspect that RF emissions might be causing them harm to evaluate the situation, and either rule out the possibility of harm, or make clear that the harm does, in fact, exist.

Also included are statements by leading scientists, physicians, and other domain experts who are familiar with the voluminous scientific and clinical record, documented by independent, non-conflicted experts, that such continuous, aggregate, and cumulative RF exposure can, in fact, be unsafe. Finally, one Declaration from a former resident on Kirtland Air Force Base highlights how a national health and environmental hazard could well turn into a national security risk. Fighter pilots and others who are responsible for, or custodians of, weapons of mass destruction may be exposed to RF radiation emitted from smart meters located near their bedrooms in military personnel housing. This low-probability/high-damage contingency must not be summarily dismissed.

E. Conclusion

The HHS Secretary must immediately declare an Imminent Hazard to prevent further harm to public health based on misleading and false claims being attributed to the HHS and FDA regarding its current RF radiation exposure policy, safety standards, and regulations; and adopt an affirmative process to directly notify all public and private sector groups impacted by the Imminent Hazard of such action, such that they can begin to take steps to protect their interests regarding exposures to RF.

VI. ENVIRONMENTAL IMPACT

The FDA website states: Environmental impact--This information is generally required if the petition requests approval of food or color additives, drugs, biological products, animal drugs, or certain medical devices, or for a food to be categorized as GRAS (Generally Recognized As Safe). Procedures for preparing environmental impact statements can be found in Title 21, Part 25 of the Code of Federal Regulations. **If an environmental impact statement is not required, petitions should include a statement to that effect.** [Emphasis added.]

As the instant Petition does not request approval of any of the above, no environmental impact statement is required as a condition for filing this Petition.

VII. ECONOMIC IMPACT

A. Unassessed National Health Costs

As part of the FDA's NEPA analysis, the agency, in collaboration with Council on Environmental Quality (CEQ) and other concerned federal agencies, must adopt a whole systems risk analysis of environmental and health impacts of its present policy relating to RF radiation emitted from electronic devices and consequent human exposures.

The present uncertainty over the FDA's official policy regarding RF exposure safety, as this Petition urges, is creating an Imminent Hazard that entails huge economic consequences. By allowing and actively encouraging the misperception and false claims that the FDA has in fact adopted an official policy that RF exposure is safe is implicitly also creating the additional false impression throughout society that the harms from exposure to RF radiation are negligible and costless. Nothing can be farther from the truth.

B. Economic Costs of the FCC/FDA's Regulatory Subsidy to the Wireless Industry

The true economic costs to the American public of the uncompensated and systemic environmental and health damage could likely exceed billions of dollars, if not over $1 trillion annually. The official policy of the FCC and FDA to allow the wireless industry to escape internalizing these costs, but rather to pass them on to the general public, constitutes a massive regulatory subsidy that has not been the subject of any Congressional oversight hearings or official scrutiny (and instead effectively institutes a 'Public Pays Principle'). The FDA and FCC are missing a major opportunity to encourage the wireless manufacturers to develop and market innovative products that compete on safety.

One white paper that addresses the challenges of quantifying the human health costs of RF exposure is Dr. David Carpenter's article.[50] This study, however, does not address the additional costs, including:

- Costs Associated with Electromagnetic Hypersensitivity (EHS),
- National Health Costs Related to Major Chronic Illnesses and Disabilities (including cancer, heart disease, stroke, neurodegenerative disease, and diabetes),
- National Health Costs Related to RF Radiation Effects on Children,
- National Health Costs of RF Radiation Effects on Economically Disadvantaged Populations,
- National Costs of RF Induced Sleep Deprivation,
- National Costs of Substance Abuse, Alcoholism, and Mental Disease Linked to Chronic and Cumulative RF Radiation Exposure,

[50] See generally: 2010 Human Health Effects of EMFs: The Cost of Doing Nothing. David O. Carpenter, MD. Institute for Health and the Environment, University at Albany, Rensselaer, NY 12144-3456.

- National Costs of Declining Productivity from RF Radiation Exposure in the Workplace.

VIII. CERTIFICATION

The undersigned certifies, that, to the best knowledge and belief of the undersigned, this petition includes all information and views on which the petition relies, and that it includes representative data and information known to the petitioner which are unfavorable to the petition.

Respectfully submitted on behalf of all Petitioners,



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IX. IDENTIFYING INFORMATION

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X. APPENDIX 1: Petitioners' Proposed Rule and Subrules Relating to a Declaration of Imminent Hazard to Public Health — Section (i) et seq. pg. 70 (Effective January 1, 2022)

21 U.S. Code § 360kk - Performance standards for electronic products

(a)PROMULGATION OF REGULATIONS

(1) The Secretary shall by regulation prescribe performance standards for electronic products to control the emission of electronic product radiation from such products if he determines that such standards are necessary for the protection of the public health and safety. Such standards may include provisions for the testing of such products and the measurement of their electronic product radiation emissions, may require the attachment of warning signs and labels, and may require the provision of instructions for the installation, operation, and use of such products. Such standards may be prescribed from time to time whenever such determinations are made, but the first of such standards shall be prescribed prior to January 1, 1970. In the development of such standards, the Secretary shall consult with Federal and State departments and agencies having related responsibilities or interests and with appropriate professional organizations and interested persons, including representatives of industries and labor organizations which would be affected by such standards, and shall give consideration to—

(A)

the latest available scientific and medical data in the field of electronic product radiation;

(B)

the standards currently recommended by (i) other Federal agencies having responsibilities relating to the control and measurement of electronic product radiation, and (ii) public or private groups having an expertise in the field of electronic product radiation;

(C)

the reasonableness and technical feasibility of such standards as applied to a particular electronic product;

(D)

the adaptability of such standards to the need for uniformity and reliability of testing and measuring procedures and equipment; and

(E)

in the case of a component, or accessory described in paragraph (2)(B) of section 360hh of this title, the performance of such article in the manufactured or assembled product for which it is designed.

(2)

The Secretary may prescribe different and individual performance standards, to the extent appropriate and feasible, for different electronic products so as to recognize their different operating characteristics and uses.

(3)

The performance standards prescribed under this section shall not apply to any electronic product which is intended solely for export if (A) such product and the outside of any shipping container used in the export of such product are labeled or tagged to show that such product is intended for export, and (B) such product meets all the applicable requirements of the country to which such product is intended for export.

(4)

The Secretary may by regulation amend or revoke any performance standard prescribed under this section.

(5)
The Secretary may exempt from the provisions of this section any electronic product intended for use by departments or agencies of the United States provided such department or agency has prescribed procurement specifications governing emissions of electronic product radiation and provided further that such product is of a type used solely or predominantly by departments or agencies of the United States.

(b)ADMINISTRATIVE PROCEDURE
The provisions of subchapter II of chapter 5 of title 5 (relating to the administrative procedure for rulemaking), and of chapter 7 of title 5 (relating to judicial review), shall apply with respect to any regulation prescribing, amending, or revoking any standard prescribed under this section.

(c)PUBLICATION IN FEDERAL REGISTER
Each regulation prescribing, amending, or revoking a standard shall specify the date on which it shall take effect which, in the case of any regulation prescribing, or amending any standard, may not be sooner than one year or not later than two years after the date on which such regulation is issued, unless the Secretary finds, for good cause shown, that an earlier or later effective date is in the public interest and publishes in the Federal Register his reason for such finding, in which case such earlier or later date shall apply.

(d)JUDICIAL REVIEW

(1)
In a case of actual controversy as to the validity of any regulation issued under this section prescribing, amending, or revoking a performance standard, any person who will be adversely affected by such regulation when it is effective may at any time prior to the sixtieth day after such regulation is issued file a petition with the United States court of appeals for the circuit wherein such person resides or has his principal place of business, for a judicial review of such regulation. A copy of the petition shall be forthwith transmitted by the clerk of the court to the Secretary or other officer designated by him for that purpose. The Secretary thereupon shall file in the court the record of the proceedings on which the Secretary based the regulation, as provided in section 2112 of title 28.

(2)
If the petitioner applies to the court for leave to adduce additional evidence, and shows to the satisfaction of the court that such additional evidence is material and that there were reasonable grounds for the failure to adduce such evidence in the proceeding before the Secretary, the court may order such additional evidence (and evidence in rebuttal thereof) to be taken before the Secretary, and to be adduced upon the hearing, in such manner and upon such terms and conditions as to the court may seem proper. The Secretary may modify his findings, or make new findings, by reason of the additional evidence so taken, and he shall file such modified or new findings, and his recommendations, if any, for the modification or setting aside of his original regulation, with the return of such additional evidence.

(3)
Upon the filing of the petition referred to in paragraph (1) of this subsection, the court shall have jurisdiction to review the regulation in accordance with chapter 7 of title 5 and to grant appropriate relief as provided in such chapter.

(4)
The judgment of the court affirming or setting aside, in whole or in part, any such regulation of the Secretary shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28.

(5)
Any action instituted under this subsection shall survive, notwithstanding any change in the person occupying the office of Secretary or any vacancy in such office.
(6)
The remedies provided for in this subsection shall be in addition to and not in substitution for any other remedies provided by law.
(e)AVAILABILITY OF RECORD
A certified copy of the transcript of the record and administrative proceedings under this section shall be furnished by the Secretary to any interested party at his request, and payment of the costs thereof, and shall be admissible in any criminal, exclusion of imports, or other proceeding arising under or in respect of this part irrespective of whether proceedings with respect to the regulation have previously been initiated or become final under this section.
(f)TECHNICAL ELECTRONIC PRODUCT RADIATION SAFETY STANDARDS COMMITTEE
(1)
(A)
The Secretary shall establish a Technical Electronic Product Radiation Safety Standards Committee (hereafter in this part referred to as the "Committee") which he shall consult before prescribing any standard under this section. The Committee shall be appointed by the Secretary, after consultation with public and private agencies concerned with the technical aspect of electronic product radiation safety, and shall be composed of fifteen members each of whom shall be technically qualified by training and experience in one or more fields of science or engineering applicable to electronic product radiation safety, as follows:
(i)
Five members shall be selected from governmental agencies, including State and Federal Governments;
(ii)
Five members shall be selected from the affected industries after consultation with industry representatives; and
(iii)
Five members shall be selected from the general public, of which at least one shall be a representative of organized labor.
(B)
The Committee may propose electronic product radiation safety standards to the Secretary for his consideration. All proceedings of the Committee shall be recorded and the record of each such proceeding shall be available for public inspection.
(2)
Payments to members of the Committee who are not officers or employees of the United States pursuant to subsection (c) of section 210 of title 42 shall not render members of the Committee officers or employees of the United States for any purpose.
(g)REVIEW AND EVALUATION
The Secretary shall review and evaluate on a continuing basis testing programs carried out by industry to assure the adequacy of safeguards against hazardous electronic product radiation and to assure that electronic products comply with standards prescribed under this section.
(h)PRODUCT CERTIFICATION
Every manufacturer of an electronic product to which is applicable a standard in effect under this section shall furnish to the distributor or dealer at the time of delivery of such product, in the

form of a label or tag permanently affixed to such product or in such manner as approved by the Secretary, the certification that such product conforms to all applicable standards under this section. Such certification shall be based upon a test, in accordance with such standard, of the individual article to which it is attached or upon a testing program which is in accord with good manufacturing practice and which has not been disapproved by the Secretary (in such manner as he shall prescribe by regulation) on the grounds that it does not assure the adequacy of safeguards against hazardous electronic product radiation or that it does not assure that electronic products comply with the standards prescribed under this section.

(i) DECLARATION OF IMMINENT HAZARD TO PUBLIC HEALTH: CLARIFICATION OF FDA OFFICIAL POLICY REGARDING RF SAFETY FOR RADIATION EMITTING DEVICES (EFFECTIVE JANUARY 1, 2022)

(1)

FDA Preamble to Text of Regulation[51]

The U.S. Food and Drug Administration's (FDA Center for Devices and Radiological Health (CDRH) is responsible for regulating radiation-emitting electronic products. The FDA's statutory authority to regulate certain classes of radiation-emitting electronic products is granted by the Federal Food, Drug and Cosmetic Act, Chapter V, Subchapter C, Electronic Product Radiation Control. The CDRH's goal is to protect the public from hazardous and unnecessary exposure to radiation from electronic products. For most electronic products, safety regulation is divided between CDRH and state regulatory agencies. CDRH regulates the manufacture of the products, and the states regulate the use of the products. Any product that contains an electronic circuit and generates any type of radiation is an electronic product that emits radiation. X radiation (x-rays), microwaves, radio waves, laser, visible light, sound, ultrasound, and ultraviolet light are examples of the many types of radiation emitted by electronic products. It is always the manufacturer's responsibility to produce an electronic product that does not emit hazardous and unnecessary radiation of any type and to comply with the general requirements in Title 21 CFR 1000 through 1005. If there is no performance standard associated with the product, the manufacturer may still have certain reporting requirements, as defined in Table 1 of 21 CFR 1002.1. Certification means that the manufacturer of a radiation-emitting electronic product states that the product complies with applicable FDA performance standards and does not emit hazardous and unnecessary radiation. Certification is based upon the manufacturer's own quality control testing program and does not indicate FDA approval. Certification is a manufacturer's statement that indicates its product complies with the applicable standard. The manufacturer is responsible for assuring in the certification (21 CFR 1010) that a product complies with applicable standards to the best of its knowledge. This statement of certification must be based on an acceptable quality control and testing program which can demonstrate that each product manufactured complies with the applicable standards.

(2)

Proposed Rule and Sub-Rules

(i)

Clarification of FDA Official Policy regarding RF Safety for Radiation Emitting Devices. *A dangerous situation has arisen creating an Imminent Hazard to public health regarding whether the FDA has officially adopted, or not adopted, an APA-compliant policy regarding RF safety of various radiation emitting devices. The intent of this section is to clarify FDA official policy in this regard.*

(a)

Scope and Coverage. *This Rule applies to all information and communication technology devices and systems emitting Radio Frequency Radiation (RF) as part of their connectivity, information transfer and communication functions.*

(b)

Imminent Hazard. Definitions. *This provision is based on 21 CFR - Sec. 2.5 § 2.5 Imminent hazard to the public health:*

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[51] https://www.fda.gov/radiation-emitting-products/electronic-product-radiation-control-program/getting-radiation-emitting-product-market-frequently-asked-questions

"(a) Within the meaning of the Federal Food, Drug, and Cosmetic Act an Imminent Hazard to the public health is considered to exist when the evidence is sufficient to show that a product or practice, posing a significant threat of danger to health, creates a public health situation (1) that should be corrected immediately to prevent injury and (2) that should not be permitted to continue while a hearing or other formal proceeding is being held. The Imminent Hazard may be declared at any point in the chain of events which may ultimately result in harm to the public health. The occurrence of the final anticipated injury is not essential to establish that an Imminent Hazard of such occurrence exists.
(b) In exercising his judgment on whether an Imminent Hazard exists, the Secretary will consider the number of injuries anticipated and the nature, severity, and duration of the anticipated injury. 21 CFR - Sec. 2.5§ 2.5 Imminent hazard to the public health."

(ii)

Sub-Rules

a.

The HHS and the FDA hereby declare an Imminent Hazard concerning actions taken to induce reliance on a non-existent or yet to be promulgated HHS and FDA safety regulations for Radio Frequency Radiation (RF). The general impression, explicit or implicit, that standards and regulations have actually been promulgated and thoroughly protect public health, is based on false and misleading information being widely disseminated. At present the HHS and the FDA have not promulgated such standards and regulations pursuant to an APA-compliant notice and comment process.

b.

Despite ubiquitous and growing worldwide use of such devices, the HHS and the FDA have yet to establish safety standards for RF emissions from end-user devices, pursuant to an APA-compliant process. These devices include but are not limited to cell phones, cell tower antennas and base stations, OTARD devices, Wi-Fi routers, and add-on commercial devices such as smart meters (utility meters which include communication transceivers), and remote sensing capability devices such as those embedded in implanted cardiac pacemakers and defibrillators.

c.

To pronounce publicly, or imply, or allow others to pronounce or imply without correction, that the HHS and the FDA have in fact established safety standards for RF emissions and consequent human exposure, when it has not, violates the law and rules prohibiting false and misleading statements contained in the Food, Drug, and Cosmetic Act, and the regulations promulgated by the FDA to implement that Act, unless and until the FDA formally and officially adopts RF emission safety standards.

d.

Continued public statements made in reliance by individuals, governmental organizations, public health and other private organizations, private businesses, business organizations, local, state or federal regulatory agencies or any other groups or individuals, on the existence of HHS and FDA established RF emission safety standards constitute an Imminent Hazard to public health, until and unless the HHS and the FDA officially establish RF emission safety standards.

e.

Reliance on absent or yet-to-be established HHS and FDA RF emission safety standards creates a false sense of security around presumed safety by the public that promotes the continued use of untested and unmonitored technologies resulting in expanded exposure of members of the public to RF emissions, based on the misrepresentation that the risks of RF emissions have been

evaluated, mitigated and are continuously monitored by the HHS and the FDA, when, in fact, official evaluation of risks posed by RF technology emissions has yet to be undertaken by the HHS and FDA.[52]

f.

The FDA recognizes that it is now critical for the agency to clarify its official policy regarding RF emissions and consequent human exposure; that the present situation of regulatory uncertainty and ambiguity is itself greatly contributing to the FCC's practice of not monitoring or enforcing existing FCC RF guidelines, even when there is evidence that RF devices and systems are regularly violating these emission guidelines, and are resulting in dangerous exposure of both users and bystanders.

Petitioners ask the HHS and the FDA to adopt the forgoing language as an official regulation of the HHS and the FDA to clarify the fact that they have yet to establish safety standards for RF devices and systems.

(June 25, 1938, ch. 675, § 534, formerly act July 1, 1944, ch. 373, title III, § 534, formerly § 358, as added Pub. L. 90–602, § 2(3), Oct. 18, 1968, 82 Stat. 1177; amended Pub. L. 91–515, title VI, § 601(b)(2), (3), Oct. 30, 1970, 84 Stat. 1311; renumbered § 534 and amended Pub. L. 101–629, § 19(a)(1)(B), (2)(B), (3), (4), Nov. 28, 1990, 104 Stat. 4529, 4530; Pub. L. 103–80, §§ 3(w), 4(a)(2), Aug. 13, 1993, 107 Stat. 778, 779.)

[52] It is noteworthy that there is universal acceptance that waveforms used for information transfer through wireless devices and systems are biologically active. The most direct evidence of this observation is the global reliance on the Specific Absorption Rate as an estimator of exposure that relates to thermal, biological effects. In addition, these waveforms have been shown to alter DNA/RNA.

XI. APPENDIX 2: Declarations from Scientists, Doctors and Organizations

In this appendix are declarations from professionals and organizations who have studied the technologies that emit RF and the impacts of those technologies in the areas of health, safety, and quality of life. Declarants are deeply concerned that throughout the country decision makers with authority are accepting without careful review the widespread proposition that the federal government (FCC and FDA) has promulgated official safety standards covering RF emissions, when Petitioners and Declarants can find no credible evidence that such official FDA safety standards have in fact been formally adopted. Declarants believe the present state of regulatory uncertainty and ambiguity presents a risk of irreparable harm to themselves and many others and an Imminent Hazard to public health.

A. Environmental Health Trust

Declaration on FDA's Misrepresentations of FDA's Scientific Determination for Cell Phone and Wireless Radiation Safety

Introduction

This Declaration is submitted by Theodora Scarato, Executive Director of Environmental Health Trust (EHT), one of the world's preeminent research and educational organizations on health effects of Radio Frequency Radiation (RFR)/Electromagnetic Fields (RF). The Declaration documents in detail a Situation of Imminent Hazard due to a broad range of contradictory statements, critical omissions, half truths, haphazard activities and misrepresentations asserted by the Food and Drug Administration (FDA) over many years regarding the agency's official policy and scientific activities concerning RF safety.

The result of FDA's contradictory presentations is the propagation of the false illusion that *safety is assured* for 5G, cell phones and cell towers. The FDA asserts it has reviewed "the totality" of the science, yet it has never completed a hazard or risk assessment of the full body of science. In fact the FDA has only released a literature review limited in scope to cancer and cell phones. The FDA has released a science based evaluation of U.S. human RF exposure limits specifically, nor of studies on 5G technology, nor of studies on impacts to children, nor of non cancer health effects such as brain damage and sperm damage; yet the FDA asserts without adequate evaluation that current US RF exposure limits protect the public.

Unless the FDA has reports and evaluations that have never been made public, the FDA has repeatedly misrepresented its activities in regards to cell phone and wireless radiation safety limits. When scientists and policymakers request specific information on FDA's policies and level of scientific review, the FDA has repeatedly refused to answer questions.

Most detrimentally, the FDA's contradictory presentations have taken on a life of their own. Each misleading or half truth once allowed or encouraged, is quoted, augmented and expanded into a cascade of false safety assumptions, innuendoes, and falsehoods amplified by the media, wireless companies and even elected officials.

Due to the cascade of misinformation the FDA's statements foster, most people believe the following **false narrative**:

> ***FALSE: The FDA has a scientific review process in place whereby FDA scientists have thoroughly reviewed all of the latest science, including 5G infrastructure, and used science based best practice methods to ensure current FCC RFR safety limits are safe for the public.***
>
> ***FALSE: The National Institutes of Health National Toxicology Program studies that found cancer in rats have absolutely no relevance to human health.***

FALSE: The FDA's science based determination is that cell phones have such a large 50-times safety factor that they can be used snug to the brain and body, even by children and pregnant women, without any risk whatsoever.

This Declaration provides copious evidence documenting that the above wireless safety narrative is false.

The multitude of hazards to the American public resulting from the FDA's actions and inactions is profound, alarming, continuing, and imminent. Elected officials inaccurately believe that the FDA is ensuring safety against all harms and that they are regularly monitoring the science. As documented in this declaration, FDA's statements to the FCC and Congress that the FDA has evaluated the adequacy of US FCC limits have resulted in major policy and legal decisions at the federal, state and local level which allow significantly increased public exposure to RF.

The Bottom Line: When members the public raise the issue of health effects for children in schools, or request accommodations to protect their health, they are sent a dazzling array of responses all eventually pointing to the FCC RFR limits that rest on the FDA's unsubstantiated safety assurances. They are provided no accommodations or protective action.

Yet, the havoc is easily and immediately corrected. **All the FDA needs to do is to clarify its official activity, level of reviews and policy on RF safety, thus putting a stop to all the misinformation and the resulting confusion.**

THIS DECLARATION EXCERPTS FROM A FULL REPORT[53] (LINKS INCORPORATED BY REFERENCE)

This declaration includes the Executive Summary, Misrepresentation #1, #2, #7 #13 and Section X. A Remedy Is Needed, As the FDA's Failure to Act Will Lead To Continued Harm and key excerpts from a longer 150+ page Report by Environmental Health Trust on FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety. The Table of Contents of this full report is below and can be found online at https://ehtrust.org/fdas-misrepresentations-of-cell-phone-radiation-safety-eht-report/

TABLE OF CONTENTS OF FULL REPORT

I. Executive Summary
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[53] For further evidence of Imminent Hazard, see generally the entire record in *EHT et al. v FCC* which we hereby incorporate in full. See also http://www.nap.edu/catalog/12036/identification-of-research-needs-relating-to-potential-biological-or-adverse-health-effects-of-wireless-communication.

III. FDA's Contradictory Statements, Misrepresentations and Lack of Clarifications Regarding its Policy-This Declaration contends that FDAs misleading information is helping cause an imminent hazard to the American public by allowing an unprecedented increase to RF exposure.

1. Misrepresentation #1: The FDA evaluated the "totality" of scientific data to make a determination that 1. That there are no health effects from cell phone radiation and 2. That FCC Radio Frequency Radiation (RFR) limits are adequately protective and do not need to be changed.
2. Misrepresentation #2: The FDA's "Review of Published Literature between 2008 and 2018 of Relevance to Radiofrequency Radiation and Cancer" released in 2020 is a scientifically valid risk assessment rather than just a literature review.
3. Misrepresentation #3: The FDA has evaluated the science on specific non-cancer effects such as oxidative stress, impacts to reproduction and people with electromagnetic sensitivity.
4. Misrepresentation #4: The FDA states that "the majority of studies" do not show an association between cell phones and health problems.
5. Misrepresentation #5: The FDA states that RFR studies which find biological effects have not been replicated.
6. Misrepresentation #6: The FDA misrepresents the significance of its own sponsored $30 million U.S. National Toxicology Program (NTP) animal study findings and presents inaccurate facts regarding the study.
7. Misrepresentation #7: The FDA has evaluated the FCC's human exposure limits for RFR and come to a determination that the limits are protective based on its scientific review of the limits.
8. Misrepresentation #8: The FDA states they "continually monitor the scientific studies" yet FDA shows no evidence of regular research monitoring nor regular scientific reviews.
9. Misrepresentation #9: The FDA states there is "scientific consensus" that RFR radiation is safe and safety is assured.
10. Misrepresentation #10: The FDA misrepresents that children and pregnant women are adequately protected by FCC RFR human exposure limits, despite no publicly available review on the risks posed by the unique vulnerability of children, pregnant women and the fetus.
11. Misrepresentation #11: The FDA presents to the public that cell phones are safe in body contact positions, well aware that phones in body contact positions exceed the FCC's federal RFR exposure limits.
12. Misrepresentation #12: The FDA misrepresents the existence of a 50 times safety factor in relation to cell phone radiation exposure limits.
13. Misrepresentation #13: The FDA misrepresents its level of review of 5G technology, communicating that the 5G network is safe.

V. The FDA's Critical Omissions

1. Omissions Related to FDA's Role and Authority
2. Omissions Related to FDA's Level of Review
3. Omissions Related to FDA's Public Health Information on How To Reduce Exposure
4. Omissions Related to FDA's Involvement in the National Toxicology Program

5. Omissions Related to the defunct Radiofrequency Interagency Work Group and lack of advisory on RFR by the FDA's Technical Electronic Product Radiation Safety Standards Committee.

VI. The FDA's Lack of Transparency and Refusal to Fully Respond to Questions and the Call for Corrections by the Public, Federal Officials and Scientists.
VII. The FDA Website 2020 Rewrite Misrepresents the FDA's Role After A Decade of Stagnant Website Material
VIII. The Nationwide Impact of the FDA's Misrepresentations Has Serious and Deleterious Consequences to the American Public

1. Influence at the Communities and to Local Governments
2. Influence on State Government and State Elected Officials
3. Influence at the Federal Level on Federal Agencies and Federal Policy
4. Influence on U. S. Congress
5. Influence on Lawsuits and The Courts' Perceptions of Safety
6. Influence on Medical Organizations and Professional Organizations
7. Influence on the Armed Forces
8. Influence on Universities and Educational Institutions
9. Influence on the Media
10. Influence on the Wireless Companies' Ability to Promote the Safety of Their Products
11. Influence on the Public

IX. A Remedy Is Needed, As the FDA's Failure to Act Will Lead To Continued Harm
X. Appendix of Evidence of FDA Misrepresentations and influence on Congress, State Agencies and the Media

Executive Summary

We believe the FDA has made numerous misleading misrepresentations and critical omissions regarding the FDA's level of review and risk assessment for the public health risks of 5G, cell phone and wireless radiofrequency radiation (RFR). The American public, elected officials and agencies at the local, state, local and federal level have detrimentally relied on the FDA, erroneously believing that the agency has evaluated the totality of the science, and that the FDA has officially determined that there is no public health risk from exposure.

The FDA's numerous misrepresentations and critical omissions regarding it's activities and level of review of the science convey the false illusion that *safety is assured*. Every agency from the local to state and federal level point to the FCC which is not a health and safety agency but validates the adequacy of its limits based on the FDA's publicly available information which asserts a robust evaluation of health risks.

However, as detailed in this Declaration, the FDA has not systematically reviewed the "totality" of the evidence to determine public health risks, nor has it evaluated the FCC human exposure limits with a science based methodology. Further, the agency has repeatedly refused to answer questions related to its activities regarding wireless radiation, and refuses to correct inaccurate information on its website.

The FDA has omitted that the Agency has no authority in regards to cell tower emissions and has not scientifically evaluated cell tower antenna maximum permissible RFR levels, nor 5G modulations and has not publicly shown any systematic evaluation of published studies on brain development and reproduction. The FDA omits that it has no authority or expertise regarding impacts to non humans - wildlife trees and plants. The FDA is aware that cell phone radiation exposures can be so high that they may exceed the FCC's limits when phones are resting on the body or carried in a pants pocket or bra, but omits this information from its public communications. The FDA is also aware that a child's developing brain and a fetus are more sensitive to cell phone radiation, but has chosen to omit information on children and fetus vulnerability, dangerously downplaying the human health risks to the American public.

The FDA's misleading information has influenced the public, media, medical professionals, courts and government officials at local, state and federal levels which has led to the unchecked rapid proliferation of wireless networks across the nation in schools, neighborhood streets and workplaces.

At the core of the problem is the fact that the FCC's human exposure regulations for wireless RF radiation have remained unchanged since 1996, and this is directly due to years of FDA's haphazard activities and silence regarding the health effects of cell phone radiation. As the EPA was defunded from research on RF in 1996, the FDA has long been the only federal health agency considered to have authority to opine on RF health issues, due to the FDA's power to regulate radiation emitting electronic products under the provisions of the Food, Drug and Cosmetic Act.

In 2013, the FCC opened up an inquiry seeking comment on the adequacy of these 1996 human exposure limits, and the FDA did not respond for years. Then, on April 24, 2019, FDA Director of the Center for Devices and Radiological Health Dr. Jeffrey Shuren submitted a letter to the FCC with one paragraph dedicated to the issue which stated, *"the available scientific evidence to date does not support adverse health effects in humans due to exposures at or under the current limits…*" Soon after on December 4, 2019 the FCC made a decision **not** to update its 1996 RF limits **largely based on this FDA letter,** and the FDA's web pages and FDA Shuren's statements rejecting the conclusions of the National Toxicology Program study that found cancer and DNA damage in rodents.

Environmental Health Trust and 13 petitioners filed a lawsuit[54] against the FCC for this 2019 refusal to update the federal regulations, and we argued that the FDA had not shown any substantive science based report nor risk analysis to substantiate their online statements and April 2019 Submission to the FCC.

On August 13, 2021, the United States Court of Appeals for the District of Columbia Circuit made a judgment in our case and ruled that the **FCC had failed to show** that its re-affirmation of those 25-year-old wireless radiation limits was based on a reasoned evaluation of the relevant scientific evidence because it ignored record evidence about children's vulnerability, non-cancer effects, impacts to wildlife and the environment, and the effects of long-term

[54] Full Opening Brief of EHT et al v FCC 8/14/2020 ORAL ARGUMENT REQUESTED 20-1025 (Lead); 20-1138 (Consolidated) UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

exposures. Importantly, the Court found that the FCC had improperly relied on FDA's "conclusory statements" regarding RFR and health - **the very same statements we document in this Declaration as misrepresentations[55].** The court stated the FDA's statements *"represent a failure by the FDA to address the implication of Petitioners' studies: The factual premise—the non-existence of non-thermal biological effects—underlying the current RF guidelines may no longer be accurate."*

The FDA's subsequent 2020 release of "Review of Published Literature between 2008 and 2018" further proved that the FDA's conclusion of no harm is unsubstantiated by FDA review, because the FDA's literature review was limited to cancer and cell phones only. It did not include a review of the literature on non-cancer health effects (brain damage, oxidative stress, reproductive harm, etc.), and did not include a review of cell tower studies or environmental effects. Importantly, the FDA's 2020 literature review was not a risk assessment nor hazard identification report and it had numerous inaccuracies - inaccuracies which remain uncorrected to this day. **Yet the FDA misleadingly presents this review as proof of safety.**

The FDA's failure to honestly present its EMF activities, and its misrepresentations regarding the adequacy of the FCC's human exposure limits, have led to a rapidly increasing nationwide RF exposure for all age groups, putting the entire U.S. population at risk. The FCC's limits and the FDA's misrepresentations are used as proof of safety for the rapid deployment of 4G and 5G wireless networks nationwide. Because of this failure, government officials at all levels have rejected evidence presented to them by constituents indicating that densified wireless infrastructure is unsafe, and instead officials are funding new wireless projects in schools and communities. Half the states in the country have passed small cell legislation which strip local authority and fast-track cell tower installations into neighborhoods, many allowing cell antennas less than 50 feet from homes and bedrooms, significantly increasing the environmental RF exposures and leading to documented harms.

People have been injured, and the number of injuries will continue to grow from the wireless networks and wireless devices continuously brought to market under the FCC's 25-year-old, outdated regulations — rules that the FDA has rubber stamped by its inaction, omissions and misrepresentations.

The FDA omits critical information about its scope of authority and level of review to policymakers, allowing false safety assumptions to be widely disseminated. For example, when asked about the safety of 5G networks, the FDA omits to members of Congress that it has no authority regarding cell tower antenna radiation, and the FDA also omits that no US environmental agency is actively monitoring the escalating environmental RF exposures for any adverse effects to wildlife[56]. The FDA omits that it has not systematically reviewed the implications of another type of non ionizing EMF from electronic devices - magnetic field

[55] The FCC cited three statements by the FDA as substantiating their determination: a 2/2018 FDA statement (saying the "totality" of the research shows no harm, a 4/2019 FDA letter (with one paragraph discounting the relevance of the NTP results), and the 12/4/2019 dated FDA website page "Do cell phones pose a health hazard?" (which does not reference the FDA research review).

[56] Research has documented numerous environmental effects from RFR exposure including tree damage, biochemical changes in plants and harm to pollinators and wildlife.

Extremely Low Frequency radiation exposure from cell phones and wireless devices used in body contact positions. The FDA omits that the Interagency RFR workgroup is defunct, and that its advisory committee on the issue has not met since 2016.

Unless the FDA is withholding its science-based reports from the public, all of the publicly available evidence indicates that the FDA is misrepresenting its EMF activities and level of review on the issue, creating false safety assurances. It is certainly possible that the FDA has performed a robust systematic scientific review and risk assessment which has not been made public. If so, the FDA has failed to be transparent to the public and to federal agencies and elected representatives who have repeatedly requested such information. If indeed a robust systematic science based FDA risk assessment exists, it should be made public and subject to scrutiny. Until the FDA publicly releases such documentation, we believe that the FDA is misrepresenting this issue in numerous areas as details in this Declaration.

In short, the American people believe that their government is watching out for them. They believe that the FDA - the U.S. health agency with authority in regards to wireless radiation - is doing its job. This Declaration provides proof that this is not the case.

As the legacy of asbestos, lead, and cigarettes inform us, the FDA's failure to fully assess and mitigate risk will lead to irreversible harms for generations to come.

Years of Misrepresentations and Haphazard Activities

To substantiate the long history of misrepresentations by FDA staff, EHT has compiled years of personal direct email communications with FDA staff initiated by an in-person meeting between EHT's Devra Davis, PhD and Theodora Scarato at FDA headquarters on September 23, 2014. In that meeting, Davis and Scarato presented research linking RFR to cancer and reproductive damage, as well as case reports of young women developing unusual breast cancers directly underneath where they stored a transmitting cell phone in their bra. EHT requested that the FDA inform the public that cell phones should not be in a pocket or bra, as FCC regulatory limits would be violated.

The subsequent email conversations over the years between Scarato and FDA staff showcase a haphazard approach by the agency, a refusal to warn the public about clear violations of FCC exposure limits, and a disregard for credible science clearly indicating harm, especially for children. The FDA clearly stated they had not performed a research review in a 2016 email and refused to answer the question of whether the FDA had reviewed the FCC limits. When the NTP released its findings in 2016 and 2018, Scarato repeatedly requested the FDA update it's website as it linked to 2010 information, but the FDA never did, at least until the February 2020 rewrite. FDA Importantly, when repeatedly asked what specific levels of RFR exposure would trigger FDA's action on the issue, and when asked to correct inaccuracies, FDA staff repeatedly refused to answer, exemplifying the haphazard activities and lack of transparency and misrepresentation.

As additional evidence for this Declaration, EHT has collected and analyzed FDA's letters to members of Congress, to state/local officials, and to scientists. Furthermore, we have included statements by the FCC referencing the FDA's false safety assurances, and dismissing the National Toxicology Program study which found adverse effects in animals. The FDA's misleading website information on cell phone radiation, and the FDA's Dr. Shuren's online statements, also provide critical evidence of the FDA's misrepresentations to the public. We also have provided a short list of examples of how the wireless industry then uses the FDA verbiage to amplify the false message that safety is assured. This information is listed in Section X. Appendix of Evidence of FDA Misrepresentations and influence on Congress, State Agencies and the Media

The FDA Downplays the Significance of the National Toxicology Program Study Which Proves Non Thermal Effects, and Refuses to Correct the Inaccurate FDA Information on The Study

FDA's Dr. Jeffrey Shuren has repeatedly stated that the FDA does not agree with the NTP study's cancer determinations, has publicized this disagreement on the FDA website, and also in one paragraph of his April 2019 letter submitted to the FCC regarding FCC's human exposure limits. The FDA's rejection of the NTP study for being an "animal" study that the FDA itself nominated, displays a shockingly two-faced and hypocritical attitude to animal testing. Because every agent known to cause cancer in humans also produces cancer in animals when adequately studied, animal studies have constituted a bedrock of FDA operations for drug development and toxicology evaluation since the agency's inception.

Determinations based on animal studies from the 1970s and 1980s remain the sole criterion on which cell phone testing protocols have rested as documented in ANSI/IEEE C95.1-1991. Yet, when findings from state-of-the-art National Toxicology program animal studies document the damaging cumulative chronic impacts of non-thermal levels of RF, the FDA staff rejects the study as not relevant to humans. Numerous scientists have determined that the NTP's large scale animal studies, paired with the Ramazzini Institute research and published human studies that have found an association between cell phone use and cancer, indicate that RF now meets criteria to be a human carcinogen.[57,58,59] Children's developing brains are more sensitive to RFR radiation and their unique physiology results in their absorption of proportionately more RFR compared to adults.

Instead of rejecting the NTP study, many scientists argue the FDA needs to fulfill the intent of their nomination of the study to the NTP, and conduct a quantitative risk assessment from the NTP data so that the FCC can develop health-protective exposure standards. However, the FDA has not responded to the scientists who have repeatedly written to the agency regarding

[57] Coureau G, Bouvier G, Lebailly P, Fabbro-Peray P, Gruber A, Leffondre K, Guillamo JS, Loiseau H, Mathoulin-Pélissier S, Salamon R, Baldi I. Mobile phone use and brain tumours in the CERENAT case-control study. Occup Environ Med. 2014;71(7):514-22.
[58] Hardell L, Carlberg M. Mobile phone and cordless phone use and the risk for glioma - Analysis of pooled case-control studies in Sweden, 1997-2003 and 2007-2009. Pathophysiology. 2015;22(1):1-13.
[59] Hardell L, Carlberg M, Hansson Mild K. Use of mobile phones and cordless phones is associated with increased risk for glioma and acoustic neuroma. Pathophysiology. 2013;20(2):85-110.

a quantitative risk assessment. Nor has the FDA responded to these expert scientists' requests to correct the FDA's inaccurate statements regarding the NTP and to be transparent about what experts were involved in the literature review that downplays the NTP study.

FDA's Misrepresentations Regarding Their Level of Scientific Review for Cell Phone and Radiofrequency Radiation.

In this Declaration we break down the FDA's misrepresentations one by one. For each misrepresentation, we document the facts confirming that the FDA's representation is erroneous and misleading. ***To be clear, in this Declaration we are not making scientific arguments as to whether RFR is harmful or not, but instead we are addressing the FDA's critical omissions and lack of honesty and transparency in its statements regarding health effects from RF.*** We then follow with documentation of the far-reaching deleterious impact of these misrepresentations to public health and the environment.

Below is a short summary of the misrepresentations and the documentation. For the comprehensive documentation please go to the corresponding section for each misrepresentation in the body of the Declaration.

Misrepresentation #1: The FDA evaluated the "totality" of scientific data to make a determination that there are no health effects from cell phones and that FCC radio frequency radiation (RFR) limits do not need to be changed.

Fact: The FDA has not publicly released any reports or systematic reviews that show the FDA has reviewed all health effects. The one report the FDA did release in 2020 is simply a literature review filled with inaccurate statements the FDA refuses to correct, despite numerous letters by experts including longtime NIH scientists. Importantly, the 2020 literature review is not a systematic review, nor is it a hazard or risk assessment. The Literature review does not even reference all of the FCC's human exposure limits (maximum permissible exposure limits and localized limits for head and torso) so it certainly could not be an evaluation of these limits.

All one need do is to read the FDA Literature Review to see the review is only focused on cancer and cell phones. In addition:

1. **Government Accountability Office (GAO):** The GAO 2020 Report on 5G confirms the fact that the FDA did not include non cancer outcomes starting on page 44:

   "the FCC relies on the FDA as well as other organizations—principally IEEE and the National Council on Radiation Protection and Measurements (NCRP)—to review scientific research and provide recommendations for setting RF safety standards. However, each of these organizations has only reviewed a subset of the relevant research...According to officials, the FDA monitors peer-reviewed science regarding RF energy and health. The agency does not typically make its assessments publicly available, but released one assessment publicly in February

2020. The [FDA] assessment focused on cancer-related animal and human studies of frequencies below 6 GHz. The [FDA] assessment did not include non-cancer outcomes or frequencies above 6 GHz."

Here are examples where the FDA makes misleading statements about evaluating the "totality of the science."

The 11/1/2019 online statement by FDA's Dr. Shuren about the NTP study states:

"*Based on our ongoing evaluation of this issue, the totality of the available scientific evidence continues to not support adverse health effects in humans caused by exposures at or under the current radiofrequency energy exposure limits. We believe the existing safety limits for cell phones remain acceptable for protecting the public health."*

On September 9, 2019: The FDA sent a letter to Representative Anna Eshoo and Jeff Merkley stating in the letter and section on "FDA's findings" that:

"FDA considers all relevant scientific data on RFR and does not limit its considerations to any specific *frequency or modulation due to the increasing use of, for example, Wi-Fi enabled medical devices."*

The FDA's online webpage "Do Cell Phones Pose a Health Hazard?" states:

"Based on the evaluation of the currently available information, the FDA believes that the weight of scientific evidence has not linked exposure to radio frequency energy from cell phone use with any health problems at or below the radio frequency exposure limits set by the FCC."

"The available scientific data on exposure to radio frequency energy show no categorical proof of any adverse biological effects other than tissue heating."
"The FDA's physicians, scientists, and engineers regularly analyze scientific studies and publications for evidence of health effects of exposure to radio frequency energy from cell phones. The weight of nearly 30 years of scientific evidence has not linked exposure to radio frequency energy from use of cell phones to health problems, such as cancer."

The FDA does not inform members of Congress that their literature review is limited to only cancer (not memory problems, brain damage, sperm damage, etc.) and cell phones (not Wi-Fi, Bluetooth, 5G small cells, OTARD devices, etc.). The FDA also omits that no federal agency is actively reviewing the science on 5G modulation or cell tower antenna radiation.

The full documentation of how the FDA is misrepresenting that it has evaluated the "totality of the science can be found in Misrepresentation #1 in the full report FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety

Misrepresentation #2: The FDA's "Review of Published Literature between 2008 and 2018 of Relevance to Radiofrequency Radiation and Cancer" released in 2020 is a scientifically valid risk assessment.

Fact: Although the FDA inaccurately states in its 2020 Literature Review that they "completed an updated radiofrequency (RF) exposure risk analysis," this literature review is not a scientifically defensible "risk analysis" as it does not follow best practice guidelines for risk assessment developed by US scientists

Good practice recommendations for systematic review for risk assessment and hazard identification of environmental health exposures have been developed and published by US government experts and international scientists (Whaley et al., 2016, Whaley et al., 2020, Rooney et al., 2014, NAS, 2017, Stephens et al., 2016). The U. S. Office of Health Assessment and Translation (OHAT) adapted guidance, principals and methods for systematic-review of environmental health questions (through consultation with technical experts in systematic review and human health assessments, as well as scientific advisory groups and the public) to provide greater objectivity and transparency to the process of developing conclusions. In health care, detailed methodologies with descriptions of strengths and discussions of nuances of scientific review steps have been developed by the International Cochrane Collaboration, and the U.S. Agency for Health Research Quality (AHRQ), using methods that are summarized on the Preferred Reporting Items for Systematic Reviews and meta-Analyses (PRISMA) website (Moher et al., 2009, Liberati et al., 2009). However the FDA did not show that it followed these methods.

In contrast to these published expert practice recommendations for review, the FDA's 2020 Literature Review did not show the FDA systematically compared FCC's limits to the effects found at various exposure levels in the full body of published scientific publications.

The FDA did not follow best practices. It did not grade nor weigh the evidence, rate the level of confidence or translate that level into levels of evidence for health effects. The FDA did not publicly publish the protocol nor secure peer-review and public feedback. There are no explicit standards or protocols relied on for selecting and evaluating the studies, and no effort to meta-analyze them in any way. Nor did the FDA share which scientists were part of the evaluation, nor if they had been vetted for conflicts of interest. The FDA did not check accuracy in their numeric data utilizing an appropriate transparent process.

Importantly, while it could be possible that such a risk analysis exists and it has been kept confidential, this documentation has *never* been shared with the public or scientists who repeatedly have requested it. The FDA should share its grading of the research and risk analysis not only as a matter of good government, but to ensure confidence in the FDA's conclusions and in the US regulations for wireless devices.

Further, the FDA Literature Review is not a systematic review, nor a review of the adequacy of FCC limits, and it is riddled with major errors that the FDA refuses to correct.

However the FDA misrepresents this review as substantiating its conclusions that FCC's limits do not need to be changed, and the review is used on the FDA's web pages to substantiate the Agency's assertion that cell phones are safe. Numerous scientists have called on the FDA to retract this review, but to date have received no response from the FDA. Here are some examples of the FDA misrepresenting that their literature review is a risk assessment. The FDA's Office of Legislation 2020 letter to U.S. Senator Baldwin states:

> *"Based on this **extensive risk analysis,** our **determination remains consistent that there is no scientific evidence that warrants a change in cell phone safety limits,** and that there is insufficient evidence to demonstrate a causal link between cell phones and cancer in the population."*

The FDA's letter to Eshoo and Merkley creates the illusion that a risk assessment was done, stating:

> *"The gold standard for the **assessment of risk to public health** remains the data and information that is available from studying effects on humans. Animal and laboratory studies can provide useful scientific information, but data on human health is the most informative where it is available. In the case of cell phone handsets, there is abundant evidence to **support FDA's conclusion** from epidemiological studies, public health surveillance data and supportive laboratory studies. The information on which FDA has based its conclusion is summarized below, together with a description of the methods that the Agency uses for undertaking risk analysis and other relevant scientific information."*

For the full documentation on the FDA's misrepresentations of its Literature Review please go to Misrepresentation #2 in the full report FDA's Misrepresentations of FDA's Scientific Determination for Cell Phone and Wireless Radiation Safety.

Misrepresentation #3: The FDA has evaluated the science on specific non-cancer effects such as oxidative stress, impacts to reproduction, and people with electromagnetic sensitivity.

Fact: The FDA has misrepresented that they have adequately reviewed specific non-cancer health endpoints such as oxidative stress and damage to reproduction - but has never publicly released any scientific report documenting that the FDA systematically reviewed these issues. Despite highlighting the issue of electromagnetic sensitivity on their website, the FDA has shown no science based reports nor review of this issue as well. Although the FDA has been sent several studies and published reviews on this issue indicating harmful non-cancer effects, the FDA has taken no action to properly review these issues, nor shared this science with the public.

For the full documentation on the FDA's misrepresentations of its review on non cancer endpoints please go to Misrepresentation #3 in the full report FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety

Misrepresentation #4: The FDA states that "the majority of studies" do not show an association between cell phones and health problems.

Fact: The FDA has stated "the majority of studies" do not show an association between cell phones and health problems, even though the FDA has not publicly released any report or research list that looked at all the studies on cell phones and health issues (cancer and non-cancer) in order to make this numerical determination. Furthermore, independent scientific evaluations on several endpoints find that the majority of studies do show adverse effects.

For the full documentation on the FDA's misrepresentations of its determination on the "majority of studies" please go to Misrepresentation #4 in the full report FDA's Misrepresentations of FDA's Scientific Determination for Cell Phone and Wireless Radiation Safety.

Misrepresentation #5: The FDA states that RFR studies which find biological effects "have not been replicated".

Fact: Biological effects have been replicated. In fact, the FDA's own literature review contains replicated research indicating RFR is a tumor promoter. False sweeping general statements like this one on the FDA's public website only serve to downplay the health issue to the American public and government. While RFR research is complex, and numerous studies do indeed suffer from critical limitations, exposure issues and confounding factors, the fact is that numerous systematic reviews have repeatedly found the same types of biological effects, and there are numerous research studies that have been in fact replicated.

For the full documentation on the FDA's misrepresentations of lack of replication of research showing harm please go to Misrepresentation #5 in the full report FDA's Misrepresentations of FDA's Scientific Determination for Cell Phone and Wireless Radiation Safety.

Misrepresentation #6: The FDA presents inaccurate information about its own sponsored $30 million U.S. National Toxicology Program (NTP) animal study findings.

Fact: The FDA has presented inaccurate information about the NTP study findings to the public, elected officials and federal agencies. The FDA has not corrected their statements, despite being provided factual information and a science-based request for corrections by NIH scientists and experts. Furthermore, the FDA mischaracterizes the study by omitting the key findings of cancer and DNA damage and putting forward unfounded criticisms.

The end result of this deception is that the public believes this large-scale animal study has no relevance to human health, elected officials believe the study is irrelevant to policy decisions, and the U.S. federal regulations for human RF exposure are believed to be adequate to

protect public health. The FDA omits that the NTP study is significant because biological effects were found at non-thermal levels, indicating the basis for FCC maximum RF exposure limits - that thermal effects are the only important effects - is no longer accurate.

As Dr. Ronald Melnick states, *"The NTP studies were conducted to test the widely-held assumption that cell phone radiofrequency radiation could not cause cancers or other adverse health effects (other than by tissue heating) because this type of radiation (non-ionizing) did not have sufficient energy to break chemical bonds. The NTP findings that cell phone radiation caused cancers in the heart and brain, DNA damage in brain cells, heart muscle disease and reduced birth weights clearly demonstrate that the assumption that non-ionizing radiation cannot cause cancer or other health effects is wrong."* [60]

For the full documentation on the FDA's misrepresentations of the National Toxicology Program study please go to Misrepresentation #6 in **FDA's Misrepresentations of FDA's Scientific Determination for Cell Phone and Wireless Radiation Safety.**

Misrepresentation #7: The FDA has evaluated the FCC's human exposure limits for RFR and come to a determination that the limits are protective based on its scientific review of the limits.

Fact: Despite the FDA's misleading statements to several members of Congress, the FDA has never released any science based report that evaluates the FCC's human exposure limits for RF, and determined with science based methods that FCC limits are adequately protective of all harms. Instead, all the FDA has produced is its 2020 literature review *focused only on cancer and cell phones.* The FDA literature review is not a systematic review, not a hazard or risk assessment, and not a review of FCC limits - whereby levels of exposure in studies would be compared to the FCC RF limits. In fact, the FDA literature review does not even reference the actual FCC limits.

For the full documentation on the FDA's misrepresentations regarding its level of evaluation of FCC's human exposure limits please go to Misrepresentation #7 in FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety

Misrepresentation #8: The FDA states they "continually monitor the scientific studies" yet the FDA shows no evidence of regular research monitoring nor regular scientific reviews.

Fact: The FDA shows no documented evidence of "regular" research reviews nor "regular" research monitoring. There are no monthly or yearly reports, no research updates and no publicly available notes or agendas from meetings on the issue of RFR. The FDA publicly states that the agency will act if credible science shows harm, but has never defined what it deems as credible, nor the process by which it evaluates or monitors the RFR issue. If the FDA is doing regular monitoring of the science, its process and opinions are being kept a secret from the public. As an example, the FDA literature review was only on studies up to the year 2018, but

[60] https://thehill.com/opinion/healthcare/416515-theres-a-clear-cell-phone-cancer-link-but-fda-is-downplaying-it

the FDA website has not been updated with the numerous studies published *since that date* indicating adverse health effects.

The FDA Literature Review was also not updated to include the 2020 genotoxicity paper by the National Institute of Environmental Health Sciences National Toxicology Program scientists (Smith-Roe et al., 2020) nor to include the American Cancer Society funded Yale study that links thyroid cancer to cell phone use in people with a type of common genetic variation (Luo et al., 2020).

For the full documentation on the FDA's misrepresentations regarding its "continuous monitoring of the scientific studies" please go to Misrepresentation #8 in FDA's Misrepresentations of FDA's Scientific Determination for Cell Phone and Wireless Radiation Safety.

Misrepresentation #9: The FDA states there is "scientific consensus" that RFR radiation is safe and safety is assured.

Fact: The FDA repeatedly and inaccurately states there is "scientific consensus" that cell phones are safe, despite the fact that the FDA is fully aware that hundreds of scientists and thousands of medical doctors are warning that the science indicates serious health effects, and they recommend that the public should reduce its exposure to RF. The FDA also states that there is a scientific consensus that cell phones specifically do not cause cancer, despite the fact that numerous authors in numerous published papers conclude RF is a carcinogen.

As Dr. Ronald Melnick, now retired from 28 years as an NIH scientist, states in his 2020 letter to the FDA:

> "The statement on the FDA website that there is a "scientific consensus on cell phone safety" is totally wrong and should be removed since there is no scientific consensus supporting this claim. In contrast, numerous experts in the field have reported evidence that current levels of cell phone radiation can be harmful to human health."

For the full documentation on the FDA's misrepresentations regarding "scientific consensus of safety" please go to Misrepresentation #9 in FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety.

Misrepresentation #10: The FDA states that children and pregnant women are adequately protected by FCC limits despite no publicly available review on the risks posed to children, pregnant women and the fetus - all of whom are more vulnerable due to their rapidly developing brains and higher absorption of RFR.

Fact: For decades the FDA has repeatedly presented that there is no need for children or pregnant women to reduce RF exposure because the FDA has determined that FCC exposure

limits are adequately protective. Yet the FDA has shown no evaluation of the research on children's unique vulnerability, nor any evaluation of effects during pregnancy nor any systematic evaluation of how FCC limits have incorporated recent research on children. FDA's 2020 issued Literature Review did not focus on children's vulnerability. In fact, a search of the word "children" in the FDA's literature review finds only three studies that considered children specifically, and no studies reviewed children's deeper RF penetration, impacts to a child's developing brain, or to prenatal development.

For the full documentation on the FDA's misrepresentations regarding children and pregnancy please go to Misrepresentation #10 in FDA's Misrepresentations of FDA's Scientific Determination for Cell Phone and Wireless Radiation Safety.

Misrepresentation #11: The FDA presents to the public that cell phones are safe in body contact positions, well aware that phones in body contact positions exceed the FCC's federal RFR exposure limits.

Fact: The FDA is aware that FCC limits can be exceeded when phones are tested in body contact position and well aware that the public has no idea of this fact. The FDA knowingly allows the American public to be exposed to RF levels in excess of the regulatory limit, yet the FDA's website pages have images of smiling people with cell phones against their heads — communicating the message that phones are safe near the body. The FDA website does not have any warnings to the public explaining that all cell phone manufacturers have special instructions — fine print warnings — buried deep in the cell phone manuals that say to keep the phone at a specified distance away from the body: from 5 to 25 millimeters (¼" to 1").

Here are just a few examples of the research EHT sent to FDA staff regarding cell phone radiation exposure violations. Communications went to Daniel Kassiday, William Jung, Robert Och, CDRH Ombudsman, Jeff Shuren, Mary Pastel, Robert Ochs, Michael O. Hara, Brian Beard and Bakul Patel:

- On June 13, 2017 Scarato shared the latest research from the government of France that found hundreds of phones exceeded radiation regulatory limits when they were tested in body contact positions (starting at page 6 Scarato/FDA emails) and asked why the FDA had not taken action to inform the public.
- Scarato sent the FDA the March 12, 2019 IEEE published article (Gandhi 2019) that found if the French government measurements were done with U.S. FCC protocols, some cellphone radiation emissions would violate FCC limits up to 11 times.
- Scarato also sent the August 21, 2019 Chicago Tribune cell phone testing data showing phones violated FCC limits at body contact.

The FDA says there is "a large safety margin" that is protective, yet will not answer our repeated requests to define *how large the safety margin is,* nor at what RFR level past the FCC regulatory limit the FDA would act to enforce the limit or warn the public. The FDA shows no review of recent research to even determine at what level above the FCC limits the FDA would act. The FDA lack of clarity on the threshold of harm it subscribes to has resulted in the current

situation where people of all ages carry phones in body contact positions day and night, and pregnant women rest wireless devices on their abdomen, unaware that they could be exposing their fetus to RF which violates FCC exposure limits.

In the May 31, 2017 email exchange Scarato asked the FDA why it was not informing the public about situations where cell phones will go to peak power, such as in a car. The FDA again stated, *"The safety factors set in place for RF exposure adequately protect the general public."*

Examples of the FDA refusing to respond regarding the "safety margin include the following examples.

1. An email chain dated May 31, 2017 details how Scarato asked, *"If the FDA is supposed to protect the public then they need to inform the public of the fine print instructions in the manual related to RF. Why is the FDA not acting on this and informing people of the fine print instructions on RF on cell phones and wireless devices? Children are carrying phones on their bodies, tucked in spandex pants and in bras and jeans in school classrooms. Can you please explain why the FDA is not ensuring the public is aware of the fine print warnings?"* FDA's Kassiday responded, *"There is a large safety factor included in the public exposure limit (see IEEE Std. C95.1-2005 Annex C, Rationale, for more information regarding this safety factor)."*

2. In response to the hundreds of tests finding RFR levels exceeded in France, on October 18, 2017 (FDA Scarato emails page 15) FDA's Kassiday wrote, *"We have asked the French Agency for a discussion of their studies and findings and conclusions. However, they have not responded as of the writing of this response."* When Scarato asked, *"I am writing to ask if I understand correctly that the FDA believes that it is OK to exceed the regulatory limits because of this "large safety factor?"* FDA's Kassiday responded, *"FDA is not saying that it is OK to exceed a regulatory limit. We stated that there is a large safety factor built into these regulatory limits."*

3. On November 19, 2017 Scarato asked what exactly the FDA's "large safety margin" was (what numerical level) in an email, *"What does the FDA think the safety factor is for SAR exposure limits. Please state it.*" The FDA did not respond with an actual level.

Scarato repeatedly asked the FDA to share the RFR threshold level that would trigger the FDA to act on February 3, 2018, April 5, 2018, June 2, 2018, June 11, 2018, November 6, 2018, March 2019 and several other dates but has never received a response that included the actual level that would trigger FDA action.

The FDA's only response to the question of the safety margin was talking about the 50-fold safety limit whole-body FCC limits. However this is not the regulatory limit for cell phone compliance and thus the FDA did not answer the question in regards to local tissue cell phone RFR exposure limits.

The FDA knowingly allows the American public to be exposed to RFR levels in excess of the regulatory limit. Scarato stated to the FDA (Page 35 FDA Scarato Emails), "Everyone I

have spoken to is 100% unaware of this information buried in manuals. Please explain how the FDA has decided it is not their responsibility to inform the public on this."

The FDA's Kassiday responded:
"As any web search for "usability of user manuals" will reveal, there is a lot of concern and research on why most consumers ignore manuals and instructions. So it is not surprising that consumers are unaware of one particular fact in a manual when most consumers don't read anything in user manuals. The FDA has not done a survey and we are not aware if the FCC has."

For the full documentation on the FDA's misrepresentations regarding the safety of cell phones in close body proximity please go to Misrepresentation #11 in FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety.

Misrepresentation #12: The FDA misrepresents the existence of a 50 times safety factor in relation to cell phone radiation exposure limits.

Fact: The FDA misrepresents the existence of a 50 times safety factor by confusing the public, and omitting the complete technical information needed to understand the reality that there is, in fact, no 50 times safety factor for brain tissue exposure when it comes to local SAR limits used in cell phone regulatory premarket tests.

Most of the public, elected officials and scientists (who are not bioelectromagnetic experts) do not understand the complexity of the FCC's human exposure limits, nor that there are two types of RF SAR limits (as well as Maximum Permissible limits for cell tower emissions). However, the FDA is fully aware of the difference. The reality that there is no 50 times safety factor for the Local SAR Limit for brain tissue is a fact, even among scientists who do not believe that there are health effects from RFR at nonionizing levels. However the FDA strings sentences together so that it seems like there is a 50 times safety factor for cell phone radiation local SAR limits. Again, we have repeatedly requested that the FDA respond to our questions about what the safety margin for cell phone local SAR is, and the FDA has never responded to these questions.

For the full documentation on the FDA's misrepresentations regarding the non existent 50 times safety margin for cell phones please go to Misrepresentation #12 in FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety.

Misrepresentation #13: The FDA misrepresents its level of review of 5G technology, communicating that 5G technology is safe.

Fact: FDA's Dr. Shuren sent letters to members of Congress responding to requests regarding the potential health effects of 5G networks, which create the illusion that the FDA has evaluated 5G technology and determined 5G technology is safe. First, the FDA has no authority in regards to RFR emissions from cell tower antennas, and omitted this fact in its response to

members of Congress. Further, the FDA has never publicly released any reports focused on 5G modulations, nor systematically reviewed scientific citations specific to 5G technology emissions. As an example, in the FDA's 2020 Literature Review the word "5G" is absent, and none of the studies the FDA reviewed were noted to specifically include 5G modulations.

While it is true that 5G networks will utilize frequencies covered in earlier technology generations (and frequencies considered in the FDA's literature review), many 5G networks will also include higher frequencies, new technologies, and more complex signal characteristics and antenna systems. Furthermore, 5G networks will rely on hundreds of thousands of densified new "small cell" towers that are part of a 5G technosphere that includes **billions** of "smart" wireless devices — Internet of Things — all of which will exponentially increase ambient environmental RF exposures compared to pre-5G generations of wireless technology. Yet the FDA misrepresents that safety is assured, as it has not shown any review of both the increased daily RF exposure, nor the specific impacts of 5G technology modulation on humans and the environment.

Here are examples of the FDA misrepresenting their level of review of 5G.

1. The FDA's webpage Scientific Evidence for Cell Phone Safety" has a section about 5G entitled "No New Implications for 5G" which starts out stating the FDA is "responsible" and then concludes by asserting that the FDA is "monitor[ing] the science":

   "*The FDA is responsible for, among other things, ensuring cell phones – and any radiation-emitting electronic product – are safe for the public to use. This includes understanding the health risks (if any) of new electronic products that emit radiation as they become widely available to the U.S. public, such as 5G cell phones. While many of the specifics of 5G remain ill-defined, it is known that 5G cell phones will use frequencies covered by the current FCC exposure guidelines (300 kHz-100 GHz), and the conclusions reached based on the current body of scientific evidence covers these frequencies. The FDA will continue to monitor scientific information as it becomes available regarding the potential impacts of 5G."*

2. The FDA sent a Sept 9, 2019 letter to Representative Anna Eshoo and Senator Jeff Merkley purporting that FDA has reviewed the research and determined safety, even for 5G. The FDA's statements will all result in the reader being satisfied that the FDA has reviewed and is continuing to monitor the research on 5G and has determined it is safe. The FDA letter states:
   a. *"We appreciate the opportunity to provide an overview of the substantial body of evidence that has informed our determination that the current safety standard for RFR exposure remains appropriate."*
   b. *"The Agency's ongoing evaluations include but are not limited to those frequencies currently being used by cell phones as well as those being considered for future uses (e.g., 5G)."*

3. In the letter there also is a one-paragraph section entitled, "No New implications for 5G" that details how 5G frequencies are non-ionizing with a "current body of scientific evidence" that has been well understood for many years" and concludes:

a. *"Based on this information, the new 5G technologies are unlikely to pose additional risks to health for individuals. FDA will continue to monitor scientific information as it becomes available regarding the impacts of 5G."*

For the full documentation on the FDA's misrepresentations regarding their review of 5G technology please go to Misrepresentation #13 in FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety.

FDAs Critical Omissions on Cell Phone and Wireless Radiation

Hand in hand with FDA's misrepresentations are the FDAs critical omissions. Members of Congress and elected officials, government agency staff, the public and media do not understand the complexity of this issue and thus are unaware of the full landscape in regards to EMFs. If they were made aware of the information the FDA omits, they would see the lack of accountability at the federal level on this issue. They would understand that the FDA cannot offer a full safety assurance, as it does not even have full authority in regards to the issue.

FDA's omissions related to FDA's role and authority in regards to EMFs.

1. FDA has only presented activities in relation to electronic devices such as cell phones- not other wireless devices such as routers, laptops, security systems, Wi-Fi, Bluetooth, cell towers, OTARD devices, etc. However, according to the Food, Drug, and Cosmetic Act, the FDA could be addressing all consumer electronic devices, not just cell phones. Yet the FDA seems to have chosen to ignore other devices.
2. FDA omits that it has no authority in regards to telecommunications infrastructure such as cell towers, or 5G/4G "small" cell towers and the FDA has done no science based review on health effects from the cumulative emissions of this equipment.
3. FDA omits that it has no authority nor expertise regarding impacts to wildlife or natural environment (i.e. trees, plants) and not reviewed adverse effects to flora and fauna.

FDA's omissions related to FDA's level of review regarding EMFs.

1. FDA omits it has not shown review of science on non-cancer effects.
2. FDA omits it has not shown review of science in relation to 5G technology.
3. FDA omits it has not performed a public risk analysis of RFR.
4. FDA omits it has not analyzed the FCC limits in relation to the current body of science.
5. FDA omits that no other federal health and safety agency is actively engaged on this issue.

FDA omits it has not engaged in activities regarding magnetic field EMFs.

1. FDA omits that it has authority to regulate both RFR **and magnetic field EMF emissions** from consumer electronic devices according to the Federal Food, Drug,

and Cosmetic Act **refers to "electronic product radiation."** However the FDA seems to have chosen only to address RFR emissions and has shown no activities in relation to the scientific review of health effects from magnetic field EMF.

2. FDA omits that it has not reviewed the science on health effects from magnetic field electromagnetic exposure.
3. FDA omits how the public can reduce exposure to magnetic field or ELF EMF.

FDA omits extensive information to the public on how and why to reduce EMF exposure.

1. FDA omits that hundreds of scientists are warning that FCC limits are not adequate protective and that the public should reduce exposure. Instead FDA downplays science indicating risk and communicates that reducing exposure is not necessary.
2. FDA omits science indicating children and the fetus are more vulnerable as their rapidly developing brains are more sensitive.
3. FDA omits numerous strategies to reduce cellphone radiation exposure and instead only presents a list of just 4 ways to reduce cell phone radiation.
4. FDA omits a robust list of sources of RFR exposure - all the ways that people are exposed from cell towers, to video games, to phones to Wi-Fi printers.
5. FDA omits strategies to reduce exposure from wireless, Bluetooth and Wi-Fi devices such as speakers, gaming consoles, Wi-Fi routers and baby monitors.
6. FDA omits that issuing wired internet and telephone connections eliminates RFR exposure.
7. FDA omits reference to scientific research showing adverse effects from exposure.

FDA omits critical information related to the NTP study findings and FDA's involvement.

1. FDA omits that the findings of an adverse effect at non thermal exposure levels means that the basis for FCC limits is no longer valid.
2. FDA omits the actual findings of the NTP studies - increased brain and heart tumors, DNA damage and heart damage, and also omits the conclusion of "clear evidence of cancer" in male rats.
3. FDA omits that it has known the NTP design for years - to test the assumption that heat is the relevant factor - and yet the FDA has never contacted the NTP to communicate that the animal study the FDA asked for was irrelevant to understanding effect to humans.
4. FDA omits that it did not offer comments during the NTP peer review in March 2018.

FDA omits that the advisory and interagency groups thought to be addressing this issue are in fact defunct and have not reviewed the RFR health issues.

1. FDA Omits that the Radiofrequency Interagency Work Group (RFIAWG) is defunct and quietly removed references off its website.
2. FDA omits that the FDA's advisory committee - the Technical Electronic Product Radiation Safety Standards Committee - has not reviewed the RFR nor EMF health issues, and has not met since 2016, having 9 vacancies.

The numerous implications of these omissions regarding the advisory and interagency groups are far reaching because wireless companies put forward the groups as active-communicating a false illusion of safety and a collaboration and oversight that does not exist.

Below, industry consultant Jerrold Bushburg presented an "Introduction to Potential Health Considerations of 5G Networks" at the Beverly Hills California Health and Safety Commission Meeting on February 24, 2020 and referenced the RFIWG *despite the fact that it is defunct* (See Agenda, Watch video, See full transcript). He presented a slide about the group and stated:

> *Minute 1:08:20 "It's now 2020, whose taking account of the current science because the NCRP has not been asked to update this report since it was issued and that is the job of the federal interagency agency working group for RF safety surveillance [referring to the RFIWG in a slide at minute 1:08:54]. Their members include individuals from the EPA, FDA NIOSH, OSHA and the FCC and this group meets six times a year, either by person or tele conference. Primarily just to review what is going on around the world and they go to meetings and ask the question whether they think the standards in the US are still reasonable and in-line with what is happening around the world."*



As the FDA has also omitted a robust presentation on sources of RF exposure and on how to reduce RFR exposure, the public is fully unaware of the numerous ways to reduce exposure and engage in behaviors that increase their exposure unknowingly.

The full details and documentation on this issue can be found in the section FDA's critical omissions FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety.

The FDAs Lack of Transparency in Regards to Its Activities and Policies

The FDA has repeatedly refused to respond to letter from government entities, members of Congress and scientists who have written with questions directly addressing the FDA's activities and level of review. For example:

- **The New Hampshire State Commission on 5G** wrote to the FDA with several questions, but the FDA responded without directly addressing the questions and instead presented a cursory opinion with just a few paragraphs.
- **Numerous scientists**, including Dr. Ronald Melnick, wrote the FDA in 2020 with questions as well as for a retraction of the FDA literature review. In these letters Dr. Melnick specifically documented the inaccurate information and asked for corrections. The only response was from FDA's Dr. Jeffrey Shuren in a March 24, 2020 letter to EHT's Theodora Scarato with one sentence that said, *"thank you for sharing your and your colleagues' concerns with. We appreciate your feedback." The corrections have not been made.*
- When the Office of Senator Tammy Baldwin wrote the FDA with specific questions, the FDA responded with a September 8, 2020 letter that ignored the specific questions but instead stated that:

> *"The FDA published a detailed literature review of all scientific evidence that has become available for over the past decade and updated our webpages related to all aspects of radiofrequency radiation from cellphones* **[thus misrepresenting the FDA level of review]** *Based on this extensive risk analysis* **[again misrepresenting the FDA's level of review],** *our determination remains consistent that there is no scientific evidence that warrants a change in cell phone safety limits, and that there is insufficient evidence to demonstrate a causal link between cell phones and cancer in the population. We believe that all of the questions contained in your constituent's letter are answered in the publicly available information* **[although this is not the case, as the questions to the FDA in that letter are not answered on the website at all],** *and I have included links below to the relevant information."*

- **EHT Executive Director Theodora Scarato has repeatedly written to the FDA** asking for answers to follow up questions from her years of email communications and the FDA states they will no longer respond.

See the questions here in Scarato email communications to the FDA .

Examples of questions that remain unanswered by the FDA include:

- In light of the French government tests showing excess radiation from phones at body contact, what steps is the FDA taking to address the fact that cell phones and wireless devices have RFR levels that exceed FCC limits when devices are placed at body contact?
- What FDA scientific review substantiates the FDAs statement concerning the safety factor?
- Why is the FDA ignoring the fact that the NTP exposure levels were comparable to FCC's localized public SAR limits and all of them were within occupational localized SAR limits.
- We would like to know why the FDA has not taken action to inform the public about the separation distances that cell phones should be from the body in light of published analysis.
- Does the FDA have a specific SAR level that will trigger a FDA action?
- Will there be any premarket safety testing for 5G technology by the FDA to understand the long term effect on human health?
- When did the FDA do a systematic review of the scientific evidence to evaluate impacts on human health?
- The DNA and tumor findings of the NTP indicate non thermal effects from long term exposure as the animals were exposed at levels considered "non thermal. " What is the process by which the FDA is going to integrate this information regarding non thermal exposures into an opinion of the safety of exposure limits for RFR both occupational and for the public?

The Nationwide Impact of the FDA's Misrepresentations, Omissions and Lack of Transparency is Serious and Deleterious

The FDA's lack of clear policy has led to a cascade of policy decisions and court rulings that put the public in harm's way. Representative Anna Eshoo and Senator Jeff Merkley described the far reaching impact of FDA's information in their letter to the FDA requesting the FDA's science review of 5G and wireless networks that:

> *"While FDA does not have premarket review authorities for cell phones, its information is used by the Federal Communications Commission to set the standards for exposure limits of radiation from cell phones, which cell phone manufacturers must follow. Second, the public relies on conclusions published on FDA's website. Third, scientists and researchers use this information to assess methodologies and to inform their own research questions"*

Elected officials, the military and agencies at the local, state and federal level are being influenced by the FDA's information and making policy decisions on the myths created by the FDA misinformation.

Below are a few examples for federal, state, local, media, medical and public implications. Extensive documentation on each of these issues can be found in the section "The Nationwide Impact of the FDA's Misrepresentations, Omissions and Lack of Transparency is Serious and Deleterious" in FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety.

Federal Policy: The fact that the FDA misrepresented its level of scientific review and risk assessment regarding the science on non-cancer health effects to the FCC led to the FCC's 2019 refusal to update FCC's 1996 human exposure limits. The FCC used the FDA's website, public statements and the FDA's April 24, 2019 letter (that has one paragraph on RFR limits) to support the FCC's 2019 determination (after a six-year inquiry) that the FCC's 1996 human exposure limits for RFR did not need to be changed.

Despite the fact that FCC's RFR limits are based on the assumption that heating is the only harm and do not protect against biological effects and despite the fact that the $30M National Toxicology Program (NTP) study confirmed in a highly controlled study that RFR can cause cancer and DNA damage at non heating levels challenging the basis for the FCC's 1996 limits, the FDA entirely dismissed the study and downplayed the results to the FCC, the American public, and Congressional officials. In turn, the FCC affirmed its 1996 limits in 2019.

The FCC's human exposure limits are relied upon by every level of government as proof of safety. This is why the FDA's misrepresentations must be urgently addressed.

Although the August 13, 2021, the United States Court of Appeals for the District of Columbia Circuit judgement found the FCC's reliance on the FDA's information as "arbitrary and capricious," it is possible that the FDA could decide to *again misrepresent the science to the FCC* as it previously did regarding the NTP study and cancer. The FDA must clarify its policy in regards to RFR to ensure the FCC has complete information in its upcoming response to the court mandate.

Lack of Oversight: FDA's misrepresentations have resulted in a lack of appropriate oversight in Congress. The Congressional Committees tasked to provide oversight aren't even aware this issue is in need of oversight. Notably Senator Tammy Baldwin, Senator Feinstein and Senator Merkley are all members of the U.S. Senate Committee on Appropriations Subcommittee Agriculture, Rural Development, Food and Drug Administration, and Related Agencies that have oversight of the FDA, and all have written letters void of action to ensure accountability on the issue.

An example of how elected officials inaccurately believe there is oversight and accountability on the issue is showcased in U S. Representative Scott Fitzgerald November 5, 2021 letter which erroneously states that, *"In addition to the FCC, Federal health and safety agencies such as the Environmental Protection Agency (EPA), the Food and Drug*

Administration (FDA), the National Institute for Occupational Safety and Health (NIOSH) and the Occupational Safety and Health Administration (OSHA) have been actively involved in monitoring and investigating issues related to radio frequency (RF) exposure."

Congress Repeating FDA's Misrepresentations: In fact, members of U.S Congress are so misled, that they are communicating erroneous information to their constituents related to the FDA's level of review as detailed in this Declaration in the section "Influence to Congress."

An example of how the FDA's misinformation has propagated false illusions of safety leading to members of Congress asserting nonfactual statements based on the FDA's misinformation is illustrated by the case of Representative Anna Eshoo and Senator Jeff Merkley's communications with the FDA.

- On July 18, 2019, Representatives Anna Eshoo and Senator Jeff Merkley wrote a letter[61] to the FDA asking the agency details about the scientific review the FDA purportedly did to determine 5G and wireless radiation was safe and that RFR limits were protective.
- On September 9, 2019 the FDA responded with a letter[62] filled with misrepresentations and critical omissions - as discussed in this Declaration - which created the impression that the FDA had reviewed the full body of science re: FCC's RFR limits and concluded 5G is safe.
- In turn, on September 20, 2019, Representatives Eshoo and Senator Jeff Merkley sent a letter[63] to a constituent that *"the agency concludes that the current RFR safety limits for cellphones are acceptable to protect public health. These conclusions hold for 5G technologies."*

As substantiated in detail in this Declaration, the elected officials' statements are inaccurate because the FDA has not made public any science based analysis of the FCC's RFR limits, nor shown any systematic review of the full body of research on health effects from wireless, much less 5G.

Policy Fast Tracking 5G into Neighborhoods and Wireless Networks into Schools: The FDA's misrepresentations have led to policy that allows the unchecked proliferation of 4G/5G wireless devices and infrastructure - millions of new "small cell" installations in close proximity to U.S. homes and schools. Officials at every level of government ignore calls for protective policy because of the FDA's false safety assurances. Instead of enacting policy to minimize exposure, they support policy to densify networks.

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[61] "U.S. Senator Richard Blumenthal and U.S. Representative Anna G. Eshoo (CA-18) Letter to Federal Communications Commission Commissioner Brendan Car About 5G Health Hazards." December 9, 2018, https://ehtrust.org/u-s-senator-richard-"U.S. Senator Richard Blumenthal and U.S. Representative Anna G. Eshoo (CA-18) Letter to Federal Communications Commission Commissioner Brendan Car About 5G Health Hazards,

[62] "FDA Response to Representative Eshoo," September 9, 2019. https://ehtrust.org/wp-content/uploads/FDA-letter-to-Eshoo-re-cell-phone-RF-safety.pdf.

[63] "U.S. Senator Richard Blumenthal and U.S. Representative Anna G. Eshoo (CA-18) Letter to Federal Communications Commission Commissioner Brendan Car About 5G Health Hazards." December 9, 2018. https://ehtrust.org/u-s-senator-richard-blumenthal-and-u-s-representative-anna-g-eshoo-ca-18-letter-to-federal-communications-commission-commissioner-brendan-car-about-5g-health-hazards/.

As one of several examples, Montgomery County Maryland Councilman Hans Riemer, who pushed legislation allowing 5G cell antennas 30 feet away from homes and schools without routine notice of public hearing - a common type of industry-friendly policy being financed in local municipalities - repeatedly discussed how federal agencies had reviewed the science and determined 5G cell towers were safe - reiterating FDA's misinformation in tweets, statements during Council meetings, and newsletters to his constituents.

As an example, Councilman Riemers July 28, 2021 newsletter reads:

> **"What do leading public health authorities say about cell phones and 5G?** Safety comes first. Fortunately, the science on wireless waves is compelling. The leading national and international scientific institutes continue to find that cell phones are not linked to health problems. The FDA, which we are proud to have located here, reviews the existing studies and puts them all into a balance. The FDA clearly says, the "weight of scientific evidence has not linked cell phones with any health problems."

Other Federal Agencies: Health and safety agencies reference the inaccurate FDA information reiterating a false narrative of safety.

For example in June 2020, the National Cancer Institute released an article on the FDA Literature Review that was titled "FDA Says Data Doesn't Link Cell Phones to Cancer" that says, *"Is there any reason to worry? The best evidence says no."*

The National Cancer Institute's Cell Phone Radiation page references the FDA rejection of the NTP and states, "*The US Food and Drug Administration (FDA) notes that studies reporting biological changes associated with radiofrequency radiation have failed to be replicated and that the majority of human epidemiologic studies have failed to show a relationship between exposure to radiofrequency radiation from cell phones and health problems."*

A heartbreaking example of how the FDA's misleading information leads to false safety assurances that are then amplified by government agencies which in turn impacts the public, can be found in the case of the middle school student who wrote a US government scientist requesting a campaign for safer cell phone use in light of the NTP study findings of cancer in 2016.

The National Cancer Institute (NCI) was sent a letter by a Middle Schooler asking why the agency is not starting a campaign for safe cell use: *"For my final project I am researching about the health effects of radiofrequency radiation given off by cell phones. As seen through your research the radiofrequency radiation given off by cell phones can cause cancer and or tumors in the head, neck and heart lab rats. However there are no PSAs or any commercials to inform the public about this topic which is why I am writing to you."*

In response the NCI wrote back, *"We hope you will understand that, as a research agency, the National Cancer Institute does not conduct public awareness campaigns. In addition, the US Food and Drug administration shares responsibility for cell phones with the FCC. Although cell phones can be sold without FDA clearance or approval the agency monitors the effects the phones have on health. FDA has the authority to take action if cell phones are shown to admit RF energy at a level that is hazardous to the user."*

The letter could have been a pivotal moment when the NCI and NIH considered the need for more public information on *how to reduce cell phone radiation*. Instead, this student was sent to the FDA website (with minimal steps on how to reduce exposure and void of the most important steps which include using wired rather than wireless technology) and provided information which downplayed the study findings. The NCI and NIH never updated its page to share more information on how to reduce exposure.

Armed Forces: Members of our armed forces are using numerous wireless devices as part of their job, and due to the FDA's mis-information will remain unaware of any potential health effects they might be experiencing. As an example, the U.S. Army Public Health Command has a cell phone fact sheet that references the FDA as periodically reviewing the research, stating:

> "Who decides whether cell phones are safe? Subject matter experts from the Food and Drug Administration (FDA), the Federal Communications Commission (FCC), the Environmental Protection Agency, the National Cancer Institute, the Department of Defense, the Institute of Electrical and Electronics Engineers (IEEE) and others periodically review the research data to see if there are any potential health effects from RFR... These agencies have declared publicly that cell phones conform to published standards and are safe."

The Media Amplifies Expands the False Illusion of Safety: The media, the public, government officials, medical professionals and even the Courts are provided false safety assurances and repeat and amplify the FDA's misrepresentations with additional unfactual information they assume to be true. The FDA does not offer corrections to the clear false statements that were borne of the FDA misrepresentations. Because media references the FDA's misrepresentations as a source of credible information and the public believes safety is assured.

In 2018, CNN, Scientific American, Reuters, New York Times, Science, Forbes and Medscape all featured how the FDA ``disagreed" with the "clear evidence of cancer" conclusions of the National Toxicology Program. Medscape's headline exemplified the media coverage: "Cancer Fears Over Cell Phones, Again, but FDA Disagrees." The Verge coverage read, "the FDA is still confident that the current limits on cell phone radiation are safe." The Daily Mail headline read, *"FDA insists cell phones ARE safe - despite new government study that found 'clear evidence' of link to heart and brain cancers in rats."*

Court Proceedings Hinge on FDA's Misrepresentations: The FDAs misleading presentations have led to major court rulings in favor of industry and against the public's right to know. As an example, the FDA has repeatedly asserted there is a "large safety margin" for cell

phone radiation limits and then followed with a sentence about how RFR limits have a 50 times safety factor. However, the FDA never clarifies that they are in fact referring to *two different types of regulations, confusing the reader.* While both of these FCC regulations are based on the *heating is the only harm* assumption (proven wrong by the NTP study and other research not adequately reviewed by the NTP), even if this assumption were true, the cell phone FCC premarket cell phone radiation test localized regulatory limits **do not have a 50 fold safety factor for brain tissue** as a factual matter. The self appointed small invite only group that calls itself the International Commission on Non-Ionizing Radiation Protection (ICNIRP) states in their latest 2020 guidelines (based only on thermal effects) that for Type 2 tissues **such as the head** the local adverse health effect threshold is a SAR of 20 W/kg averaged over 10 g. *Therefore, the reduction factors in the 2020 ICNIRP guidelines are 2 (occupational local exposures) and 10 (general public local exposures) - **not 50**.*

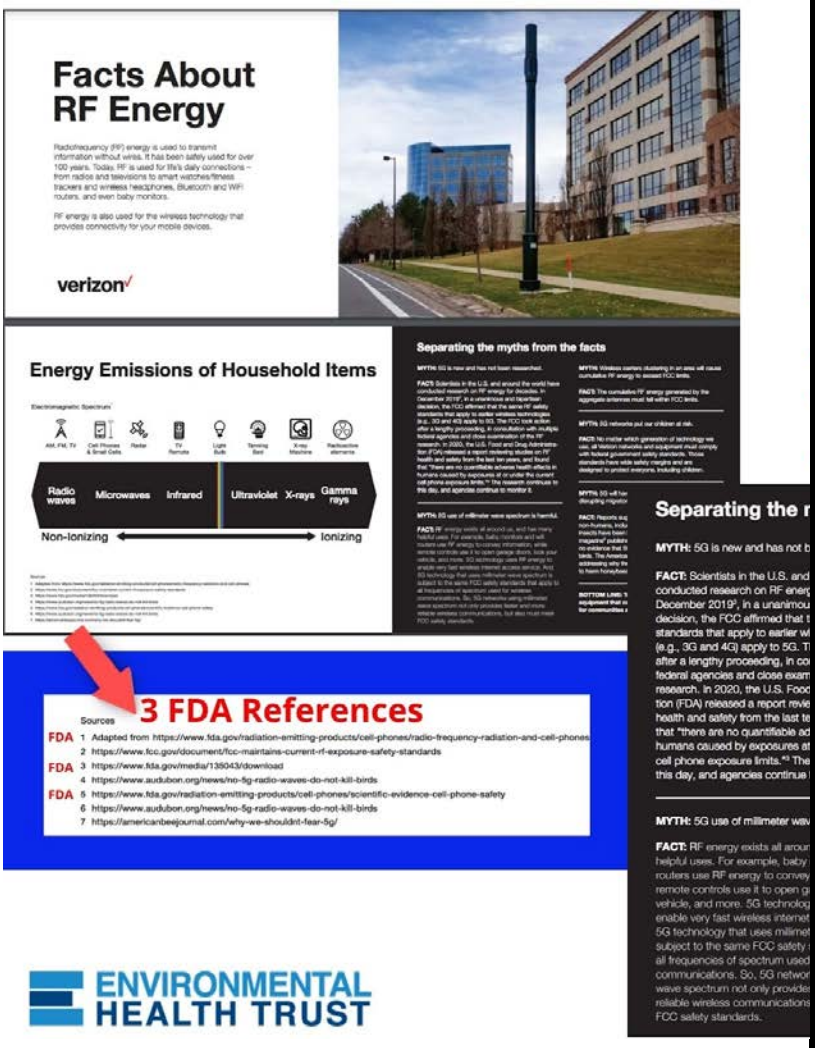
However due to the FDA misrepresentations (of the safety factor and its misrepresentation that it evaluated the scientific evidence and FCC limits), the FCC and in turn, even the wireless companies put forward inaccurate information.

For example, in court proceedings for Cohen v. Apple, Apple's brief inaccurately stated that there is a "50-times" safety factor for local cell phone radiation limits. This inaccurate information, combined with the FCC's "safety determination", led to the Court's ruling in favor of Apple. In Wireless Ass'n v. City of Berkeley the FDA's misleading information was again used by the FCC in their statement to the Court effectively halting implementation of the Berkeley Cell Phone Right To Know law. On September 17, 2020, the Court found the Berkeley Ordinance preempted by the FCC's 2019 RF limit affirmation, because the FCC had determined that even if wireless devices produce RF exposure that would be in excess of FCC limits, the FDA had concluded that exposure would be well below levels considered dangerous. The September ruling specifically cited the FDA stating, *"The FDA maintains that 'the weight of scientific evidence has not linked cell phones with any health problems' and that 'the current safety limits for cell phones are acceptable for protecting the public health."*

Industry Avoids Accountability: The wireless industry is using the FDA's misrepresentation to shield themselves from accountability. Wireless companies are able to cite the FDA as proof of safety and avoid accountability in legal actions for harms to people and the environment from their RFR-emitting devices and networks. Wireless companies use the FDA and FCC limits to avoid regulations. For example, they put forward FDA's misrepresentations when cities are considering setbacks for cell towers in residential areas, or when states are considering labeling wireless devices.

See below a table of with key examples of how the FDA's contradictory and misleading information is used by the wireless industry to promote the false narrative that cell phones, Wi-Fi devices, cell towers and 5G have been deemed safe after a robust safety review by the FDA.

Wireless Industry Document	Documentation on How FDAs Misrepresentations are Augmented, Expanded and Amplified into Sweeping Unsubstantiated Conclusions
CTIA Consumer Website Wireless Health Facts- Wirelesshealthfacts.com	**FDA's Misrepresentations in CTIA Statements** #1: The FDA evaluated the "totality" of scientific data. #2: The FDA's Literature Review is a scientifically valid risk assessment. #6: The NTP study is irrelevant to human health. #7: The FDA has evaluated FCC's RFR limits. #8: The FDA "continuously monitors the science. **Statement by CTIA** *"**Are cellphones, cell towers, small cells and antennas safe?*** *[Answer] Radiofrequency energy from wireless devices and networks, including radiofrequencies used by 5G, have not been shown to cause health problems, according to the international scientific community. To cite one example, the Food and Drug Administration said, "Based on the FDA's ongoing evaluation, the available epidemiological and cancer incidence data continues to support the Agency's determination that there are no quantifiable adverse health effects in humans caused by exposures at or under the current cell phone exposure limits."* "*The Food and Drug Administration has also said that "the existing safety limits for cell phones remain acceptable for protecting the public health."* *"Cell phones don't cause cancer FDA says"* *"After reviewing the [National Toxicology Program] study, the Food and Drug Administration agreed, saying that "the existing safety limits for cell phones remain acceptable for protecting the public health."*
Verizon's Consumer Information Page	**FDA's Misrepresentations in Verizon Statements** #1: The FDA evaluated the "totality" of scientific data #10: Children and pregnant women are adequately protected by FCC RFR limits. **Verizon Statements**

	"*Do Wireless Phones Pose Any Special Risks to Children?: The FDA/FCC website states that 'the scientific evidence does not show a danger to users of wireless communication devices including children.'*"
Verizon's "Facts About RF Energy" brochure	**FDA's Misrepresentations in Verizon Statements** #1: The FDA evaluated the "totality" of scientific data #2: The FDA's Literature Review is a scientifically valid risk assessment. #8: The FDA "continuously monitors the science. #10: Children and pregnant women are adequately protected by FCC RFR limits. #13: The FDA scientifically reviewed the safety of 5G technology 
Samsung's Health and Safety Information	**FDA's Misrepresentations in Samsung Statement** #1: The FDA evaluated the "totality" of scientific data

	#3: The FDA has evaluated the science on specific non-cancer effects such as oxidative stress, impacts to reproduction and people with electromagnetic sensitivity. **Samsung Statements** "*The FDA publication includes the following information: Do cell phones pose a health hazard? Many people are concerned that cell phone radiation will cause cancer or other serious health hazards. The weight of scientific evidence has not linked cell phones with any health problems.*"
T -Mobile's RF Safety Webpage	**FDA's Misrepresentations in T-Mobile Statement** #1: The FDA evaluated the "totality" of scientific data #3: The FDA has evaluated the science on specific non-cancer effects such as oxidative stress, impacts to reproduction and people with electromagnetic sensitivity. #8: The FDA "continuously monitors the science. **T-Mobile Statements** *"Based on scientific data currently available, T-Mobile has not determined that RF energy from wireless phones causes health risks. Nonetheless, we want our customers to be informed as the wireless industry and government agencies continue to monitor the ongoing scientific research on this important subject."* *"The FDA, based on current data, "believes that the weight of scientific evidence does not show an association between exposure to radiofrequency from cell phones and adverse health outcomes."*
AT&T's Information on Wireless and Health Webpage	**FDA's Misrepresentations in AT&T Statement** #1: The FDA evaluated the "totality" of scientific data #3: The FDA has evaluated the science on specific non-cancer effects such as oxidative stress, impacts to reproduction and people with electromagnetic sensitivity. **AT&T Statement** "*The U.S. Food and Drug Administration (FDA) also has authority and expertise with respect to radio frequency fields and health, and has provided the FCC its expert views. The FDA concludes on its website: 'The weight of scientific*

	evidence has not linked cell phones with any health problems."
Crown Castle 2021 Understanding the Safety of 5G	**FDA's Misrepresentations in Crown Castle Statement** #1: The FDA evaluated the "totality" of scientific data #7: The FDA has evaluated FCC's RFR limits. #9: There is "scientific consensus" that RFR radiation is safe. #13: The FDA scientifically reviewed the safety of 5G technology **Crown Castle Statement** "*The research is clear. The consensus of nearly seven decades of research by many of the top scientific and health communities, including the FDA, is that electromagnetic emissions at the levels allowed by FCC regulations are safe."*
GSMA Handbook on 5G, EMF Exposure and Safety The GSM Association is an industry organization that represents the interests of mobile network operators worldwide.	**FDA's Misrepresentations in GSMA Statement** #1: The FDA evaluated the "totality" of scientific data #13: The FDA scientifically reviewed the safety of 5G technology **GSMA Statement** Under the section *"Is 5G Carcinogenic":* *"In February 2020 , the US Food and Drug Administration in a review of animal and epidemiological studies of radio signals and cancer concluded that:* *'To date there is no consistent or credible evidence of health problems caused by the exposure to radio frequency energy emitted by cell phones'."*
EMF Explained- A Website of the Australian Mobile Telecommunications Association - Webpage "US National Toxicology Program Study Results Published"	**FDA's Misrepresentations in Australian Mobile Telecommunications Association Statement** #1: The FDA evaluated the "totality" of scientific data #7: The FDA has evaluated FCC's RFR limits. #6: The NTP study is irrelevant to human health. **Australian Mobile Telecommunications Association Statement** *"The Food and Drug Administration (FDA) has reviewed the NTP report and issued a statement.* *We respect the recently released research conducted by our colleagues at the National Toxicology Program (NTP), which is part of the National Institute of Environmental Health*

	Sciences within the National Institutes of Health, on radiofrequency energy exposure. When we nominated this topic for study in 1999, there were limited epidemiological and long-term animal studies investigating the effects of radiofrequency energy exposure from cellular phones. Fortunately, since then, there have been hundreds of studies from which to draw a wealth of information about these technologies which have come to play an important role in our everyday lives. *Taken together, all of this research provides a more complete picture regarding radiofrequency energy exposure that has informed the FDA's assessment of this important public health issue, and given us the confidence that the current safety limits for cell phone radiation remain acceptable for protecting the public health.* *Click here for the FDA statement"*
Verizon Improve Your Wireless North Carolina https://improveyourwireless.com/northcarolina/	**FDA's Misrepresentations in Verizon Statements** #1: The FDA evaluated the "totality" of scientific data #8: The FDA "continuously monitors the science. #10: Children and pregnant women are adequately protected by FCC RFR limits. #13: The FDA scientifically reviewed the safety of 5G technology **Verizon Statement** *"Are small cells safe?* *The Federal Communications Commission, in consultation with multiple federal agencies, sets federal government safety standards regarding small cells. Those standards have wide safety margins and are designed to protect everyone, including children, and were established after close examination of research that scientists in the US and around the world conducted for decades. The research continues to this day, and agencies continue to monitor it. Scientists have studied potential health effects of RF emissions from cell phones for decades. Based on all the research, federal agencies have concluded that equipment that complies with the safety standards poses no known health risks. And advisers to the World Health Organization have specifically concluded that the same goes for 5G equipment. In fact, the RF safety standards adopted by the United States Federal Communications Commission (FCC) are even more conservative than the levels adopted by some international standards bodies.*

	FCC: The FCC provides information about the safety of RF emissions from cellular base stations on its website at: http://www.fcc.gov/oet/rfsafety/rf-faqs.html. *FDA: The Food and Drug Administration's Cell phone website…"*
VERIZON PUBLIC HEARING ON 9/22/21 AT 6PM Glendale California: 9/22/21 testimony	**FDA's Misrepresentations in Verizon Hearing** #1: The FDA evaluated the "totality" of scientific data #7: The FDA has evaluated FCC's RFR limits. #9: There is "scientific consensus" that RFR radiation is safe. **Statements on Record** *"The RF exposure limits were set by the FCC in 1996, at the direction of Congress, and were reaffirmed in 2019. All FCC-regulated small cells must comply with the FCC's RF limits. As such, ExteNet's installations adhere to those standards. The public limit incorporates a fifty times safety factor, that is, the limit is set fifty times below the level where the scientific consensus shows that there may be observable effects on humans. So, with the large safety factor in place, there are anticipated no observable effects at sites that are below the FCC limits... In addition, many household items, including microwave ovens, wireless modems, and televisions emit RF emissions and are deemed safe for everyday consumer use by the U.S. Food and Drug Administration."*
Smartlink LLC on behalf of AT and T, for City of Independence California, Staff Report May 27, 2020	**FDA's Misrepresentations in Smartlink Statement** #1: The FDA evaluated the "totality" of scientific data #7: The FDA has evaluated FCC's RFR limits. #8: The FDA "continuously monitors the science. **Smartlink Statement** *"The FCC regulates RF emissions to ensure public safety. Standards have been set based on peer reviewed scientific studies and recommendations from a variety of oversight organizations, including the National Council on Radiation Protection and Measurements (NCRP), American National Standards Institute (ANSI), Institute of Electrical and Electronics Engineers (IEEE), Environmental Protection Agency (EPA), Federal Drug Administration (FDA), Occupational Safety and Health Administration (OSHA), and National Institute for Occupational Safety and Health (NIOSH).*

	Although the purview of the public safety of RF emissions by the FCC was established by the Telecommunications Act of 1996, these standards remain under constant scrutiny. *All AT&T cell sites operate well below these standards, and the typical urban cell site operates hundreds or even thousands of times below the FCC's limits for safe exposure."*
Wireless Infrastructure Association (WIA) Wireless Networks and Your Health: THE FACTS	**FDA's Misrepresentations in WIA Statement** #1: The FDA evaluated the "totality" of scientific data #8: The FDA "continuously monitors the science." **WIA Statement** ***"The U.S. Food and Drug Administration has determined that based on all available evidence, there is "no increased health risk due to radio-frequency (RF) energy."*** *U.S. Food and Drug Administration, Consumer Updates: "No Evidence Linking Cell Phone Use to Risk of Brain Tumors"*
Jerrold Bushberg "Introduction to Potential Health Considerations of 5G Networks" at the Beverly Hills California Health and Safety Commission Meeting on February 24, 2020 (See Agenda, Watch video, See full transcript)	**FDA's Misrepresentations in Jerrold Bushberg Statement** #1: The FDA evaluated the "totality" of scientific data #3: The FDA has evaluated the science on specific non-cancer effects such as oxidative stress, impacts to reproduction and people with electromagnetic sensitivity. #8: The FDA "continuously monitors the science. Minute 1:18:00 *" It is fortunate that this [referring to the FDA] recently came out a week or so ago. It's the most recent review of all the epidemiological and animal data from the FDA and they ended with their conclusions they had these bullet points which said the FDA doctors scientists and engineers continuously monitor scientific studies and public health data for evidence that radiofrequency from cell phones could cause adverse health effects. To date there is no credible scientific evidence of health problems caused by exposure to radiofrequency energy."*

The Medical Community is Unaware: Webmed, Medical Express and Healio Hematology/Oncology all feature stories about the FDA's finding of *"insufficient"* evidence. Exemplifying these, MD Edge Hematology and Oncology's 2020 article is entitled, *"FDA: Cell phones still look safe."* As an example, the American Cancer Society (ACS) cites the FDA's

Literature review conclusion of "*insufficient evidence*" on its "cell phone radiation webpage" despite the fact that it is not a systematic review, not a risk assessment, nor a hazard identification study. In turn, doctors do not routinely assess their patients' RFR exposure nor educate them on how to reduce exposure.

The Public Is Left in the Dark: The public is making choices about how they personally use technology based on these myths. Although they are concerned about the health impacts from widespread and ever-increasing exposure to wireless radiation, they are also easily confused about this highly technical issue. The first thing most people do is look up what government agencies such as the FDA state about safety issues. Most will feel a false sense of security from FDA's website pages on "Cell phone safety." Thus, the public continues to purchase and use more and more wireless devices unaware of the serious health risks posed by years of chronic exposure. The public's confusion is compounded by the wireless industry's safety assurances - substantiated by the FDA's misrepresentations.

We show in this Declaration that the FDA's misrepresentations and wide-spread dissemination of factual errors are at the very heart of the misinformation causing confusion and false assurances of wireless exposure safety. The continued failure by the FDA to clarify its EMF activities and level of review is leading to serious, catastrophic consequences as well as high financial costs.

A Remedy Is Needed As the FDA's Failure to Act Will Lead To Continued Harm

The remedy needed for the FDA is honesty and transparency.

- The FDA must factually present their level of review regarding the science on radiofrequency.
- The FDA must factually present their level of review regarding their evaluation of the adequacy of FCC limits.
- The FDA should clarify to members of Congress and other agencies the limits of its activities.
- The FDA should offer corrections when the media or Congress or other federal agencies misrepresent their activities.
- The FDA should be testing cell phones and other wireless devices for radiation levels in positions close to the body and publicly posting the results. Devices that exceed RF limits should be taken off the market.
- The FDA must clarify the process by which they "monitor" the research and release all reports and memos and agendas related to their activity on the issue.
- The FDA must allow public comment to their decisions and be transparent in every action they take.
- The FDA must stop misrepresenting the NTP study findings and do a proper quantitative risk analysis on the NTP data and body of research to determine human health risks.

- The FDA must have a robust webpage on how to reduce exposure that includes reducing exposure to the myriad of wireless devices (including Wi-Fi routers, cordlessDECT phones, Bluetooth headsets, wireless baby monitors etc..), in our lives today - not just four tips on cell phones.
- Most importantly the FDA should state "we recommend people reduce cell phone and wireless radiation."

American Families, Children and Future Generations are at Risk.

If the FDA continues to misrepresent their level of review, which in turn allows this issue to remain unattended and under regulated, the public will continue to be at risk not only for increased cancers but for numerous other irreversible health impacts related to exposure. Wireless radiation is ubiquitous, and children are exposed from before they are born. Children, pregnant women, and the medically vulnerable will be most impacted.

Federal Inertia: A Continued Lack of Federal Accountability and Inadequate Oversight.

Cell phone, wireless and cell tower radiation is a public health issue that requires robust evaluation by U.S. federal agencies that protect public health and the environment. However the FDA's lack of a clear policy, paired with its misrepresentations regarding the FDA's level of review, has resulted in the complete failure of the United States to adequately regulate the cumulative and aggregate radiation exposure levels, and ensure the public and environment are protected.

Elected officials at every level of government point to the FCC regulations and the FDA online statements as proof of safety. Most inaccurately believe the FDA and FCC are properly reviewing the research, and are unaware that the EPA was defunded from developing safety limits in 1996. Local and state officials say their "hands are tied" because they are federally preempted by the FCC and its 1996 regulations. Yet at the federal level, the ball has been dropped because federal officials assume the health agencies are doing their job. There has been no robust research review to evaluate the adequacy of FCC limits, and no risk analysis to ensure the public is protected from long term exposures. Thus the health issue is effectively unregulated with no oversight. Although the recent *EHT et al v. FCC* DC Circuit court ruling brought attention to the FCC's improper reliance on the limited information from the FDA, the FCC has no deadline on when the FCC must respond to the Court, and the process could take years.

The Economic Impact

The national costs from FDA's inaction to protect the public must be considered. Studies indicate that those who begin using either cordless or mobile phones regularly before age 20 have greater than a fourfold increased risk of ipsilateral glioma. Given that treatment for a single case of brain cancer can cost between $100,000 for radiation therapy alone and up to $1 million depending on drug costs, the financial implications could be staggering, even with a small increase in the population. Resources to address this illness are already in short supply and not universally available in all communities.

However, brain cancer is just one of the numerous health effects research has associated with RFR. Research has repeatedly found oxidative stress from exposure, which over time can contribute to a myriad of health effects. Oxidative stress plays an important role in DNA damage process, general and specific gene expression and cell apoptosis. The brain has a high metabolic rate, making it more prone to damage by ROS and oxidative damage compared to other organs. Research has also found memory damage, behavior problems and neurological damage from radiofrequency radiation exposure which could result in cognitive and behavioral impairment that can affect children's lifelong success. The economic costs could be staggering. Consider the economic impacts of other toxic exposures. Smoking-related illness in the United States costs more than $300 billion each year. The estimated U.S. annual healthcare costs from asbestos-related mesothelioma alone is nearly $2 billion, while remediation efforts cost an estimated $3 billion. Health care costs are compounded by loss of productivity and litigation costs. We expect the issue of cell phones, wireless and 5G to follow the path of lead, asbestos and cigarettes. The health and economic costs will be unprecedented.

The bottom line is that FDA's websites and letters promote the **unsubstantiated narrative** that wireless radiation is safe and that FCC limits are protective because the *FDA has a scientific review process in place whereby FDA scientists have thoroughly reviewed all of the latest science and used science based best practice methods to ensure FCC's RFR safety limits are safe for the public, even children.*

Despite the FDA's knowledge of research indicating harmful effects, the FDA has concealed its EMF activities and misled the public, members of Congress and other federal agencies about its role and activities. These false safety assurances influence the public, government officials and medical professionals. As a result, consumers continue to use phones and wireless devices in ways that increase their RFR exposure, and officials do not promote policy that reduces exposure, but instead support policy that increases exposure. 5G streamlining bills have been passed in half the country, fast-tracking the proliferation of thousands of new small cell towers to connect new 5G cell phones and other wireless devices.

About Environmental Health Trust

Environmental Health Trust (EHT) is a scientific think tank focused on preventable health risks.

Dr. Devra Davis is co-founder and President of EHT. Davis was Founding Director, Center for Environmental Oncology and the University of Pittsburgh Cancer Institute and founding director of the Board on Environmental Studies and Toxicology of the U.S. National Research Council, National Academy of Sciences. Davis was Senior Advisor to the Assistant Secretary for Health in the Department of Health and Human Services and appointed to the US Chemical Safety and Hazard Investigation Board by President Clinton. She served on the Board of Scientific Counselors of the U.S. National Toxicology Program and various advisory committees to the U.S. Centers for Disease Control and Prevention. She was part of the team of

Intergovernmental Panel on Climate Change scientists[64] awarded the Nobel Peace Prize in 2007 with the Honorable Al Gore as Davis was lead author on research assessing climate mitigation policies. Davis has authored more than 200 peer reviewed publications in books and journals on the issue of environmental Health.

EHT was founded by Dr. Ronald Herberman,[65] founder of the University of Pittsburgh Cancer Institutes who issued the first US medical institution employee recommendations[66] to reduce cell phone radiation in 2008.

Both Dr. Herberman and Dr. Davis provided expert testimony at the last congressional hearings on cell phone radiation held in 2009 (Senate CSPAN link)[67] and 2008 (House CSPAN link)[68] - the last congressional hearings ever held. Following the 2009 hearing, EHT held a conference in Washington DC[69] attended by the FCC with presentations by NIH and the American Cancer Society and several international scientists.

Appendix of Evidence of FDA Misrepresentations, and Influence to Congress, State Agencies and the Media

This section lists the evidence used in this Declaration including FDA Letters and communications as well as letters by other agencies and officials related to the FDA's misrepresentations.

FDA's Public Statements, Letters and Communications

FDA's Public Website Over the Years

EHT has monitored the FDA website for years. On February 10, 2020, the FDA updated all its website pages related to cell phone radiation after ten years of no changes. Previous to that the FDA had a long list of Q and As that did underscore the need for more research.

1. The FDA website pages after February 10, 2020 proclaiming cell phone safety and featuring the Literature Review.
    - Do Cell Phones Pose a Health Hazard?[70]

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[64] "Devra Davis, a Lead Author on the Intergovernmental Panel on Climate Change Awarded Nobel Peace Prize alongside Honorable Al Gore." 2007, https://ehtrust.org/devra-davis-part-of-the-intergovernmental-panel-on-climate-change-awarded-nobel-peace-prize-alongside-honorable-al-gore/.
[65] "Ronald B. Herberman, UPCI Founding Director, Dies," Pitt Chronicle | University of Pittsburgh, June 17, 2013. https://www.chronicle.pitt.edu/story/ronald-b-herberman-upci-founding-director-dies.
[66] Tara Parker-Pope, "Prominent Doctor Warns about Cell Phones ," New York Times (blog) JULY 20, 2008. https://well.blogs.nytimes.com/2008/07/24/prominent-cancer-doctor-warns-about-cellphones/
[67] "Health Effects of Cell Phone Use, Senate Appropriation Subcommittee." C-Span video,1:45. 2009. https://www.c-span.org/video/?288879-1/health-effects-cell-phone-use.
[68] "Health Effects of Cell Phone Use, House Oversight Subcommittee on Domestic Policy." C-Span video,2:03:33:24. 2008. https://www.c-span.org/video/?288879-1/health-effects-cell-phone-use
[69] "EHT Expert Conference in Washington DC." September 13-15 2009. "https://ehtrust.org/science/key-scientific-lectures/2009-expert-conference-on-cell-phone-radiation/.
[70] "Do Cell Phones Pose a Health Hazard?" (2020) https://www.fda.gov/radiation-emitting-products/cell-phones/do-cell-phones-pose-health-hazard.

- Children and Teens and Cell Phones[71]
- Scientific Evidence for Cell Phone Safety[72]
- Radio Frequency Radiation and Cell Phones[73]
- Reducing Radio Frequency Exposure from Cell Phone Radiation[74]

2. FDA Webpages 2009 to 2019 (Previous to February 10, 2020 Saved on Wayback Machine)
   - Do Cell Phones Pose a Health hazard?[75]
   - Children and Cell Phones[76]
   - Current Research Results[77]
   - Radiofrequency Background[78]
   - Reducing Exposure: Hands-free Kits and Other Accessories[79]
3. Pre 2009 FDA website pages - a few examples saved on waybackmachine.
   - 2004 Cell Phones Questions & Answers
   - Cell Phones and Cancer: No Clear Connection March 9, 2001, February 28, 2002

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[71] "Children and Teens and Cell Phones." U.S. Food and Drug Administration (2020) https://www.fda.gov/radiation-emitting-products/cell-phones/children-and-teens-and-cell-phones

[72] "Scientific Evidence for Cell Phone Safety." U .S. Food and Drug Administration. (2020) https://www.fda.gov/radiation-emitting-products/cell-phones/scientific-evidence-cell-phone-safety.

[73] "Radio Frequency Radiation and Cell Phones." U.S. Food and Drug Administration. (2020) https://www.fda.gov/radiation-emitting-products/cell-phones/radio-frequency-radiation-and-cell-phones.

[74] "Reducing Radio Frequency Exposure from Cell Phones." U.S. Food and Drug Administration. (2020) https://www.fda.gov/radiation-emitting-products/cell-phones/reducing-radio-frequency-exposure-cell-phones

[75] Electromagnetic Biology and medicine, https://www.tandfonline.com/doi/figure/10.1080/15368378.2016.1220389: 07 Feb. 2019; archived at Wayback Machine, https://web.archive.org/web/20190207225334/https://www.fda.gov/Radia**tion-**EmittingProducts/RadiationEmittingProductsandProcedures/HomeBusinessandEntertainment/CellPhones/ucm116282.htm.

[76] Center for Devices and Radiological Health. "Children and Teens and Cell Phones." U.S. Food and Drug Administration. FDA: 16 Dec 2019; archived at Wayback Machine, https://web.archive.org/web/20191216191346/https://www.fda.gov/radiation-emitting-products/cell-phones/children-and-cell-phones.

[77]Current Research Results. U.S. Food and Drug Administration. FDA 16 Dec 2019; archived at Wayback Machine, https://web.archive.org/web/20191216191422/

[78] Center for Devices and Radiological Health. "Radio Frequency Radiation and Cell Phones." U.S. Food and Drug Administration. https://www.fda.gov/radiation-emitting-products/cell-phones/radio-frequency-radiation-and-cell-phones: 16 Dec 2019: archived at Wayback Machine, https://web.archive.org/web/20191216191507/https://www.fda.gov/radiation-emitting-products/cell-phones/radiofrequency-background.

[79] Center for Devices and Radiological Health. "Reducing Radio Frequency Exposure from Cell Phones." U.S. Food and Drug Administration. FDA. https://www.fda.gov/radiation-emitting-products/cell-phones/reducing-radio-frequency-exposure-cell-phones: 16 Dec 2019: archived at Wayback Machine, https://web.archive.org/web/20191216191229/https://www.fda.gov/radiation-emitting-products/cell-phones/reducing-exposure-hands-free-kits-and-other-accessories.

Official FDA Statements and Reports Posted Online

1. The FDA Literature Review "Review of Published Literature between 2008 and 2018 of Relevance to Radiofrequency Radiation and Cancer, February 2020
2. FDA Jeffrey Shuren Submission to the FCC Docket 13-84 stating that scientific evidence to date does not support adverse health effects, April 24, 2019
3. FDA Press Release, Statement from Jeffrey Shuren, M.D., J.D., Director of the FDA's Center for Devices and Radiological Health on the National Toxicology Program's report on radiofrequency energy exposure, November 1, 2018
4. FDA Press Release, Statement from Jeffrey Shuren, M.D., J.D., director of the FDA's Center for Devices and Radiological Health on the recent National Toxicology Program draft report on radiofrequency energy exposure, February 2, 2018

FDA Letters and Email Communication Chains

FDA to Scientists

1. One sentence letter by FDA's Dr. Shuren to Theodora Scarato[80] March 24, 2020

February 27, 2020 Letters Sent to the FDA by Scientists Calling For a Retraction of the Literature Review. Main EHT page detailing the Scientists' Letters to the FDA

- Letter calling for a retraction signed by numerous scientists.
- Ronald Melnick PhD's letter to the FDA on the National Toxicology Program study
- Albert Manville PhD, retired Senior Wildlife Biologist, Division of Migratory Bird Management, U.S. Fish & Wildlife Service, Senior Lecturer, Johns Hopkins University
- Prof. Tom Butler of the University College in Cork, Ireland's letter to the FDA
- Igor Belyaev, PhD, Dr. Sc. Head, Department of Radiobiology of the Cancer Research Institute, Biomedical Research Center of the Slovak Academy of Science
- Paul Heroux PhD, McGill University
- Alfonso Balmori, BSc
- PDF of all letters and statements

2. FDA Letter to Physicians for Safe Technology Dr. Cindy Russell and Dr. Beatrice Golomb stating that the NTP study supports the FDA determination that current safety limits for RFR are adequate and also in regards to electromagnetic sensitivity, the FDA does not believe electromagnetic fields are the cause of symptoms, May 23, 2019

3. FDA Letter to Dr. Ron Melnick in response to Dr. Melnick and other scientists asking for corrections regarding the NTP final reports. March 14, 2019

[80] "One sentence response letter by FDA to Theodora Scarato" (March 24, 2020). https://ehtrust.org/wp-content/uploads/FDA-communications-Scarato-PDF-2019.pdf.

Theodora Scarato to FDA's David Kassiday:

Years of Email Communications Between Theodora Scarato and FDA's David Kassiday before and after September 23, 2014 meeting between EHTs Theodora Scarato and Devra Davis and FDA staff Emails before meeting between Theodora Scarato to FDA's David Kassiday.

1. September 15, 2014 on FDA's activities (general statements about FDA monitoring research, interagency workgroup. When asked "What information you already have reviewed?" the answer was "FDA has reviewed many papers, presentations, and reports." The FDA states they reviewed the CERENAT study but it was never posted anywhere online
2. Scarato to Kassiday on Wi-Fi devices at body contact November 1, 2014
3. 2/5/2016 email chain FDA did not do a formal review in 2013 and no answer to question about review of FCC limits as protective
4. Email from FDA's David Kassiday to Scarato, October 18, 2017,
5. A series of email communications (2014 to 2016 Emails, 2017 Emails)[81] over several years between FDA's Daniel Kassiday and EHT Executive Director Theodora Scarato after an in-person meeting at the FDA between Dr. Devra Davis and Theodora Scarato and FDA's Daniel Kassiday and Michael D. O'Hara.
6. FDA Communications Between Theodora Scarato and FDA Branch Chief, Postmarket and Consumer Branch Division of Industry and Consumer Education Tonya Wilbon on February 19, 2020 and FDA Consumer Safety Officer, Division of Industry and Consumer Education Counsel Terri Garvin on February 12, 2020.

Letters To and From Members of Congress

2019 FDA/Scientists/U.S. Representative Anna Eshoo and Senator Jeff Merkley:

1. FDA Jeffrey Shuren and Edward Margerrison Letter to Representative Anna Eshoo and Senator Jeff Merkley summarizing how they determined FCC limits were adequate and 5G health effects were not a concern, September 9, 2019

Scientists Respond to the FDA's September 9, 2019 Letter to Representative Eshoo:

- Dr. Devra Davis/ Environmental Health Trust to Eshoo Letter: October 19, 2019 Scientific letter with extensive citations documenting the published scientific evidence with counters statements by the FDA that RF is safe/brain tumors are rising in youth in the USA, Cancer is not only health endpoint showing effects, calls for Congressional hearing.

- Bioinitiative Letter to FDA Shuren, September 26, 2019 urging the FDA to rescind the endorsement of the adequacy of RF limits/ no independent review of research/ grossly outdated and incomplete information on FDA website.

[81] "A series of email communications over several years between FDA's Daniel Kassiday and EHT Executive Director Theodora Scarato." (2014 - 2017) https://ehtrust.org/wp-content/uploads/Melnick-Letter-RE_FDA-review-of-RFR-2020.pdf.

- California Brain Tumor Association Letter to School September 30, 2019
- Physicians For Safe Technology Letter to Eshoo October 1, 2019 documenting a "number of inconsistencies, misstatements and flaws in the research summaries" put forward by the FDA. FCC to Congress Communications That Reference to the FDA
- FCC Commissioner Carr Tweet About FDA May 22, 2020

U.S. Senator Richard Blumenthal and U.S. Representative Anna G. Eshoo:

- U.S. Senator Richard Blumenthal and U.S. Representative Anna G. Eshoo Letter to FCC Commissioner Brendan Car About 5G Health Hazards, December 9, 2018
- FCC Commissioner Carr letter to U.S. Senator Richard Blumenthal and U.S.
- Representative Anna G. Eshoo, December 17, 2018

U. S. Representative Andy Kim:

- U.S. Representative Andy Kim Letter to FCC Chair Ajit Pail About Health Effects of 5G March 28, 2019
- FCC Letter Responding to Representative Kim, April 30, 2019

U.S. Representative Thomas Suozzi:

- U.S. Representative Thomas Suozzi Letter to FCC, April 16, 2019
- FCC Letter Responding to Representative Suozzi, April 30, 2019

U. S. Representative Peter A. DeFazio:

- Representative Peter A. DeFazio Letter to the FCC and FDA, April 15, 2019
- FCC Letter Responding to Representative DeFazio, April 30, 2019

Citizens Petition:

- FDA Denial of Petition Docket FDA 2013-P-1374 to Frederick S. Mayer, July 17, 2017
- Petition by Frederick S. Mayer to the FDA
- Supplemental Material in Mayer Petition to the FDA

FCC Julius Knapp Letters to Questions Re 5G, Smart meters and Health:

- FCC to Senator Tammy Baldwin, November 4, 2019
- FCC Chair Letter to U. S. Senator Tim Scott re: Smart meters, May 5, 2017
- FCC Julius Knapp Letter to Senator Nelson April 4, 15, 2017

- FCC Chair Julius Knapp letter to U.S. Representative Lynn Woolsey on Smart Meters, April 21, 2011
- FCC Chair Knapp Letter to Cindy Sage, August 6, 2010

National Cancer Institute Communications:

- Middle School Student to the National Cancer Institute, June 18, 2016
- National Cancer Institute to Middle School Student, December 14, 2016

Congress and FDA Communications

U.S. Representative Anna Eshoo and Senator Jeff Merkley:

- U.S. Representative Anna Eshoo and Senator Jeff Merkley's letter to the FDA on 5G July 18, 2019
- FDA Jeffrey Shuren Response to U. S. Representative Eshoo- Same was sent to Merkley- September 9, 2019
- U.S. Representative Eshoo Letter to Constituent, September 20, 2019

2020 Letters between FDA and Senator Tammy Baldwin Refuse to Answer Direct Questions:

- FDA Letter to U.S. Senator Tammy Baldwin states the FDA performed an "extensive risk analysis" and determined insufficient evidence to demonstrate a causal link between cell phones and cancer…" September 8, 2020

Congress Communications of Safety to Constituents After They Raise Health Issues:

- U S. Representative Scott Fitzgerald to Resident November 5, 2021
- U.S. Representative Alan Lowenthal to a Constituent on 5G, October 18, 2021
- U.S. Senator Kyrsten Sinema Letter to Constituent October 7, 2021
- U.S. Representative Trone letter to Scarato on 5G October 27, 2021
- U.S. Representative Chrissy Houlahan letter to Constituent, October 8, 2021
- U.S. Representative Trone Letter on 5G Towers September 20, 2021
- U.S. Representative Brad Wenstrup Letter to Constituent, September 16 2021
- U.S. Senator Feinstein Letter to Constituent, September 6, 2021
- U.S. Senator Sherrod Brown Letter to Constituent, September, 26, 2019
- U.S. Senator Markey Letter to Constituent on 5G September 18, 2018
- U. S. Senator Tammy Baldwin Letter to Constituent, September 13, 2017
- U. S. Senator Markey Letter to Constituent After Health Issues Raised, July 26, 2017

State

New Hampshire Commission:

- FDA's Karen Meister Letter to Denise Ricciardi of the New Hampshire Commission on 5G found on the Commission's Final 5G Report page 41.[82] Emails dated June 23, 2020, July 15, 2020, July 15, 2020, March 2, 2020

State Entities and Officials:

- Connecticut State Senator Kevin Witkos Letter to Constituent, September 7, 2021
- New York State Senator James F. Gaughran Letter to the FCC, July 23, 2019
- Maryland Department of Public Health Letter, April 23, 2014
- Florida Department of Environmental Protection to Florida Resident, January 22, 2013
- Florida Department of Environmental Protection Letter, January 22, 2013
- State Senator Fitzgerald Office tells Constituent it is a Federal Issue, December 13, 2011
- Wisconsin Department of Natural Resources, December 12, 2014

Local Officials, Government Agencies and Entities

- County Commissioner Palm Beach County Florida, September 20, 2021
- Montgomery County MD Councilman Hans Riemer newsletter July 28, 2021
- Montgomery County MD Councilman Hans Riemer Tweet July 14, 2021
- Colin Groff Assistant City Manager Boynton Beach Letter to Resident, November, 3, 2020 and November 2, 2020
- Robert Bessel Selectman Town of Canton, Connecticut Letter, March 18, 2020
- Questions and Responses from Verizon Representatives Hempfields School District Board Meeting, November 14, 2017
- Chad Pelishek Director of Planning & Development City of Sheboygan October 21 2021
- University of Maryland Letter citing FCC and ICNIRP limits, January 15, 2015
- Montgomery County School District Letter on FCC and FDA Safety Assurances, March 12, 2014
- Town of Tucson Arizona -FAQs on Small Cells References FDA
- Glendale California: 9/22/21Verizon testimony

[82] "New Hampshire State Report on Health and Environmental Effects of 5G and Wireless Radiation." November 07, 2020. https://ehtrust.org/new-hampshire-state-report-on-health-and-environmental-effects-of-5g-and-wireless-radiation/.

- **City of Sacramento** 5G FAQS: WHO DETERMINES SAFETY STANDARDS FOR 5G?

The Public Service Commission of Wisconsin, Smart meters and several U.S. residents: An example of how the FDAs lack of clear policy impacts the American people:

- Public Service Commission of Wisconsin Letter to Resident, May 28, 2003
- Public Service Commission of Wisconsin to resident April 27, 2010
- Public Service Commission of Wisconsin Letter to Resident, February 10, 2011
- Public Service Commission of Wisconsin Investigation into the Health and Safety and Other Aspects of Advanced 5-WI-101 Meter Infrastructure Systems for Water Utilities, September 12, 2012
- Wisconsin Public Service Commission Denies Rehearing November 8, 2013

Wireless Industry Safety Assurances That Refer to the FDA

Wireless Company Online Websites:

- CTIA Consumer Website Wireless Health Facts- Wirelesshealthfacts.com
- Verizon's "Facts About RF Energy" brochure
- Verizon's Consumer Information Webpage
- Samsung's Health and Safety Information
- T Mobile's RF Safety Webpage
- AT&T's Information on Wireless and Health Webpage
- Crown Castle Understanding the Safety of 5G
- Wireless Infrastructure Association Wireless Networks and Your Health: THE FACTS
- Times of San Diego features CTIA Protecting Health and Safety
- GSMA Handbook on 5G, EMF Exposure and Safety

EMF Explained - Australian Mobile Telecommunications Association - website: US National Toxicology Program Study Results Published - features Statement by FDA Shuren

The full longer 150 page plus Report by Environmental Health Trust on FDA's Misrepresentations of FDA's Level of Review for Cell Phone and Wireless Radiation Safety is found online at https://ehtrust.org/fdas-misrepresentations-of-cell-phone-radiation-safety-eht-report/

B. Americans for Responsible Technology

My name is Douglas Wood, and I am the founder and National Director of Americans for Responsible Technology (ART), a not-for-profit coalition of more than 130 grassroots organizations across the country advocating for the deployment of safe, economical and future-proof wired technology and promoting equitable access to technologies that benefit society and protect the health, safety, security, privacy and property of all Americans.

I am petitioning the Department of Health and Human Services and its constituent agency, the Food and Drug Administration (FDA), to (1) immediately issue science-based human health safety standards for exposure to radiofrequency (RF) radiation from wireless devices and infrastructure, or (2) immediately convene an emergency expert panel to develop such standards pursuant to 21 USC 360 kk following procedures required by the Administrative Procedures Act, or (3) immediately issue a public statement that the Agency currently has no official standards for human exposure to RF radiation from wireless devices and infrastructure, and is therefore unable to render accurate, science-based advice to other federal agencies.

This is an urgent matter due to the rapidly growing demand for wireless devices and services, pushed by a misguided national effort to make our cars, homes, cities, electric grids and utilities "smart," and the rapacious appetite for profits on the part of the world's telecommunications companies. This rush to connect everything to everyone and fill the world with the Internet of Things is happening in a vacuum of scientific information resulting from the failure of the FDA to fulfill its primary responsibility to protect the health of the American people.

Over the past three years, our organization has been engaged in a near-constant effort to fill the information gap and educate the public about the rapidly developing science regarding human exposure to RF radiation, including biological effects documented at levels below the current thermal limits promulgated by the Federal Communications Commission (FCC). To illuminate the research taking place worldwide by highly credible individuals and institutions, we compiled a digest of "The Independent Science on the Effects of Wireless Radiation on Human Health and the Environment," attached hereto, which we update on a quarterly basis. This effort, along with the development of other educational materials has cost us hundreds of thousands of dollars in staff time and materials, and has been necessary because of the failure of the FDA to clearly articulate a science-based position on the subject. Instead, the Agency seems determined to straddle the fence, on the one hand claiming it has seen no evidence of harm from exposure and on the other, casually offering advice on how consumers can reduce exposure "if they want."

What public health agency, cognizant of the robust and growing body of scientific evidence of human harm from exposure to a toxin, advises consumers to take precautions "if they want?" The failure of the FDA to conduct a serious investigation of the health impacts of RF radiation, to develop science-based standards and to provide the American public with actionable information is an unjustified dereliction of responsibility. This is causing confusion in the marketplace, uncertainty for local governments, anger in those who are physically suffering

from exposure, desperation for parents who are trying to protect their children, and frustration for school officials caught between a respect for science, a legal responsibility to protect students and a national policy which is advocating the adoption of technologies that could be harmful – and perhaps even life-threatening – to children under their care.

- Local government officials are confused and conflicted because the FDA nominated a study that was conducted by the National Toxicology Program which found that exposure to RF radiation causes cancer, DNA damage and heart damage,1 while telecoms claim their wireless devices and infrastructure meet all FCC safety guidelines.2 These local officials are further constrained from exercising their primary legal responsibility to protect the health and safety of citizens by federal law which prevents objections to wireless infrastructure based on "environmental" concerns. This creates an untenable situation, caused in large part by the failure of the FDA to fulfill its responsibility under the law to protect public health.

- In community after community, outraged citizens are demanding reasonable accommodations to prevent 24/7 involuntary RF radiation exposure for their families from nearby 4G/5G small cell antennas, OTARD antennas on neighbor's roofs or large cell phone towers. But local officials cannot accommodate the requests because purveyors claim their equipment "meets FCC human exposure guidelines" and imply that these guidelines have been vetted and approved by the FDA.

- School officials are confused because the growing body of peer-reviewed science demonstrates that non-thermal levels of RF radiation can inflict serious damage on the developing brains of children, while at the same time government funding for "upgrading" schools with wireless technology flows from Washington. Concerned parents are met with heavy skepticism from school officials, since once again, purveyors of wireless technology in schools claim all of their equipment meets FCC guidelines which should extinguish any concerns. But parents are not that stupid. The instinct to protect is stronger than the flimsy and transparent assurances of the FCC and manufacturers that everything is fine.

- We have lost count of the number of people who have developed a sometimes debilitating illness known as Electromagnetic HyperSensitivity (EHS) or microwave sickness after a digital RF-radiating "smart" utility meter was installed in or on their home or apartment. These devices, which emit high-level bursts of radiation, have been approved by the FCC because the agency allows manufacturers to average emissions over a period of time. The bursts, which would normally far exceed FCC limits if sustained, fail to sufficiently raise the temperature of the body during their short duration, and therefore are permitted. The FCC is making *de facto* medical decisions for

1 https://ntp.niehs.nih.gov/whatwestudy/topics/cellphones/index.html

2 https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFDF7/$file/20-1025-1910111.pdf

millions of Americans. The FDA on the other hand, with the ability and responsibility to provide the public with fact-based science on the human response to high bursts of RF radiation, has instead ignored the issue. This situation is devastating to the rapidly increasing number of people, including school children, who suffer from EHS, because the uninformed and untrained medical establishment is unable to recognize or manage EHS. Patients suffering with this illness are often diagnosed with a mental disorder. Medical professionals, like most of the public, believe that FCC compliance is an assurance of safety, confirmed and endorsed by the FDA. Instead of informing the public that it has not actually conducted any scientific inquiry into the issue, the FDA instead allows this misperception to persist.

- People suffering from EHS report symptoms including severe headaches, nausea, dizziness, inability to concentrate, tinnitus, insomnia, and a general malaise. Symptoms subside when exposure to RF radiation is reduced or eliminated. This has caused many who suffer EHS to abandon their homes, quit their jobs, leave their families and seek shelter in sparsely populated areas, or invest in EMF shielding products and building materials in their own homes as a means of temporary escape. The problem is worldwide. Scientists in France and elsewhere have documented this neurologic pathological disorder, and have invited others to join in the research, but lack of funding has discouraged widespread investigation.

In virtually all of these circumstances, ART has been called in to inform, testify, present or otherwise intervene in local government proceedings, school board hearings, state legislature committee meetings, meetings of housing coops, local grassroots groups, parent associations and other similar forums. We have led small coalitions to oppose local and state legislation that fast-tracks the deployment of 5G, and joined with others to oppose the mandatory installation of smart meters because of the involuntary exposure which these technologies entail.

We have created print documents to inform local governments of their rights under the 1996 Telecommunications Act, and created documents that help local citizens improve and strengthen their local zoning codes. We have compiled codes from around the country and made them available to local legislators. Together with legal, technical and medical experts, we have held webinars on various aspects of wireless technology and how its deployment intersects with existing law and medical understanding. All of these events have been made necessary, in part, by the lack of active participation by the FDA in the overarching question of the health impacts of exposure to RF radiation.

We have made documentary films about the issue, including one specifically about OTARD antennas, and their potential to impact the health and safety of unsuspecting consumers who agree to have high-powered 5G antennas placed on their homes. All they know about 5G is that it's fast, and it's deemed safe because it meets FCC safety guidelines. They have no idea the FCC's claim that it relies on the FDA for guidance has no basis in fact.

In the absence of FDA involvement on this issue, ART has been forced to write legislation to have state legislatures convene their own committees to investigate the health impacts of exposure. Several states have convened committees (with mixed results due to heavy industry influence), but regardless of their findings, the FCC claims its human exposure guidelines trump any local law. Judges have generally agreed, giving deference to federal authorities which they believe are engaged in good faith efforts to monitor and actively evaluate developing science. There is no truth behind this.

In short, we believe that HHS and the FDA are engaged in fostering a cruel deceit on the American people by pretending to be actively monitoring the issue of RF radiation exposure on humans when they are not. Instead, they are actively and knowingly promoting the myth that the FDA is carefully reviewing the science and has developed standards by which products and services are measured. Moreover, they are allowing others to perpetuate and extend this myth, resulting in great harm and imminent hazard to the American people.

This cannot stand. This is, for many Americans, an immediate existential issue, and for millions of others, a potential serious health crisis in the making. Science tells us there are likely to be severe consequences from prolonged exposure to RF radiation. Exposure at a critical period of development could easily manifest in a diagnosis of cancer, DNA damage or reproductive or neurological problems later in life.

As I write this declaration, there are decisions being made that, in ten or twenty years, could mean a cancer diagnosis for a young student. Those decisions could also mean unexplained infertility for a young couple, or a diagnosis of neurological impairment for a newborn. Those decisions could literally mean death due to RF interference with a life-saving implanted medical device, or result in suicide for someone suffering from EHS who can no longer bear the pain.

The FDA is responsible for protecting the public's health and most Americans assume the agency is doing everything in its power to accomplish that. Sadly, this is not the case when it comes to RF radiation. Wireless infrastructure and devices have infiltrated every aspect of American life and despite thousands of peer-reviewed studies and numerous and urgent appeals from scientific and medical researchers and doctors, the FDA has been conspicuously absent in dealing with one of the most consequential public health threats of our time.

Under penalty of perjury I attest that the foregoing is true and correct to the best of my knowledge and understanding.



Douglas A. Wood

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Independent Science on the Effects of Wireless Radiation

on Human Health and the Environment

(compiled by Grassroots Environmental Education)

Updated December 2021

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XII. 5G Effects

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XIV. Reports and Articles

I. EFFECTS ON FETUSES

1. **Mobile Phone Use During Pregnancy: Which Association With Fetal Growth?** Boileau, N., et al. *Journal of Gynecology Obstetrics and Human Reproduction* 49(8):101852. (2020). https://pubmed.ncbi.nlm.nih.gov/32623065/

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C. David O. Carpenter, M.D.

I, David O. Carpenter, M.D., under penalty of perjury pursuant to 28 U.S.C. § 1746, hereby make the following declaration in support of a demand that the Federal Food and Drug Administration (FDA) and the Federal Communications Commission (FCC) acknowledge the proven evidence that radiofrequency electromagnetic fields (RF-EMFs) cause harm to humans at intensities that are not so strong as to cause tissue heating, and that current FCC human exposure guidelines are not based on a thorough scientific and health evaluation by the FDA.

I am a public health physician, educated at Harvard College and Harvard Medical School. My current title is Director of the Institute for Health and the Environment at the University at Albany, which is a Collaborating Center of the World Health Organization, and Professor of Environmental Health Sciences within the School of Public Health. Formerly, I was the Dean of the School of Public Health at the University of Albany and the Director of the Wadsworth Center for Laboratories and Research of the New York State Department of Health.

1. I served as the Executive Secretary to the New York State Powerlines Project in the 1980s, a program of research that showed children living in homes with elevated magnetic fields coming from powerlines suffered from an elevated risk of developing leukemia. After this I became the spokesperson on electromagnetic field (EMF) issues for the state during the time of my employment in the Department of Health. I have published several reviews on the subject and have edited two books.
2. I am a Co-Editor and a Contributing Author of the *BioInitiative: A Rationale for a Biologically-based Public Exposure Standard for Electromagnetic Fields (ELF and RF)*, www.bioinitative.org. It documents bioeffects, adverse health effects and public health conclusions about impacts of non-ionizing radiation (electromagnetic fields including extremely-low frequency ELF-EMF and radiofrequency/microwave or RF-EMF fields). The public health chapter from this report was subsequently published in a peer reviewed journal.
3. Additionally, I am a Co-Author of *Setting Prudent Public Health Policy for Electromagnetic Field Exposures*, Reviews on Environmental Health, Volume 23, No 2, 2008, attached as Addendum A-2.
4. In addition, in 2009, I was invited to present to the President's Cancer Panel on the subject of powerline and radiofrequency fields and cancer, and have testified on this issue before the United States House of Representatives.
5. I am an active biomedical researcher, whose major interest is the study of environmental causes of human disease. I have over 460 peer-reviewed publications in the scientific literature, have edited six books and have numerous other publications and book chapters.
6. In sum, I am a public health physician, professor and former public health school Dean with expertise in neurobiology, low-frequency electromagnetic fields bioeffects, and radiofrequency (RF) and microwave (MW) radiation bioeffects and other disease caused by other environmental exposures..
7. Radiofrequency radiation (RFR) is used globally for communication, and is the basis for radio, television, cell phone, smart meters, Wi-Fi, GPS, and all other forms of wireless communication. While there are some natural sources of RFR, most human exposure is man-

made. The total exposure to the human population has increased markedly in the past decade with the advent of Wi-Fi in most homes and businesses, "smart" cities, "smart" utility meters, driverless automobiles, and especially with the global roll-out of the fifth generation (5G) RF, which operates at a higher frequency but has a shorter distance of propagation, requiring close placement of mini-cell towers in front of every 6th to 10th house in urban areas.

8. There is an enormous body of information which documents animal and human health hazards coming from excessive exposure to RF electromagnetic fields. In 2013 the International Agency for Research on Cancer rated RF EMFs as being "possible" human carcinogens based on human epidemiological studies. The major reason that the rating was not stronger was that there was inadequate evidence for cancer in animals. That has subsequently been changed as both the US National Toxicology Program (NTP) and the Ramazzini Institute in Italy have conclusively shown the development of cancer in rodents after exposure to cell phone intensities and lower cell tower intensities. In addition the NTP study showed DNA damage from cell phone frequencies and intensities.

9. In addition to cancer there is a large body of information showing that RF exposures have damaging effects of human sperm, and that excessive exposure alter neurobehavior. In addition there is growing evidence that some people respond to RF exposures, even at relatively low intensities, with development of a syndrome called electrical hypersensitivity (EHS), characterized by "brain fog", headache, fatigue, tinnitus, photophobia and other relatively non-specific symptoms. The evidence supporting these statements are summarized in the Bioinitiative Report and the publication by Belpomme *et al*.

10. In spite of the overwhelming evidence for harm from RF EMFs the federal organizations responsible for protecting US citizens from harm from RF EMFs have not done so. They have based exposure standards on the false belief that RF EMFs are not harmful at intensities that do not cause tissue heating. These agencies ignore thousands of scientific publications demonstrating that that is not true. Because of the official responsibility of these federal agencies, states, local governments, medical professionals, school superintendents and the industry itself have not accepted nor acknowledged the dangers posed by excessive RF EMFs to the citizens of the US.

11. As a result of the failure of the FDA and the FCC to issue health protective exposure standards all residents of the US are exposed to intensities of RF EMF that are harmful to their health. This is most egregious among more vulnerable populations such as children, people with disabilities, minorities, pregnant women and the aged.

12. The cost to the health economy because of the failure of these federal agencies to issue health-protective guidelines is enormous, leading to hospitalization and death from cancer, demands made on infertility clinics, loss of productivity due to reduced cognitive potential, especially in children, and loss of productivity and well as the personal suffering of individuals who have EHS.

13. The FCC states that it does not have health expertise on its staff, and that it depends upon other federal agencies, particularly the FDA, for advice in setting standards. The FDA has failed totally in this regard. The FDA is the federal agency that supported the NTP study, but for reasons beyond comprehension they refuse to accept the results of that study, which conclusively proves that RF-EMFs cause cancer and DNA damage.

14. The immediate action that must be taken is that the FDA must acknowledge the evidence that RF-EMFs cause harmful biological effects after exposure at non-thermal intensities. This then must lead to a revision of the FCC guidelines which currently protect only from tissue heating, and thus do not protect against the development of cancer, infertility, neurobehavioral damage and EHS.
15. This acknowledgement by the FDA and the FCC that non-thermal intensities cause disease must then be reflected in a revision of the 1996 guidelines regulating exposures allowed to the human population coming from all sources of RF-EMFs.

Dated this 5th day of October, 2021.



DR. DAVID O. CARPENTER, M.D.

Director, Institute for Health and the Environment

University at Albany

D. Jenny DeMarco and Mary Bauer — Virginians for Safe Technology

Purpose: We submit this declaration to express our deep concern that state legislators, community leaders, and school administrators are relying on the misleading information and false claims made by the Federal Communications Commission (FCC) and the Food and Drug Administration (FDA) that their recommended guidelines for human exposure to non-ionizing radio frequency radiation (RFR) are ***safe.*** This reliance is resulting in the accelerated over-densification of RFR emitting communication technology being installed throughout the United States, especially near or within classrooms and on school grounds. These wireless installations include small cell Wireless Telecommunications Facilities (WTFs), over-the-air-reception-devices (OTARDs), Internet of Things (IoT), wireless digital devices, Wi-Fi wireless routers and networks and smart meters.

The FDA has no agency policy or process in place to validate claims of safety for any of these wireless technologies. The reliance of government and school officials on a flawed or non-existent FCC/FDA health and safety process creates a public health hazard and endangers the most vulnerable parts of our population, especially children. This is an urgent situation that needs to be immediately remedied by having the FDA, as a lead national health agency, adopt an official policy that is science-based and proven to be biologically safe.

Organization: Virginians for Safe Technology (VA4ST) is a non-partisan grassroots organization formed in 2020 to educate, inform, and advocate for Virginians and US consumers on the 5G+ roll-out and regulation of other wireless technologies we're using and exposed to everyday. VA4ST's mission is to protect current and future Virginians' rights to safe and responsible technology. VA4ST represents Virginians across the state, however, our organization's coalition network and efforts span more than 150 safe technology and health related groups across the United States, Canada, the UK, and other international countries. Through our work, VA4ST has become extremely concerned about the accelerated roll-out of wireless technology and its deep impact on the environment and health of the general population, especially our children.

Background

The FCC and the FDA are fostering a misconception that the FDA has a process and official policy to validate and ratify the current FCC thermal thresholds (also called the Maximum Permissible Exposure limit or MPE limit) for non-ionizing RFR as safe when, in fact, the FDA has no such policy or process in place. By providing this misleading information and promoting these false claims, there is now an imminent health hazard to the public, and specifically to children.

5G+ WTF technologies have been deemed "safe" by the FCC, when in fact **no safety testing** of this technology by the FDA has ever been sponsored or certified as safe to validate its position. Instead, the FCC issued Order 18-133 on September 27, 2018[83] to accelerate the 5G+ wireless deployments putting Virginians at unnecessary risk, especially in the school system. The reliance by our state legislators, school administrators, and local community leaders on these

[83] FCC-18-133A1.pdf

misconceptions and false claims perpetrated by the FCC and FDA is leaving Virginians and other members of the public unprotected and vulnerable to suffering harm due to excessive RFR exposure. RFR was classified as a Group 2B possible human carcinogen by the World Health Organization's International Agency for Research on Cancer (IARC) in 2011.[84,85] According to IARC, "the average exposure from use of the same mobile phone is higher by a factor of two in a child's brain and higher by a factor of 10 in the bone marrow of the skull.[86]

This declaration contends that the FDA and FCC's process is flawed and needs to be remedied by having the FDA adopt a policy for determining RFR Maximum Permissible Exposure (MPE) limits that are actually safe.

The FCC/FDA's Flawed Process

The FCC is not a health agency and does not have the medical competency to make health and safety assessments or decisions, and therefore defers to the FDA. The FDA's duty is to look for potential health impacts from exposure to the existing and evolving wireless technology. For example, the FDA had a responsibility to test millimeter wave frequencies (above 30 GHz) and phased array antennas intended to be a part of the 5G+ infrastructure build-out. The FCC had full knowledge the FDA did not do any of this type of 5G+ testing. The FDA also did not advise the FCC to lower the MPE to the precautionary level as part of employing the precautionary principle.

The FCC's detrimental reliance on the misleading information provided by the FDA resulted in a decision not to lower the thermal thresholds. The FDA has created a misconception that non-ionizing RFR is "safe" without using science-based reasoning to reach this conclusion. Therefore, the FCC's decision-making process for their safety guideline reviews and updates are inherently flawed and makes the thermal thresholds the FDA has provided appear arbitrary.

An Imminent Hazard for School Children

One of the fallouts of these false claims made by the FDA is that they are creating an imminent health hazard for children in Virginia schools by permitting an unlimited amount of Wi-Fi emissions, a possible Group 2B carcinogen, to radiate children in their classrooms all day without advising school officials or parents of the associated risks. The Virginia Department of Education (VDOE) administration needs instruction, training, and viable protocols to immediately implement to mitigate and reduce RFR exposures in the schools. This guidance is urgently needed so VDOE can make classrooms a healthier learning environment for the children. VDOE has a duty of care to physically protect children while they are attending school.

According to a Chief Technology Officer in a Virginia school district, their average classrooms have 25-35 students, and each child is issued a wireless digital devise starting in 3rd grade. The aggregate radiation from 25-35 students working close proximity may easily exceed FCC limits, but since the FDA has created the impression that all non-thermal radiation is safe, no schools

[84] https://www.iarc.who.int/wp-content/uploads/2018/07/pr208_E.pdf
[85] https://monographs.iarc.who.int/agents-classified-by-the-iarc
[86] https://ehtrust.org/science/whoiarc-position-on-wireless-and-health

are measuring, or attempting to reduce, the levels of wireless radiation in their classrooms. This situation is exacerbated by the fact that each student may also have a cell phone, and iPads, smart watches, Smart Boards, routers and access points all add to the total radiation level.

Guidelines created by the VDOE and the Virginia Department of Health (VDH) on best practices for using digital devices in schools[87] fail to even mention the potential health hazard posed to children by exposure to RF radiation. The health professionals within these state agencies are following the lead of the FDA, tragically assuming that the federal agency has fully vetted the science, engaged in a serious investigation of the issue, and concluded there is no risk, as it indicates on its website. That is false. Because the VDH relies on federal recognition of a health safety issue, the VDOE felt they were at liberty to completely omit RF safety measures from their statewide guidelines.

The further result of the FDA's misleading statements is that millions of school children in Virginia will now be exposed to this potential hazard at a critical window of their development. The impact in the short term could be acute chronic bio-effects such as hyperactivity, nose bleeds, headaches and concentration issues; however, the long term effects such as impaired neurological function, reproductive problems or even cancer would not be evident for years.[88]

This current amount of excessive RF exposure is making students less able to concentrate during their school day, amongst suffering other bioeffects that school nurses are not trained to recognize. As a result, school nurses may never associate a child's sudden complaint of bioeffect symptoms to RFR or radiation sickness, which hinders the ability to mitigate potential harms to the children.

Mitigation of radiation in classrooms is not difficult. Some typical RF mitigation measures for classrooms include reducing effective radiated power from routers, reducing beacon frequency, hard-wiring devices and routers, keeping cell phones in airplane mode in designated locker areas during the school day, and limiting the use of the other wireless digital devices by teachers and students. But these measures are not being taken because of FDA inaction.

It's impossible to make a safe learning environment in the school system without the FDA acknowledging the serious potential harm to students from RFR. Lacking a science based public health policy continues to permit this health hazard to be ignored, thereby recklessly endangering children at school. While the FDA's public health policy is being revised, we feel it is the FCC and FDA's urgent responsibility to immediately publish medical disclaimers warning that the official thermal threshold is not necessarily considered safe and that RF mitigations should be strongly advised to reduce RFR as much as possible. This disclaimer should also cite the current thermal standard cannot be relied upon by school administrators and medical personnel for school policy or medical diagnosis decisions, respectively.

Our Virginia legislators believe that they only have a duty to protect the public against thermal hazards, based on the FCC's fostered misconception of what is considered safe and the lack of

[87] https://www.doe.virginia.gov/instruction/virtual_learning/digital-devices-guidelines.docx
[88] https://bioinitiative.org/conclusions, *Evidence that children are more vulnerable.*

any health-based standards promulgated by the FDA. The decision of the FCC not to lower the MPE to protect against bioeffects occurring below the thermal threshold – in which the FCC implied that the decision was supported by the FDA - is clearly endangering our children. Lower threshold guidelines are specifically needed to protect the smaller bodies of children who have "*smaller body mass and rapid physical development, both of which magnify their vulnerability to known carcinogens, including radiation."*[89]

RFR harms occurring from towers placed on school property and federal funding of wireless technology

Counties across the state of Virginia are receiving significant rental fees for the installation of macro towers and WTFs on school rooftops and/or school properties. In just one example, the Chesterfield County school district received more than one million dollars of rental income from the telecom providers in one year.[90] The state also appropriates various funding streams to robustly encourage installation of wireless broadband and Wi-Fi routers, which are in closer proximity to the children's bodies, instead of wired cable connections inside the classrooms. These types of financial sponsorships, one governmental and the other from private industry, are gladly accepted by school administrators to meet the gap in their budgets without any consideration of whether they are endangering the children's physical and mental safety.

Chesterfield County also received nearly four million dollars from the CRRSA (Coronavirus Response and Relief Supplemental Appropriations Act) technology grant.[91] $2.254 Million of that was used mainly to purchase wireless computers and another $540,000 was appropriated for other digital learning technology for their students within the county.[92] Nowhere in the CRRSA grant money budget appropriation for school districts is there any money assigned for RF mitigation measures to reduce the students' exposures to non-ionizing radiation.

The reason Virginia schools are making the decision to spend the CRRSA grant money without any regard for RFR mitigations, such as hardwiring broadband, is due to the lack of public health policy by the FCC/FDA. This is resulting in the notion that children are safe during the school day around unlimited Wi-Fi connections, access nodes, and wireless routers in school classrooms as well as macrotowers and OTARDs on school property.

County school administrators are relying on the misleading information and false claims made by the FCC and FDA that their recommended guidelines for thermal thresholds per *47 CFR1.1310* are deemed as safe. In turn, the school administration and VDOE are led to believe they have no duty of care to protect children from the irreversible biological harm that can occur from RFR below the thermal threshold.

Ultra-hazardous "smart" city design in relationship to schools and children

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[89] https://bioinitiative.org/conclusions, *Evidence that children are more vulnerable*
[90] https://virginiansforsafetech.org/wp-content/uploads/2021/10/FOIA-1million.pdf
[91] https://www2.ed.gov/about/offices/list/ope/crrsaa.html
[92] https://virginiansforsafetech.org/wp-content/uploads/2021/10/money-va4st.pdf, https://virginiansforsafetech.org/wp-content/uploads/2021/10/esser-0001.pdf

Virginia is positioning itself to become a national leader in smart city technology design.[93] It appears boundless NGO 5G+ wireless innovation and an FCC deregulation agenda are considered the *avant garde* recipe to excel and compete economically in Virginia for smart city innovation; but what happens to all these Virginia policies and programs if RFR below the thermal threshold is found to be unsafe? The FCC is known to be captured by the telecom industry[94] and continues to willfully and knowingly encourage rapid deployment of wireless infrastructure, despite the mounting evidence that it is causing significant harm to children.[95]

With respect to the recent court decision ordering the FCC to re-examine its human safety guidelines in the light of new science, lead plaintiff Environmental Health Trust commented, "The landmark case centers around the FCC's decision not to update its 1996 exposure limits for wireless radiation from cell phones, cell towers, and wireless devices. Environmental Health Trust experts have long argued that the FCC's outdated limits place Americans everywhere at risk, especially in the era of 5G."[96]

This harm is additionally compounded by the telecoms' new OTARD pre-emption rule which is being forced onto communities across the United States. The new FCC rule takes over the municipal local siting authority for OTARD wireless antennas, which does not offer opt-outs or require public notice or neighbors' consent. Allowing placement of OTARDs on the top of school buildings will worsen the already harmful level of RFR exposure to children.

Smart cities are predicated on growing innovative impact markets using unlimited wireless and Wi-Fi capabilities like educational technology (EdTech) in schools. In addition to excessive RFR exposure, EdTech will exploit information markets to expand the IoT build-out making schools part of a wireless mesh network. This is all at the expense of children's safety while they are using school-issued wireless devices.

Smart city designs are marketed as inherently safe. This misconception fostered by the FCC/FDA becomes a contagion for government officials at every level to accept and promote widespread 5G+ installations to launch further innovation. With decision makers regarding the FCC power density thermal threshold as safe, there is no limit as to how many towers, sensors and wireless nodes they will allow. Instead of government agencies proceeding with caution based on the mounting evidence of wireless harm, they're still permitting smart city NGOs to financially capitalize off of the misleading information and false claims made by FCC/FDA with complete disregard of remedy or recourse to protect the children.

A Disclaimer Is Required

The Virginia Department of Health is leading schools, municipalities, and their respective medical advisors to believe the FCC/FDA official thermal standard is safe, science-based, and can be relied upon by physicians in providing medical advice. VA4ST's position is that the

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[93] www.cit.org
[94] https://ethics.harvard.edu/files/center-for-ethics/files/capturedagency_alster.pdf
[95] https://ehtrust.org/eht-takes-the-fcc-to-court
[96] 20-1025-1910111.pdf (uscourts.gov), *EHT/CHD v. FCC No, 20-1025 consolidated with 20-1138, DC Circuit Court of Appeals, decided August 13, 2021*

FCC/FDA should consider the issuance of an official disclaimer to advise against such reliance in order to protect public health This disclaimer would alert medical professionals inside schools and work places to provide some level of protection while the FCC guidelines are under review.

The official disclaimer should also encourage applying the ALARA (As Low As Reasonably Achievable) precautionary principle for RFR risk mitigation. Collaborative for High Performance Schools (CHPS), which focuses on changing the design of schools to maximize the health of students, educators, and staff[97], states, "In order to reduce the potential for adverse effects due to these exposures, it is important in school environments with children to apply the precautionary principle ALARA by providing low-EMF classrooms, specifying low-EMF IT equipment and wired Internet access network technology, and establishing low-EMF user practices."[98] Without RFR mitigation, common bioeffects experienced in the classroom include headaches, dizziness, nausea, loss of concentration, skin burning, nosebleeds, heart palpitations, arrhythmia, blurry vision, cancer, loss of capacity to work or socialize and many more.[99,100,101]

Remedies for School Children

When a new FDA policy for a revised thermal threshold is implemented, the school administrators will be able to rely on the FCC and FDA's recommended guidelines in good faith.

In the meantime, four interim remedies for relief are recommended to protect the children:

1) The FCC and FDA immediately publish medical disclaimers warning that the official thermal threshold is not necessarily considered safe and should not be relied upon;
2) Implement more protective policies to mitigate and reduce RFR exposures according to the ALARA precautionary principle for schools and buildings;
3) Initiate protocols to monitor cumulative power densities in schools and residential neighborhoods by conducting municipal RF surveys and using RF mitigation methods to reduce power levels to the minimum necessary to carry out the desired communication per *47 USC 324;*
4) Prepare an RF risk assessment for Virginia addressing what happens to state policies, programs, and smart city design if the current RFR thermal threshold is found to be unsafe by the FDA. The discontinuance of siting cell or broadband towers on school property should be scrutinized in the risk assessment in order to remove this ultra hazardous harm to children, avoid children's cancer clusters in schools, and establish low-EMF user practices for wireless devices.

The urgent problem of endangering public safety needs to be remedied immediately. It is VA4ST's position that there needs to be a new MPE limit that is significantly lower to be more

[97] https://chps.net/
[98] US-CHPS__Criteria_2014_2016 update_170706.pdf, *Low EMF Criteria*, pp. 108-114, Sections EQ 15.1-15.2
[99] https://ehtrust.org/?s=Wi-Fi
[100] https://ehtrust.org/episode-13-citizen-testimony-of-5g-effects-and-Wi-Fi-in-schools
[101] https://youtu.be/kmcAXZ-o1K4

protective against health bioeffects as cited in the Bioinitiative Report.[102] In order to do this, new rule making must be created within the FDA, which ensures there is a system of checks and balances between them and the FCC to guarantee accurate science-based conclusory decisions are made. It is only when this happens that the FCC will actually be fulfilling its mission for which it was created, to promote the "safety of life and property" *per 47 USC 151.*[103]

Conclusion

In 2019, the FCC should have had good cause to lower the MPE limits for the RFR emissions from wireless infrastructure per *47 CFR 1.1310*. This assertion is based on the FCC public comment record created in response to their Notice of Inquiry on this topic and numerous public appeals from individuals and private organizations. Consumers, employers, community leaders, schools and parents relied on the FCC to update wireless safety guidelines when necessary and expected this would happen prior to the deployment of the 5G+ infrastructure.

The three areas negatively effecting children right now due to the refusal of FCC/FDA to revise the MPE and their far reaching propagation of misleading information are:

1) Legislators deeming unlimited amounts of RFR in the classroom as safe, erroneously dismissing RFR bioeffects from the health and safety guidelines for wireless digital devices mandated via HB 817;
2) RFR from cell towers on rooftops and school property, and lack of classroom RF mitigation from all wireless devices; and
3) The ultra-hazardous smart city designs that further compound the children's RFR exposures through connecting the school to an IoT mesh, installing OTARDS, and permitting unlimited amounts of wireless radiation, which is a possible Group 2B carcinogen.

All of these harms are permitted to accumulate on school property making it impossible for the children to have a healthy learning environment.

The FDA fostered the misconception that it had a federal policy used in their decision-making process. The FCC also did not question, nor did it think it had a duty to question, the veracity of how the FDA reached its conclusions. The FCC's process is flawed and fails to protect consumers from the unnecessary biological harms, and the unrevised MPE provided by the FDA for the 5G+ technology platform is creating grave danger to the public, and an imminent hazard to our children. Until the revised MPE is established, the four VA4ST recommended remedies should be implemented immediately to intervene on behalf of the children.

We declare under penalty of perjury that the foregoing is true and correct, to our best knowledge.

/s/Jenny DeMarco

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[102] https://bioinitiative.org/table-of-contents/
[103] https://www.govinfo.gov/content/pkg/USCODE-2015-title47/pdf/USCODE-2015-title47-chap5-subchapI-sec151.pdf

Jenny DeMarco

/s/Mary Bauer
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E. Consumers for Safe Cell Phones — Cynthia Franklin

I, Cynthia Franklin, hereby state, under penalty of perjury, that the following information is true to my knowledge, information, and belief:

I am the President of Consumers for Safe Cell Phones ("CSCP"), a 501(c)(3) non-profit organization. As the group's name suggests, CSCP educates consumers as to ways to reduce microwave radio frequency radiation (RFR) exposure from cell phones, tablets, WIFI routers and other wireless devices. CSCP's work centers on the fact that cell phones and associated cellular infrastructure emit non-ionizing RFR that has been shown by thousands of peer-reviewed studies to pose biological risks, including cancer, at or below the FCC's exposure limits.

CSCP has approximately 5,800 social media followers who regularly receive information and advice from CSCP. The group also communicates with the public through webinars and online informational articles. CSCP provides updated information to its followers on, among other matters, the science and research being conducted on RFR and potential biological impacts. In offering these services, CSCP does not have the resources to conduct its own scientific studies, but instead reviews information from publicly available sources, including the FDA.

One issue CSCP is focused on is the federal regulatory RFR exposure compliance testing procedures for approving the marketing and sale of cell phones. Cell phone manufacturers are not required to test their products directly against the body even though it is well known that consumers regularly wear and use their cell phones in shirt and pants pockets and bras.

In 2012, the U.S. Government Accountability Office (GAO) published the report, **GAO-12771** "Telecommunications: Exposure and Testing Requirements for Mobile Phones Should Be

Reassessed" in which it was concluded that:

"By not formally reassessing its current limit, FCC cannot ensure it is using a limit that reflects the latest research on RF energy exposure. FCC has also not reassessed its testing requirements to ensure that they identify the maximum RF energy exposure a user could experience. ***Some consumers may use mobile phones against the body, which FCC does not currently test, and could result in RF energy exposure higher than the FCC limit."***

Cell phone manufacturers are substantially underestimating actual RFR exposure levels when demonstrating compliance with the FCC's RFR exposure limits. The 2012 GAO report states that federal testing procedures for wireless devices allow consumers to be exposed to RFR levels "higher than the FCC limit."

The FDA claims on its website that it provides guidance to "federal agencies on techniques and programs for testing and evaluating electronic product radiation"[104]

"Under the law, the FDA is responsible for, among other things: Consulting with other federal agencies on techniques and programs for testing and evaluating electronic product radiation. For example, the FDA provides scientific input and expertise to the Federal Communications

104 https://www.fda.gov/radiation-emitting-products/home-business-and-entertainment-products/cell-phones

Commission (FCC). The FCC sets limits on the emissions of radio frequency energy by cell phones and similar wireless products."

On August 13, 2021, the DC Circuit Court of Appeals in its ruling in *Environmental Health Trust v The Federal Communications Commission* (*EHT v FCC*) found:

*"..the Commission's [December 4th, 2019] order arbitrary and capricious in its failure to respond to record evidence that exposure to RF radiation at levels below the Commission's current [thermal] limits may cause negative health effects unrelated to cancer....**That failure undermines the Commission's conclusions regarding the adequacy of its testing procedures, particularly as they relate to children."***

An even more alarming statement from the EHT v FCC ruling is that "***the factual premise - the non-existence of non-thermal biological effects — underlying the current RF guidelines may no longer be accurate***."

Thousands of studies (and even more have been published since the body of evidence submitted into the record in EHT v FCC) have documented serious biological harm from exposure to levels of RFR far below those that could possibly be powerful enough to cause heating of tissue. This means that the current FCC testing guidelines, based solely upon protection from heating, are thousands, possibly even hundreds of thousands of times more lenient than limits that would be necessary to protect the public from non-thermal exposures.

As the Court found in EHT v FCC, the FCC's 25 year old exposure limits are based upon an outdated assumption that the only harm from RFR is that of heating – and the implications of this regulatory failure are a major public health threat, "***particularly as they relate for children***."

It is unclear why the FDA believes that the current RFR limits, which were adopted almost 25 years ago, still protect us even though patterns of use and the newer, more biologically harmful pulsed RFR exposures have changed significantly since 1996, with the amount of radiation we are exposed to on a daily basis increasing substantially.

The FDA has left all of us in the dark on how and why it decided that current research on biological risks from "non thermal" levels of RFR exposure does not warrant a change in federal RFR standards or cellphone testing procedures. The FDA has ignored all the scientific research documenting biological harm at low exposure levels far below those "heating-only" exposure limits currently being used by FCC in their testing protocols.

With seemingly little concern for the health and safety of the public, the FDA presents confusing and conflicting advice on its website and in public statements, assuring everyone that cell phones are safe even if used directly against the body while receiving RFR levels in excess of the FCC's limits….***even with unlimited use by children and pregnant women.***

This absolute regulatory failure by the FDA means that CSCP now has to divert resources toward efforts to counter the disinformation being disseminated by the FDA website, as well as from biased and unfounded opinion reports and misleading public statements issued by Jeffrey Shuren, director of FDA's Center for Devices and Radiological Health.

This means CSCP is not able to supplement the information that it provides to its followers with what should be the most comprehensive assessment of RFR scientific research to date by the FDA, the agency charged with protecting the public from RFR exposures.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on December 12, 2021



Cynthia Franklin, President

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Declaration in Support of the Petition for Rulemaking to the Secretary of the U.S. Department of Health and Human Services (HHS) by Americans for Responsible Technology (ART) et al. under the Imminent Hazard Rules Requesting an Immediate Clarification of FDA Official Policy on RFR Safety.

November 16, 2021

My name is Camilla R. G. Rees and I reside at 32 Water Street, Stonington, CT 06378.

I have been significantly injured in four different settings from exposures to wireless radiation (RFR), twice in residential settings and twice in office environments, and mildly impacted in several other situations. It is because of these experiences that I have come to be a researcher, educator and consultant on the biological and health risks of wireless technologies, and an advocate for safer, technologically superior, hard-wired Internet access via fiber or cable. These experiences are also the reason why today I live in a low-density, non-urban, non-commercial environment to avoid the acute, chronic and cumulative effects of 24/7 Radio Frequency Radiation (RFR).

I conduct my work through the National Institute for Science, Law and Public Policy (NISLAPP) in Washington, D.C., where as a Senior Policy Advisor I have led its EMF Education and Advocacy Project for over a decade. In collaboration with many other pioneers in this field of education and advocacy, I have sought to raise awareness of the risks and alternatives to wireless technology. At NISLAPP, we have initiated, directed and overseen policy papers on electromagnetic fields, the smart grid and telecommunications, including the landmark papers, *"Getting Smarter About the Smart Grid"* and *"Re-Inventing Wires: The Future of Landlines and Networks"*. "*Re-Inventing Wires"* explains, from technological and other perspectives, why hard-wired, fiber optics to the premises (FTTP) is superior to wireless Internet access networks, and "antenna densification", and is clearly the safer alternative to 5G.

NISLAPP has organized dozens of programs on this subject around the country, including pioneering early programs on wireless risks to children, fiber alternatives to wireless, on the benefits of hard-wired utility meters over wireless, and on tech overuse and addiction, as well as presenting five programs featuring international experts on RFR risk at the largest public affairs forum in the U.S., the Commonwealth Club of California. Also, I authored "The Wireless Elephant in the Room" and co-authored, with Dr. Magda Havas of Trent University, Canada, "Public Health SOS: The Shadow Side of the Wireless Revolution".

For thirteen years, I have conducted in-depth interviews with leading international scientists on the biological and health risks of electromagnetic fields; was co-author of a published paper on wireless radiation's impact on the heart; and have created websites for the public, ElectromagneticHealth.org and Manhattan Neighbors for Safer Telecommunications, as

well as a Facebook group aimed at parents, teachers and school administrators, focused on RFR risks to children, Campaign for Radiation Free Schools. We have also produced hundreds of videos featuring EMF experts, now circulating in 163 countries, including the International EMF Scientist Appeal to the United Nations (2015). I have been a long-time source for the media, and a source of support for new activist groups, physicians, major online consumer health newsletters, government officials, schools, employers, lawyers, and for scientists themselves, since 2008. I also serve on the Advisory Board of the Building Biology Institute, a leading educator of architects, builders and environmental consultants on environmental risks.

At the core of all of my work has been explaining: **1)** the inadequacy of the FCC's RFR thermal-only exposure guidelines to protect public health; **2)** that there has been no pre-market safety testing, or post-market surveillance, of health effects of wireless technologies and infrastructure; and **3)** that our government, including the FCC and FDA, has turned a blind eye to well-established RFR risks, and enabled harmful, RFR-emitting technologies to become pervasive throughout our lives, fueling growth of a trillion dollar, and now extremely powerful, industry that is making people sick.

In 2018, I was awarded the American Academy of Environmental Medicine's most prestigious award for outstanding contribution to Environmental Medicine, the Jonathan Forman Award, and the "2018 Public Health Award" from the Global Foundation for Integrative Medicines.



Most recently, in collaboration with the New York 501(c)(3), Wired Broadband, Inc., and other groups, NISLAPP and Manhattan Neighbors for Safer Telecommunications are opposing the 'Jumbo 5G Antennas' being proposed for several neighborhoods in New York City. Massive radiating antennas (see photo at left) are being proposed for residential city streets, concentrated initially in 10 disadvantaged neighborhoods, and are being justified by the misleading claim that these antennas will close the 'digital divide' (which they will not).



Publicly available material on the proposed 'Jumbo' 5G antennas indicate there will be no more than one Jumbo 5G Antenna per block in these neighborhoods, but the materials also say any limitation (such as this) may be reversed by the New York City Commissioner in her sole discretion. No detail has to date been provided about the power, frequencies, and other technical specifications of the 'Jumbo' antennas, except drawings showing that each pole will contain not one, but many radiating antennas on multiple tiers (see drawing on the right). Each antenna within the structure would, alone, pose a serious health risk to those nearby. There is no provision we know of for monitoring the RF emissions of these Jumbo 5G Antenna arrays, or for determining whether the aggregate exposures of the initial 4,000 antenna arrays planned for these disadvantaged neighborhoods would be in compliance with FCC guidelines. The proposed antennas present enormous health and environmental risks to New York City residents. It is frankly egregious that they are being clustered in disadvantaged areas, leading to

the possibility these communities are being used as guinea pigs to test for the likely harms these new giant-sized antennas will cause to nearby residents.

As we often find, it appears City officials have been misled into believing FCC exposure guidelines are protective, and have also been told that the FCC exposure guidelines have the support of the FDA, despite the fact that the FDA does not formally evaluate RF-emitting telecom devices and infrastructure, like they do with medical devices. Repeatedly, government officials across the country, as well as employers, schools, churches and property owners, are believing these false claims, and thus ignorantly jeopardizing people's health from small and macro towers on their premises, when safer Internet access options exist and could have been chosen over the wireless options.

Local officials are being told new 5G antennas are 'faster' than older wireless antennas, but not told about the safer, higher performance, and far superior, hard-wired technology option, Fiber to the Premises (FTTP). Fiber to the premises will always be faster than any generation of wireless, as wireless communications is a shared medium used by many on-line users at once. This critical fact is not mentioned by champions of wireless in the interest of selling communities on an inferior technology that will rapidly become obsolete. Wireless is not enduring technology, like fiber, which is paid for once and that former FCC Chairman, Tom Wheeler calls 'future-proof'.

Local officials have likely also not been told about the full range of advantages fiber offers over wireless, beyond speed, each one of which is a compelling reason on its own to choose fiber over wireless. See chart below about the advantages of fiber over wireless.

'Fiber To The Premises' - Advantages Over Wireless

- faster transmission speed
- reliability of Internet access
- neighborhood aesthetics
- national cybersecurity
- preserves human health from ambient radiation
- neutrality of internet access
- digital equity
- personal privacy
- protects the biological ecosystem
- safety & fire prevention
- resiliency in extreme weather events
- reduces climate impacts from this sector
- supports equality in high-speed internet access
- lowers energy usage and improves energy efficiency
- supports health in patients with chronic illnesses
- preserves hard-earned equity in peoples' homes
- quality of voice communications
- supports physical and cognitive health in the elderly
- supports children's health
- makes enduring tech choices not prone to rapid and costly obsolescence
- preserves the sanctity of neighborhoods with revered churches, temples, mosques, and landmark and historic buildings
- protects parks as a place of biological peace and refuge
- value for the money for all users

Without sharing the truth about the full range of Internet access options, the deception about both the adequacy of wireless to meet growing needs, and the inadequacy of regulatory oversight, American communities, businesses and individuals have been duped into believing an inferior technology is superior, and that wireless radiation does not present health risks, when nothing could be further than the truth.

Worth mentioning is the history of the LinkNYC free wireless access program in New York City, now expanding into the Link5G program with the 'Jumbo' antennas in the photo above. Originally, the LinkNYC business model was expected to rely solely on advertising. That

business model failed, as evidently there were insufficient advertisers wanting to advertise on the RFR-radiating kiosks being placed around the City. By 2019, LinkNYC faced bankruptcy. Then in 2021, the City introduced a "mixed financial model" comprised of "advertising and 5G cellular services revenue" so that the expansion of the LinkNYC wireless network throughout the city could become viable. Since LinkNYC's mission is to offer free wireless access, it appears the wireless companies are underwriting part of the cost of the NYC wireless network, a compromised position for the City. The City is essentially in a long-term partnership with the telecom industry enabling widespread, harmful RFR radiation to blanket peoples' lives, all while the adequacy of the FCC safety guidelines have long been called into question.

It is telling to look back to an early U.S. government funded meta-study on RFR effects published by the U.S. Naval Medical Research Institute in 1971, by Zorach Glaser, PhD, "Reported Biological Phenomena (Effects) and Clinical Manifestations Attributed to Microwave and Radio-Frequency Radiation". In this review of global scientific studies on the effects of RFR--a half a century ago--Dr. Glaser found 2,308 studies that linked RFR and other forms of EMF with 132 different biological effects, symptoms and diseases, including:

- Central Nervous System Effects
- Autonomic Nervous System Effects
- Genetic and Chromosomal Changes
- Psychological Disorders
- Vascular Disorders
- Blood Disorders
- Enzyme and other Biochemical Changes
- Metabolic Disorders
- Endocrine Gland Changes
- Changes in Physiological Function

Thirty six years later, a 1,540-page meta-study, published in 2007, updated in 2012, co-authored by a group of 29 international scientists, the BioInitiative Report, cited more than 1,800 scientific studies that associate low-intensity, non-thermal radiation exposures from wireless technologies and other sources of electromagnetic radiation (EMR) with dozens of diseases and biological effects in humans, including:

- Neurological Effects
- Oxidative Damage
- Effects on Immune Function
- Stress Response
- Brain Cancer
- Acoustic Neuromas & Other Brain Tumors
- Blood Brain Barrier Damage
- Breast Cancer Promotion
- Biochemical Imbalances
- Fertility & Reproductive Effects
- Childhood Cancers (leukemia)
- Genotoxic Effects
- Fetal & Neonatal Effects

These are just two examples of meta reviews of the scientific literature, but there are many additional meta reviews, as well as decades of published studies showing risks from RFR. These include rigorous studies documenting RFR effects conducted by the U.S. Government.

A recent monograph, "The Largest Unethical Medical Experiment In Human History" (2020) by Ronald N. Kostoff, Research Affiliate, School of Public Policy, Georgia Institute of

Technology, identifies a wide spectrum of adverse effects of wireless radiation as reported in the premier biomedical literature over seven decades.

In the case of the Jumbo 5G antennas being proposed for New York City, it is unacceptable that the truth about the technological choices, and their advantages and risks, is not being transparently presented to City officials. Very dangerous wireless densification is being carried out and further planned under the banner of 'closing the digital divide' by officials who have made poor decisions. Poor decisions have been made as a result of having been misled about the adequacy of the FCC RFR exposure guidelines--misled by the FCC, the FDA, and the telecommunications industry itself wanting to sell its products and services.

Over time, many individuals and groups have attempted to encourage government officials to focus on wireless radiation risks, but a blind eye has been turned to the topic by politicians, many of whom accept contributions from the telecom industry. Meanwhile, since 1990, millions of U.S. citizens having been harmed by this radiation, and are increasingly being harmed, with more and more radiating devices and infrastructure continually going up all around. Overall health in the U.S. has substantially declined since 1990 and there has been a dramatic, yet underrecognized, rise in chronic disease. Acute symptoms from wireless exposures, like sleep issues, mood swings, irritability, joint pain, brain fog, memory issues and poor learning capacity are plaguing our nation. The fastest-growing diseases have been associated with biological changes known to be caused by wireless radiation. And, importantly, DNA damage occurring remains a wild card over the long-term for our species as well as for the ecosystem.

Our government appears to have been 'captured' by the telecom industry, believing its false claims about safety without looking to the scientific literature itself, or to the tremendous amount of evidence for risk from RFR well documented in U.S. government studies. Many departments and agencies of the federal government have documented RFR risks going back decades, including the U.S. Naval Medical Research Institute, EPA, U.S. Air Force, U.S. Department of the Army, NIH, NASA, Department of Interior and the Defense Intelligence Agency (See "Wireless Radiation - Is the U.S. Government Ignoring its Own Evidence for Risk?").

The crux of the issue causing so much suffering and driving health costs is that FCC exposure guidelines for RFR are wholly inadequate, do not reflect the science, and are being used across the country, with FDA complicity, to mislead about the antennas' safety.

The RFR exposure guidelines aim only to protect against thermal effects of the radiation. They do not address the well-established 'non-thermal' effects, including biologically disruptive frequencies, the peaks and pulsing, and increasingly complex signaling characteristics.

Importantly, the FCC guidelines have misled manufacturers of wireless devices and equipment, infrastructure installers, service providers, retailers, real estate owners, building managers and the public into believing RFR radiation is safe if in compliance with the FCC's thermal guidelines. Businesses and property owners have been able to take cover from liability in relying on these government sanctioned FCC guidelines. The public naively believes antennas

outside their windows (as in the case of the photo below from New York City) must be safe if they have been permitted or otherwise approved. I certainly made that assumption--and most others, unfortunately, do, too.



Citizens have placed faith in the permitting process and government oversight, only to learn proper procedures have not been followed to protect public health. Even people suffering terrible illnesses who are aware there are antennas outside their window, often do not think to connect the antennas with their health challenges, because they make the false assumption that our government would not have permitted the antennas were there actually science showing RFR radiation is not safe.

This situation has been going on far too long and must stop. The truth about the FCC's inadequate exposure guidelines, and the FDA's hollow endorsement of the guidelines, must be known.

Here is one example of how people are being misled by the FCC's exposure guidelines and by the FDA's agreement on those guidelines. In a Manhattan co-op, where antennas were proposed to be placed on a water tower on the building's roof, I advised the Co-Op's Board of Directors not to allow the antennas. I read, and formally rebutted, Pinnacle Telecom Group's report to the Board of Directors and attended the Board meeting, along with representatives of Pinnacle and Verizon. I heard Pinnacle's misleading presentation that the FCC and FDA had certified there was no RFR risk from the antennas. Pinnacle's report to the Board of Directors stated the following:

> *"Note that both the FCC and the Food and Drug Administration (FDA) have certified that continuous human exposure at RF levels up to and including the FCC MPE [i.e. maximum permitted] limit is considered to present no RF health risk. Moreover, the FCC MPE limit has been designed to provide appropriate protection for humans of either sex, all ages, all sizes, and under all conditions."*

This is false. Were it not for my quickly commandeering the meeting, telling the Board Members that what they were hearing was false, and then delivering a scientific presentation on the matter, the proposed antennas would have been approved, and then impacted the health of people on the higher floors of this building, as well as those living in many neighboring buildings.

The media also regularly misleads about RFR risk. Reference to the FDA deeming the radiation 'harmless' is found in the recent *Wall Street Journal* article, dated November 13, 2021, "*Are AirPods Out? Why Cool Kids Are Wearing Wired Headphones*". The message that the FDA currently deems the radiation "to be harmless to humans" presumably reached the Wall Street Journal's 3.4 million circulation.

"...Biz Sherbert, a cultural specialist at youth culture-focused creative agency the Digital Fairy, narrated a TikTok video on corded headphones. "It seems that people are very concerned about the potential Bluetooth radiation that comes from AirPods," she concluded based on the video's comments. (While Bluetooth headphones do emit non-ionizing radiation, the Food and Drug Administration currently deems it to be harmless to humans.)"

It is time for the FCC and FDA to come into integrity and make clear the limited nature of their investigation into RFR risks, acknowledging that they, too, have become captured by the telecom industry. We must stop suppressing the truth about risks of RFR radiation. (See Harvard University's Edmond J. Safra report, "How the Federal Communications Commission is Dominated by the Industries it Presumably Regulates".)

If the FCC says it relies on the safety expertise of the FDA, and states it considered opinions of the FDA in setting its safety guidelines, but the FDA officially does not review the safety of radiation emitting telecommunications technologies, as it does with new drugs or medical devices, then where is the responsibility for assuring safety actually domiciled? Has responsibility for ascertaining safety potentially fallen through the cracks between these two agencies, resulting in a situation where proper protection of human, animal and environmental health interests is not taking place? And on what basis does the FCC, a communications commission charged with regulating interstate and international communications, and not a health agency, have authority to ascertain safety and establish RFR safety guidelines in the first place?

It is essential that clarity be obtained regarding FCC and FDA responsibility for:

1) Setting protective, biologically-based exposure guidelines for RFR;

2) Clarifying the pros and cons of different telecommunications technologies (fiber, wireless, cable, advanced copper, etc.) so that the public, government officials and businesses can make fully informed choices;

3) Conducting pre-market safety testing of wireless devices and wireless infrastructure prior to release onto the market;

4) Conducting post-market monitoring of RFR exposures from each antenna, and the aggregate antennas in a neighborhood, to assure compliance with FCC guidelines;

5) Conducting short- and long-term post-market health monitoring of individuals living in dense wireless environments;

6) Conducting short- and long-term post-market health monitoring of natural environments exposed to RFR;

7) Educating the public about health risks associated with RFR exposures and how they might be able to be reduced.

The American people must be assured that regulators' top priority is public health and safety.

Additional steps that can restore trust that has been lost due to lack of clarity on responsibility between the FCC and FDA and failure of government to protect public health can be found in "33 Recommendations for the FCC, FDA and Congress".

Respectfully submitted in support of the Petition for Rulemaking to the Secretary of the U.S. Department of Health and Human Services by Americans for Responsible Technology et al.



Camilla R. G. Rees

G. StopSmartMeters.org — Joshua Hart

My name is Joshua Hart, and I reside in Plumas County, CA. I am Executive Director and Founder of Stop Smart Meters![105], an organization fighting the forced deployment of utility meters that harm health, violate civil liberties and endanger public safety. I have worked in the energy industry, as an urban and transportation planner, environmental advocate, and freelance journalist. I obtained my MSc in Transport Planning in the UK at University of West England, Bristol in 2008 I have worked for a number of professional health and environmental advocacy organizations, including the Rails-to-Trails Conservancy[106], San Francisco Bicycle Coalition[107] and Living Streets[108]. Since 2010, I have been director of California-based Stop Smart Meters![109] I have studied the relevant literature regarding aspects of the current "smart grid" deployment including studies on RF health and environmental impacts.

I am submitting this document in support of the petitioners and on behalf of potentially millions of smart meter victims suffering from a wide range of health effects from mild to severely debilitating as a result of their exposure to so-called "smart" utility meters. Claims by manufacturers and utility companies that these meters meet or exceed all FCC safety guidelines for radiofrequency (RF) radiation may be technically true, but they are based on a completely false premise: that our nation's primary health agency, the Food and Drug Administration (FDA) has actually established science-based standards on which those FCC guidelines are based. This creates an untenable and life-threatening situation for individuals whose lives have been upended because the FDA has not only failed to establish health-based standards, but has allowed the myth that it has created such standards to persist.

Many smart meter victims became sick before they knew a smart meter had been installed either on their home or in their neighborhood. Many didn't even know what a smart meter was before they were injured. Some of these people have become so sensitized to RF that they have been forced from their homes because of proximity to area meters and other wireless infrastructure or have been forced to leave their jobs because of RF in the workplace. For many people who have become sensitized to RF, they have remained so even after the removal of the smart meter. It is astoundingly clear that smart meters can cause illness and that lasting sensitivity to RF can result from brief intense exposure and/or chronic exposure over time.

This assertion is based on the many individual testimonials we have received, thousands of peer-reviewed studies on RFR bio-effects, as well as personal experience being injured and suffering lasting effects from a bank of PG&E's "smart" meters in 2011.[110] I can personally attest to the access barriers that such an injury and sensitivity result in, having had difficulty finding housing, obtaining safe wired internet access, and accessing government and social services which are increasingly online.

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[105] http://stopsmartmeters.org
[106] https://www.railstotrails.org/
[107] https://sfbike.org/
[108] https://www.livingstreets.org.uk/
[109] http://stopsmartmeters.org
[110] https://stopsmartmeters.org/2011/05/25/berkeley-emf-analysis-and-rip-shrub/

I do not have any reason to doubt the veracity of those affected, and do not believe in the conspiracy theory that thousands of people would make up virtually identical health complaints. Those who had no knowledge of the presence of a smart meter, but still suffered the same impacts, belie that argument.

It is clear that the FCC's RF exposure guidelines, based on the thermal standard, is outdated and inadequate to protect public safety. People suffering the results of rapidly increasing and under-regulated wireless emissions feel that their voices are not being heard and that the government is allied with the utility and telecommunications industries even in the face of compelling scientific evidence that they are causing widespread harm.

Smart Meter Fires, Explosions and Electrical Problems

Thousands of fires, explosions, and electrical problems related to smart meters have been reported over the past 6-7 years. We have reported on a number of such fires and electrical faults on StopSmartMeters.org. A series of 26 smart meter fires forced Peco Energy in Pennsylvania to halt their smart meter deployment in August 2012. Hundreds of thousands of smart meters have been recalled, across several US states and Canadian provinces due to fire safety problems.

SmartMeterHelp.com

Stop Smart Meters! has collected complaints about smart meters related to RF health impacts, fires, overcharging, and other issues since October 2011. We worked with a web professional who volunteered to design and manage the website http://smartmeterhelp.com. Results of online surveys came in from all over the country, were entered into a SQL database, and complaints from California periodically forwarded to Governor Jerry Brown, the customer's utility company, the California Public Utilities Commission, and the California Department of Public Health, who set up a special e-mail address to receive smart meter health complaints. More than 1400 written complaints in total were received. The attached declarations (attached as Appendix B) were received in response to an email request to those complainants who entered an electronic complaint at smartmeterhelp.com. I have reviewed each of the attached declarations. They are all true and accurate copies of the declarations received by Stop Smart Meters!

Given the strong peer-reviewed science now linking wireless radiation to disease, and given my own firsthand experience, a policy decision to blanket entire communities with smart meters and associated infrastructure poses a serious threat to public health and safety.

Particularly relevant are the results of a recent study from the National Toxicology Program[111] which found significant levels of DNA damage, and brain and heart cancer in rodents exposed to ambient RF— of a similar type to that emitted by wireless utility smart meters. The fact that sub-thermal levels of microwaves are linked to biological changes has been well demonstrated. Nora Volkow, Director of the National Institute of Drug Abuse at the National Institutes of Health, found that cell phone radiation caused an excitation of neurons in the brain, leading to increased glucose metabolism.[112] In addition, a 2014 peer-reviewed Australian

[111] http://biorxiv.org/content/biorxiv/early/2016/05/26/055699.full.pdf
[112] http://well.blogs.nytimes.com/2011/02/22/cellphone-use-tied-to-changes-in-brain-activity/

study[113] linked smart meter radiation to a series of symptoms, the most commonly reported being headaches, insomnia, and tinnitus. This is consistent with the smart meter health complaints we have received. A smart meter, unlike a cell phone, cannot be switched off without terminating electrical service in the home. Smart meter companies have revealed that their products emit up to 190,000 microwave pulses/ day[114] and this is not something that customers can easily avoid particularly in areas without formal opt out policies.[115]

Smart grid companies, utilities and smart meter deployment contractors have continually violated even weak FCC oversight laws. For example, PG&E smart meters are installed in violation of the FCC's Grant of Equipment Authorization, in three respects: co-location, lack of professional installation, and lack of 20cm mandated distance from all persons.[116] Rural wi-fi companies like Digital Path place microwave transmitters with the high-powered beams crossing sidewalks at head level (as along school walking routes in Portola, CA) even though FCC regulations require that antennas this powerful must be located at least 10m above the ground for safety[117].

Utilities and regulators have been aware for many years that smart meter microwave pulses are harmful, cause injury, and both cause and exacerbate electrical sensitivities. In September of 2010, Michael Peevey, who was at the time president of the California Public Utilities Commission, admitted to PG&E executives that he believed that people do in fact feel pain from smart meter microwave signals.[118]

"There really are people who feel pain, etc., related to EMF, etc., and rather than have them become hysterical, etc., I would quietly leave them alone. Kick it around…"

Despite this, the public have been charged to keep smart meters off their homes for nearly ten years, and many living in multi-unit housing or near smart grid antennas have had no choice but to be exposed. Many of those resisting installation, including in PG&E territory, have been bullied, threatened, physically assaulted and their property damaged.[119]

In areas of RF safety, privacy, fair and transparent billing practices, cybersecurity, efficiency and fire safety, basic electromechanical analog meters remain superior. Stop Smart Meters! continues to offer assistance to members of the public who seek to prevent installation, have smart meters removed from their property, or organize to promote awareness of these problems in their communities. We provide a toll-free hotline, website, an online store providing EMF meters and EMF-related technical assistance, we continue to testify at public hearings and meetings. We are seeking to have sub-thermal RF human and environmental impact studies

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[113] Reference: Altern Ther Health Med. 2014; 20(6): pp 28-39.
Author: Federica Lamech, MBBS, a medical practitioner in Melbourne, Victoria, Australia.
[114] http://web.archive.org/web/20120221232316/http://blog.sfgate.com/energy/2011/11/03/ smartmeters-send-almost-10000-signals-a-day/
[115] http://www.stopsmartmetersbc.com/wp-content/uploads/OPT-OUT-FEES.pdf
[116] https://stopsmartmeters.org/2011/09/19/smart-meters-violate-fcc-regulations-period/
[117] See Attachment E.
[118] https://stopsmartmeters.org/2015/02/26/pge-suggested-prozac-for-those-injured-by-smartmeters-sce-schemed-higher-fees-to-force-smart-meters-on-the-poor/
[119] https://stopsmartmeters.org/category/installer-threats-and-assaults/

considered and balance restored to wireless health regulations to ensure that health is prioritized and people are no longer injured or forced to leave their homes or become marginalized in their communities, so that the smart grid industry can make a profit.

Attachment A: Joshua Hart MSc CV

Joshua Hart
PO Box 682
Portola CA 96122
joshuahart@baymoon.com

EDUCATION

MSc Transport Planning
June 2008
University of the West of England, Bristol

Bachelor of Arts in Psychology Minor in History, June 1998
University of California at Santa Cruz

EMPLOYMENT

Director, Stop Smart Meters! StopSmartMeters.Org July 2010- present

- Educated the public about the health, safety, and privacy impacts of digital "smart" meters, through broadcast, print, and online media
- Provided technical assistance to dozens of groups and individuals opposing the smart grid and organizing locally
- Interpreted the science on biological effects of wireless for the public benefit

Consultant, San Francisco County Transportation Authority May 2006 to August 2007

- Researched environmental impacts of automobiles to inform a proposed shift from auto level of service (LOS) to auto trips generated (ATG) as an environmental review threshold
- Collaborated with colleagues to identify strategies to bring San Francisco's environmental review processes into line with latest knowledge on environmental impact of automobiles

Program Director, San Francisco Bicycle Coalition January 2003 to April 2005

- Initiated and ran SFBC's BikeEd Program, based on the League of American Bicyclists BikeEd curriculum, teaching safe cycling skills to thousands of adults citywide.
- Organized members and allied community groups to support improvements in the City's bicycle route network, as well as changes in policies to support greater levels of cycling, testifying at dozens of City Hall hearings and meetings.
- Ran publicity campaigns to educate motorists and cyclists on safe roadway sharing

CA Project Coordinator, Rails-to-Trails Conservancy January 2000-June 2002

- Provided in-depth technical assistance to a variety of local advocacy organizations and public agencies around California working on rail-trail conversions
- Gave presentations to elected officials and community groups about the benefits, proper design, and management of public trails and on-road bicycle and pedestrian facilities
- Organized statewide legislative trail advocacy day in Sacramento to support the efforts of dozens of organizations engaged in trail policy development
- Researched and authored Tunnels on Trails, a study of 78 bike/ pedestrian tunnels in the United States (2001) as well as The Mission Creek Bikeway Concept Plan (2002)

Energy Sales Coordinator, Green Mountain Energy June 1999- December 1999

- Negotiated partnerships with retail outlets in San Francisco, Oakland, San Diego, and Santa Cruz as part of the California storefront tabling program
- Trained/ managed Field Consultants in sales strategy, environmental policy, and data concerning climate destabilization, energy use, and transport

League Cycling Instructor, League of American Bicyclists June 1998-June 2006

- Underwent intensive teacher's training program (both on and off road) and became accustomed with strategies for teaching the leading US cycling curriculum
- Organized, planned, and taught BikeEd classes to community groups and businesses with an emphasis on the environmental benefits of decreased auto dependence

ADDITIONAL SKILLS

- Attended Spin Project media training course, which advised on media strategy for charitable organizations San Francisco April 2004
- Extensive experience dealing with television, radio, and print media concerning a range of cycling, environmental, and climate messages

References available on request.

Attachment B: Individual Case Studies of Smart Meter RF Harm

Following are ten selected reports we have received of smart meter health problems (we have not had a chance to thoroughly investigate these complaints but the initial analysis is that these reports echo the many thousands we have received:

1. "I live in a 4-unit Victorian building, top floor Condo. The Smart meters are housed in a small shed enclosed area which is attached to the main building. My bedroom wall/ window face near that side. I hear noisy vibrations more in this room, less daytimes, more nights, so that it wakes me up. I have Wi-Fi, iphones, microwave (unplugged, I have never use it) and the internet. I am using wireless MonkeyBrains service. I was away for a week in Florida with family and felt my normal self again. After the first day back my body felt terrible, nervous, nausea, numbness in both hands, headaches, dizziness, irritable moods. I can't sleep well, my heart racing in my sleep. I have turned my fax machine and breaker box off at nights in hopes it would help. During the day I feel heavy pressure and noises in my ears and my eyes are more sensitive to light. There is an annoying constant low drumming vibration that I hear inside my apartment during the day and sometimes stronger at night, especially around 3:30 a.m. The only new appliances in my home are a Vitamix machine and electric coffee maker. I have had a healthy lifestyle for years and am vegan. Do you know what's happening or what the cause could be? I seems to be the only one that can feel and hear it. Thank you kindly for your time."

2. "I am a mom of a 13-year old whom, I believe, is the victim of EMF exposure due to a smart (water) meter placed in our home in October 2016. We knew nothing about the dangers, and when we received a letter stating they were having difficulty accessing our meter and wanted to replace it, my husband gave the okay. Since then, my son has come down with many symptoms including, but not limited to, cardiac issues (cardiologist has no answers), SEVERE insomnia, eye pain, headaches, nerve issues, brain fog and inability to concentrate... and the list goes on. I contacted the City and told them I want it removed and am getting the runaround. I will be meeting with my State Representative this week to see if he can help. Do you have any advice, direction, forms, or way of helping me? Thank you for your time."

3. "I am seeking help about getting rid of smart meters. Because this is a condo, all 6 meters are outside my bedroom wall. Since I moved back to my condo, I have sleep deprivation, headache everyday and my eyes hurt. As soon as I go to bed, they start itching and burning and I have pain in my left eye. I never had that problem. I thought it was because I am getting old. When my electricity bill came it was too high, I called the utility to complain and asked for help. Nothing was solved. I used a flashlight all month and rarely used electricity, but my bill went up. I started to search to see if I could find other people with similar complaints. I came across other reports about smart meters. I definitely want them to be removed and get my money back. I paid for energy I did not use. If you can help me, please either email me back or call. I am searching a good attorney."

4. "Some time ago we had a new power usage meter installed. I am a bit unsure if it is a smart meter or not. It does have a digital LED display and an orange blinking light. After it was

installed, my usual ailments and problems seemed amplified somehow. I don`t know if this is connected to the new meter but I don`t rule it out either. Problems such as chronic constipation seemed to get worse. Also I have more problems sleeping and am more irritable. I have a strange airy light "unsolid" feeling in the body. My hair feels electric / static. I have increased general sensitivity. Could this have something to do with that meter?"

5. "The utility did the same thing to us just before Christmas 2015. I had them remove an "advanced meter" they had placed without my knowledge or consent. My oldest son is severely autistic and suffered his first seizure right after they placed the meter. They said that I had to pay an opt-out fee for a couple of years if I didn't want the new gas meter. I told them that I was never even informed about them placing this on my house, so I obviously didn't opt-in. They said that the opt-out fee was approved by the CPUC and is mandated. I told them that I'm not paying it and they said that they'll send someone out to disconnect our service the next day. They kept their promise. The utility guy asked me if I wanted to change my mind and accept the "advanced meter" to avoid disconnection or write him a check. I refused to do either and we managed to make it for 2 days without hot water or heat before my kids ganged up on me and told me that I was ruining their Christmas. I succumbed to their protests and paid the extortion fee as well as a reconnection fee which was something like $300. The energy mafia sent Vinny to break my knees, or maybe just my bank account. The Energy Policy Act says that these devices aren't mandated, but are to be offered to customers upon request. WTF! They go around bullying and trying to intimidate people into accepting this technology that has no safety studies and is, as most people now know, an extreme health threat. They're trying to convince their customers that they're federally mandated and they're not. Even if they were mandated, we should never cooperate with unjust laws. They can't just make these laws that don't serve us (only serves them and their corporate masters) and expect us to abide by them. Do we not have a right of ownership to determine what goes on our homes if something is obviously harmful? We need a class action lawsuit against these energy companies or a mass action where we all have these damn meters taken off our houses and stop paying their extortion fees. What would they do then?"

6. "We are homeowners and have lived in our home for 24 years. We have no-trespass signs all over our front yard and we had a note saying no smart meter on our house. Lo and behold, without our knowledge, we found a smart meter. We called the utility and we were told too bad. They will not remove it. We have put up surveillance equipment and I watched a utility guy put smart meters on the condos next door to us. It took him all of 10 minutes to switch out 3 or 4 meters. Since our smart meter, I now have headaches on a regular basis. Ringing in my ears and strange blisters have formed all around my lip line twice since receiving this meter only a couple of months ago. I'm 57 years old and I have never even had a cold sore in my life until now. How can this be legal? We OWN OUR HOME! How can a privately owned company have more rights to our property than we have? Do they pay our mortgage and huge property taxes? How can this be??? Are there any class action law suits?

7. I always thought this Smart Meter phobia was craziness. But I've been having some health problems since they installed a Smart Meter on our house and I found this site by accident while looking up my symptoms and was shocked! About a month ago they replaced our analog meter with a Smart Meter. The meter is on the other side of the wall in the room

where I spend 99% of my time in my house. It's less than 8 feet away from me separated by an 8-inch-thick wall. A few days after they installed it I developed severe vertigo. I've never had a problem with dizziness in my life. I'm having a terrible time concentrating and have been hearing beeping sounds later in the evenings around 11 pm. I basically can't function anymore due to the vertigo and lack of concentration. I don't know if it was just my time to start having health problems or what, but it sure is one hell of a coincidence that this started when they installed this so called 'Smart Meter' and I found this site completely by accident when looking up my symptoms. That said, I have my PC in this room and it uses Wi-Fi and I don't have any problem using it. I'm not seeing any detectable interference problems with the electronics in my home."

8. "I am 65 years old and live in a shelters accommodation (40 flats) in the UK. Last October I had an offer of "free upgrade" for my electricity meter and as I did not know anything about "smart" meters and was not provided with any information my electricity provider fitted one. Almost immediately I got very sick, nausea, nasty headaches, disturbed sleep, itchy burning skin, muscle and joint pains and a lot more. For the last 16 years I was campaigning for fathers' and children's rights after divorce and that included two hunger strikes (2000 and 2010). I also suffered a stroke in 2011 and that has possibly made me a lot more vulnerable to microwave RFR."

9. "Smart Meters were forced upon us here. It is a nightmare for me as I have 2 sons with autism who are affected by the radiation as they are extremely sensitive. I sent a letter to hydro requesting they remove it and even got our landlord to sign it but they refused saying they would not remove them. Do you know of any support in my area? I would love to volunteer. I am sick of being poisoned. Thank you. Much Gratitude for all you are doing!"

10. "Hi Josh – thanks for all you do. In a nutshell – I am a recovering smart meter victim in. I had been receiving emails for at least 3 years from a natural doctor about their dangers. When they first started installing them locally, I remember seeing something on the news about one woman across town trying to fight it and not winning. So when they showed up at our house to install them sometime during the spring of 2013, I hoped for the best as I had my hands full with other things. I didn't think about the fact that I was already on Social Security/Disability for an arthritic condition. My husband and I were the live-in caretakers for my then 85year old father who had advanced dementia, some urinary incontinence, and used a walker. My husband also was working at 2 different jobs. We had 4 cats. We figured we would just have to find a way to co-exist. We didn't own smart phones and I didn't use Wi-Fi on my computer. My husband occasionally used Wi-Fi on his. "It took me a while to become extremely sick after the meters were installed. We just thought that stress was aggravating my pre-existing health issues. Plus I'm middle-aged – we figured that played a factor. I had been getting better from one thing for a little while and now I was taken down very hard by something else. My recovery periods also became shorter and I didn't really feel all that well during them. By mid-July 2015, I was so sick and my primary care physician was completely baffled. The other specialists she had referred me to before within the last 15 or so months had made me worse. She referred me to a natural doctor in another city. I told her that I would call her within the week if I didn't feel better. When I finally called her on July 27, 2015, she had a 6 week waiting list. I didn't think I would live that long. My

husband convinced me to call the natural doctor who had been sending me the emails. I called her and she said it was the meters. I called the utility that afternoon. We don't have an opt-out program in our state. I was told by the natural doctor to be prepared for a fight. I gave my request to a customer service agent. She said someone would call me but she didn't say when. That was at 3:45 p.m. "The following morning at 9:45 a.m., I received a call from the employee in charge of the program. He started saying all this legal stuff to me. I asked how long the meters had been on the house. He could only confirm they had been on over 2 years – he could not give me an exact date. He said I had to agree to whatever they wanted to charge me when they finally decided what they would charge for this. I also had to agree to a reading fee if and when they decided on that – but again he couldn't say how much that would be. He said he would make sure that I received the original analog meters on the house rather than the newer analog ones with the digital faces so there would be no confusion. We have a 2-family house so we had 2 gas and 2 electric meters. He said he would make sure that the gas meters were off by noon the next day. If he could find the electric ones within the <redacted>, those would be off by the next day by noon as well. If he could not locate them that day, they would definitely be off by noon on Thursday. He gave me his direct number and said to call him if they weren't all removed by noon the following day. They were all off by 11:00 a.m. on Wednesday, July 29. I started to slowly recover within a couple of days. "As I started to recover, I realized it hadn't been just me who had been affected. My dad had serious bowel problems for about a week around the time they were originally installed in June 2013. We thought we'd have to put him in a nursing home and started making arrangements. Fortunately he recovered from that in about a week. But his fillings then started falling apart in his mouth. I took them to be repaired. He had seen the dentist 6-8 months earlier and there had been no indication that would happen. We did start getting some home health care to come in to help with bathing him daily. He didn't want to listen to his middle aged daughter but he'd follow orders when nurses arrived. His dementia increased but he never tried to leave the house. His urinary incontinence increased but he'd worn diapers for years. When the bowel issue came back in mid-October though, we had to put him in skilled nursing. It was devastating for us. "Our cats also became sick one by one after the smart meters went on. I'll spare the details. By February 2015 we had said good-bye to the 4 we had when the meters were installed in 2013. We had taken in 2 other strays from the neighborhood in October 2014 – a mother and her female kitten. They drink a lot of water but seemed to be okay so far. The kitten is now about 1 years old. She isn't the brightest cat I've ever had but we love her anyway. "My husband isn't home as much as me. He hasn't seemed to be affected. However, as I recovered I started talking to my neighbors. I can point at apartments and houses and tell you a lot of stories about sick people – directly next door on one side as well as directly across the street in the apartment building as well as the house next to it. I have talked to other people here and there within a few blocks as well. There are more people with unresolved chronic health issues that started within the last couple of years than people without them. It seems to affect people who are home more also – like me. Women, senior citizens and pets seem hit the hardest of those I've talked with. "I'm trying to make contact with different people here in my state. I'm waiting on for a call back from an activist I learned about a couple days ago. I live in a lower to middle income neighborhood within a couple blocks of a college. The city is concerned about revenue and expansion. Unfortunately also as I started to recover, fall classes started up again which created a huge influx of people and business back into the neighborhood. My house – even without the

smart meters – is being affected by everything else around me. This is also affecting my recovery. I no longer take walks in my neighborhood." "There has been a lot of expansion at the college over the last 2 years also. According to www.antennasearch.com, there are 437 towers and 63 towers within a 3 mile radius of my address. Some are within a couple blocks of my house. I don't have proof that everyone is getting sick because of all of this. But there seem to be a lot of sick people around here.

In terms of more in-depth investigations into the impacts of smart meter on the health of individuals, please see the links below to articles published on our website. In the cases listed (and linked) below, radio-frequency radiation (RFR) from "smart" meters or other RFR-emitting devices was found to be the likely cause of these symptoms and health problems. The basis for the determination included detailed interviews with those effected, RF measurements on site in some cases, comparing reported symptoms with those reported in peer-reviewed scientific studies at similar frequencies and power density levels, and any presence of symptoms prior to installation, after installation (in some cases symptoms appeared without any knowledge of installation by the resident(s)), and disappearance of symptoms after removal and replacement with a non-RFR-emitting analog meter.

Attachment C: Firsthand reports of smart meter (microwave) illness

1. June 2011 Winifred http://stopsmartmeters.org/2011/06/16/winifred/
2. October 2011 SM Health Effects Worsening- two cases http://stopsmartmeters.org/2011/10/25/smart-meter-health-effectsworsening/
3. October 2011 Monise Sheehan http://stopsmartmeters.org/2011/10/03/utility-lies-threats-of-night-time-raidsfederal-prosecution-one-woman%e2%80%99s-pge%e2%80%9csmart%e2%80%9d-meter-nightmare/
4. December 2011 Smart Meter Return http://stopsmartmeters.org/2011/12/08/the-great-smart-meter-return/
5. Sept. 12 2012 Sarah, Las Vegas, NV http://stopsmartmeters.org/2012/09/12/smart-meter-or-no-power-at-allpower-company-sends-three-armed-men-to-disconnect-power-just-foropting-out/
6. March 17 2013 JN, Long Beach, CA http://stopsmartmeters.org/2013/03/17/edison-meters-suspected-in-longbeach-throat-cancer-case/
7. May 27th 2013 Shari Anker http://stopsmartmeters.org/2013/05/27/forced-seizures-in-port-st-lucieflorida/
8. April 5th 2014 Andrew McAfee http://stopsmartmeters.org/2014/04/05/interview-with-andrew-mcafee-ofraleigh-es/
9. May 6th 2015 Anura Lawson http://stopsmartmeters.org/2015/05/06/la-public-school-accommodateselectro-hyper-sensitive-teacher/
10. August 26th, 2016 Various SM Injury Testimonials Submitted to the Maine Public Utilities Commission: http://stopsmartmeters.org/2016/08/26/smart-meter-injury-testimonials/

Attachment D: Fires / Explosions related to Smart Meter Infrastructure

Utilities have been documented removing smart meters from fire scenes making official, accurate investigations of such incidents often impossible:

- https://smartgridawareness.org/2015/07/28/utilities-removeburned-smart-meter-evidence-from-fire-scenes
- http://stopsmartmeters.org/2015/05/21/hundreds-more-smart-meters-blowoff-wall-in-capitola
- http://stopsmartmeters.org/2015/03/31/wheels-falling-off-smart-grid-as-pgesmart-meters-explode-burn-smoulder-in-stockton-ca-after-dui-drivercrashes-truck-into-pole/
- http://stopsmartmeters.org/2015/02/04/man-dies-in-dallas-house-fireattributed-to-oncor-smart-meter/
- http://stopsmartmeters.org/2014/09/15/smart-meter-fire-death-injuriesreported-in-reno-nv/ http://www.rgj.com/story/news/2014/09/13/reno-sparks-fire-chiefs-callsmart-meter-probe/15580069/ contains the statement that, "Based on physical evidence in the Rhinestone matter, the Sensus meter cannot be eliminated as the ignition source." Investigator Andrew Thoresen wrote: "Data tends to suggest the meter may have failed." https://smartgridawareness.org/2014/09/14/smart-meter-fires-spread-tonevada/

The forensics report (33MB file at this link, http://wp.me/a3nav9-3W8) has the conclusion as cut and pasted below:

Conclusion:

Based on the physical evidence in the Rhinestone matter, the Sensus meter cannot be eliminated as the ignition source. The meter displays extensive fire damage within the meter socket enclosure. Additionally, the electronic components associated with the meter display heavy fire damage and arcing. There was also a lack arcing found downstream of the meter. This data tends to suggest the meter (Rhinestone) may have failed. Conversely, all of the fire damage and arcing within the meter / meter socket enclosure could be explained if an approaching fire ignited the plastics associated with the meter very early in the fire. Extensive analysis of the fire scene and electrical system associated with the condominium (to look for arcing downstream of the meter) would be needed to determine if the meter failed to any probability.

- http://stopsmartmeters.org/2014/07/07/another-fire-landis-gyr-smart-metercauses-apt-blaze/
- http://www.buckscountycouriertimes.com/news/local/electric-meter-blamedfor-bensalem-apartment-fire/article_93cf65bb-a298-5978a88e-464c2f4451e1.html
- http://stopsmartmeters.org/2013/07/09/stop-smart-meters-investigatesutilities-lie-while-people-die/
- http://stopsmartmeters.org/2013/06/21/when-smart-meters-kill-the-story-oflarry-nikkel-details-emerge-of-vacaville-ca-smart-meter-fire-death/ "undetermined, but was most likely caused by an electrical problem" (lawsuit by family of the victim against PG&E, Wellington Energy and Landis & Gyr settled for undisclosed amount) http://stopsmartmeters.org/wp-content/uploads/2013/06/Nikkel-complaint.pdf

Attachment E: FCC Rules Mandating 10m clearance from ground on high emitting antennas

Erica Rosenberg, FCC NEPA Attorney/ Assistant Chief,
Competition and Infrastructure Policy Division, Wireless
Telecommunications Bureau
"If one of those circumstances are met, then an Environmental Assessment is triggered. In other words, ***if the RF is above our limits, they need to do an Environmental Assessment.***
In FCC Rule §1.1307, **it states:**.
"Commission actions granting. . .licenses to transmit . . . require the preparation of an Environmental Assessment (EA) if exposure to levels of radiofrequency radiation [are] in excess of the [FCC] limits."
Then in Table 1 of FCC Rule §1.1307:
(b)(1) "Evaluation ***required*** *if Non-building-mounted antennas [have] height above ground level to lowest point of antenna* ***<10 m*** *and total power of all channels* ***>1000 W ERP*** (emphasis added)

H. Lawrence J. Gust — Building Biology Institute

My name is Lawrence Gust, founder of Gust Environmental. I am submitting this declaration in support a legal effort to persuade the Food and Drug Administration to exercise its responsibility for protecting public health by immediately initiating the process of setting science-based, health-based standards for exposure to pulsed radiofrequency radiation emitted by the wide variety of wireless devices currently being marketed to consumers. The lack of such health-based guidelines for exposure to radiofrequency radiation (RFR) is leading to a dangerous reliance by the public and local decision makers on false information and misinformation regarding the safety of RFR, creating an imminent hazard for people across the country.

I am certified as a Building Biology Environmental Consultant (BBEC) and a certified Electromagnetic Radiation Specialist (EMRS) through the Building Biology Institute (BBI). I also hold a BS in Electrical Engineering and an MBA from the University of Wisconsin, Madison, WI. I am currently an instructor at BBI. I teach the 5-day foundational electromagnetic radiation seminar and lab and the 5-day Advanced Electromagnetic Radiation Seminar and lab. I am president of the BBI Board of Directors. I live in Ventura, California and work throughout the United States.

The mission of the Building Biology Institute (BBI), a 501(c)(3) non-profit corporation, now in its 34th year, is to enable practitioners and the general public to create healthy homes, schools, and workplaces free of toxic indoor air, tap-water pollutants, and hazards posed by electromagnetic radiation exposure. BBI is the only educational entity in the United States that trains, equips and certifies professionals in the holistic evaluation of the built environment. www.BuildingBiologyInstitute.org

Education and Training of BBEC and EMRS Practitioners

BBI's background and program requirements are pertinent to the accuracy and veracity of the information coming from the field referred to later in this declaration.

BBI's teaching is based on the twenty-five Principles of Building Biology brought from Germany to the English-speaking world in 1987 by the German architect Helmut Ziehe. BBI's three professional certifications are based on specific online study requirements, plus multi-day on-site seminars and a mentored final project:

To be listed as a practicing professional on the BBI website, certified BBEC professionals must provide approved continuing education credits from courses obtained through BBI or other institutions.

Activities of Gust Environmental

Since 1993, my company, Gust Environmental, has served clients in the US, Canada, Europe, and Oman. We specialize in complete assessment of indoor environmental health factors from the perspective of the human sensitivity to environmental toxins. I have evaluated and recommended remedial measures in over 1,700 residential and commercial buildings. I consult on the environmental aspects of the construction and remodeling of a homes and offices. I give public presentations to explain EMF to the general public- the causes and the effects — particularly sources and dangers of pulsed radio frequency radiation with emphasis on the 5G cell system. These presentations are attracting growing numbers of concerned, angry citizens.

My business activities bring me into contact with many, many people who are suffering from exposure to radiofrequency radiations over which they have no control. Within the last 20 years as cell phones and their infrastructure and other wireless communications devices became ubiquitous, client health complaints often correlated more frequently to the level of RF exposure inside the residence. These health complaints radically affected quality of life and cause significant suffering. In all cases, levels of RF found in these residences were orders of magnitude less than the FCC standard.

The FCC and FDA

Based on my observations, I have been concerned for years with the continued ignoring by the FCC and the FDA of the health dangers of pulsed digital radiation that has been proven without a doubt by thousands of peer reviewed studies by hundreds of researchers in multiple countries.

In response to the request by the FCC for comments pertaining to its review of the RF guidelines I expressed my concern over the lack of protectiveness of the FCC standard based on my field work in comments filed with the FCC on August 19, 2013, in regard to ET Docket No. 03-137 and ET Docket No. 13-84.

I was appalled when the FCC after seven years of 'review' made not a single change in the guideline despite having been provided with these thousands of studies showing health effects at RF power density levels several orders of magnitudes less than the current guideline.

The FCC is lying to the American people by their failure to take into account research which shows significant health damage. FDA is derelict in its duty to protect the American people by not guiding the FCC in setting RF safety and HEALTH guidelines. In its own words:

> The Food and Drug Administration is responsible for protecting the public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, and medical devices; and by ensuring the safety of our nation's food supply, cosmetics, **and products that emit radiation**. (emphasis added)

According to knowledgeable scientists, this damage is occurring at the cellular level, and it is happening to everyone, whether asymptomatic or symptomatic. For the all-to-many unfortunate people who have special medical conditions, or who have developed Electromagnetic Hypersensitivity Syndrome, exposure to growing levels of RF is causing people to rapidly decline in health while enduring incredible suffering. Many of these people die years ahead of their time. For the vast majority of people, according to knowledgeable scientists, the expected lifespan is likely to be shortened, while the number of ill-defined medical conditions multiply.

The FCC is shirking its responsibility to the American people by continuing to use an outmoded RF measurement method that drastically understates the actual moment to moment level of RF exposure experienced by the body. The FCC measurement method was replaced years ago by other research organizations because research showed another measurement method to assess power density level better correlated to RF health effects.

Additionally, due to my position within BBI, I am plugged into the broader network of BBECs and EMRSs who serve the public across the United States and Canada.

BBI Certified Practitioner Field Experience

I can state with confidence that the boots on the ground — Certified BBI practitioners — are seeing an unprecedented growth in the number of people, including children, the infirm, the disabled and those with preexisting medical conditions, who are intensely suffering from RF exposure they cannot control.

BBI practitioners, including the declarant, measure the radiofrequency radiation levels in homes, and if excessive, recommend means of remediation to reduce exposure. In all cases, the initial levels of radio frequency radiation found in these residences were orders of magnitude less than the FCC standard. Once RF power density reduction was achieved, BBI Practitioners normally saw a significant health improvement. Frequently, very ill clients are able to return from death's door to the land of the living.

RF radiation levels in homes, apartments, offices and schools is drastically increasing due proliferation of ever-stronger RF emitting devices that adhere to the dangerous, outmoded FCC radiation guidelines that do not take into account the additive effect of multiple RF sources in and around buildings. For example:

1. The new 5G network which includes two antennas — an enhanced 4G antenna and a 5G antenna — forecast to be installed on every residential street about every 8 to 10 houses or approximately every 1,000 feet. This has resulted in a measured 100-400-fold increase in neighborhood RF power levels due to proximity of the antennas to ALL residences, compared to macro towers which are often miles away from most residences.
2. Municipal Wi-Fi systems.
3. Wi-Fi mesh networks installed within homes and businesses to assure flawless reception in the furthest corner of every building.
4. RF-emitting entertainment system components that never turn off.
5. Cordless phones systems with increased RF power output for greater coverage.
6. Wireless burglar and fire alarm systems.
7. RF-based audio/visual baby monitors.

RF Shielding

People who do not wish to be irradiated by outside sources beyond their control must pay for RF shielding themselves. People can shield each bed by installing a RF shielding tent over the bed. However, in the case of strong 4G/5G radiation, residents will likely need to shield the room itself, as well as tent the bed(s). This is because of unavoidable RF leakage in the tent and in a structure that has been retrofitted with RF shielding. For example, 99% shielding effectiveness allows 1,000 out of 100,000 $\mu W/m^2$ to enter the house, whereas the recommended level is in the range of 10 to 60 $\mu W/m^2$.

Cost for RF Shielding Tents for Beds

Shielding a queen size bed with a RF protection tent starts at $1,250 for moderate shielding capability, and can be as much as $1,700 for shielding of high RF radiation levels.

Shielding a twin bed will cost $1,000 to $1,400, depending on the level of protection needed.

A family with two adults and three children who wish to protect four beds from RF radiation will have to spend $4,250 to $5,900.

Costs for RF Shielding of Bedrooms

Building Biologists focus on sleeping areas because this is where people are most vulnerable to RF, but this offers no protection to people who are home all day, like a mother with young children who don't want to or cannot stay in their bedrooms all day. (And this does not even address the exposure of people who want to enjoy their property outside the house.)

People can shield the bedroom itself by painting the walls with RF protection paint and putting RF protection film on the windows instead of tenting the bed. The cost for painting including labor is about $3.15/ft^2. For an average 12' x 12' bedroom with two 3'x 4' double hung single pane windows, the cost is $2,450.

A family of two adults and three older children in separate bedrooms would have to spend $9,800 to shield their bedrooms.

Cost of Bedroom RF Protection Against Residentially located 4G & 5G Antennas

A family of two adults and three older children who all need RF tents and bedroom shielding will have to spend $15,700 (assuming this will correct the problem, given the increased power density of neighborhood 4G/5G radiation).

Cost of Whole-house RF Protection

Although not always possible, depending on the nature of the siding used on the house, the average cost of applying RF protection paint to the average existing 2,000 ft^2 house by painting outside stucco walls and the inside ceilings on the top floor is $14,000.

If the house was built prior to 2000, the windows will need to be shielded with RF protection film. With an average of one window per 100 ft^2, the house would have 20 average 3'x 4' windows and would cost $2,900 to shield.

Total average cost for shielding a 2,000 ft^2 house is $16,900.

Cost of Whole-house Shielding and Bed Shielding

If RF levels are high due to installation of a 5G antenna system on the block, the house and the beds will all likely have to also be shielded.

Total cost for shielding the average 2,000 ft^2 house and tenting the parent's and children's beds will be approximately is $24,250.

Shielding Cost Shifted to Private Citizens (Regulatory Subsidy)

The only available statistic (statistica.com) reports a number of family units with three or more children less than 18 years of age. In 2019 that number was seven million families. If we make the assumption that all seven million families lived in single family houses, obviously untrue, but convenient for demonstration of the scale of the subsidy, then based on the above

assumptions, the cost for shielding from 5G System RF exposure is $1.7 Trillion. This 'house' cost data could be applied to apartments as well as single family houses, although shielding in this environment is more complicated and landlord permission problematic.

Recommendations

My recommendation is that the results of the several thousand studies be taken into account by the FDA who will advise the FCC in setting new RF exposure standards based on health effects. These new standards would then be applied to RF emissions from all types of RF emitting products including those listed above.

People should be educated by the Federal government via a large scale advertising campaign introducing the new safety Guidelines; how they affect allowed power output of RF emitting devices; how the RF emissions from various sources are additive in a living space, and the need for people to have living spaces with low levels of RF exposure in order to have good long-term health, whether symptomatic or asymptomatic. Written and videotaped tutorials should be provided showing people what they need to do in their homes to be safe, including installation of a hard-wired Ethernet system to provide service to all Internet connected devices.

Cell phone service providers should be required to collectively fund a public entity that pays for the shielding of homes and apartments where shielding is necessary. Shielding would be paid for after families are evaluated by an MD with an EMF specialty who is a member of the *American Academy of Environmental Medicine*. Landlords should be required to allow shielding of their properties. Eventually, all buildings with unacceptable levels of externally imposed RF should be shielded using funding from the industry.

I declare under penalty of perjury that the foregoing

is true and correct.

Signed Lawrence J. Gust

Print Name Lawrence J. Gust

Date October 4, 2021

Street Address 211 S Brent St

City, State Ventura, CA

Zip Code 93003

I. Sharon Goldberg, M.D.

Integrative Internal Medicine
2019 Galisteo St. Suite N10C
Santa Fe, NM 87505

10.11.2021

To Whom it May Concern:

I am writing in support of petitioners seeking a public admission from the U. S. Food and Drug Administration (FDA) that the current human exposure guidelines for radiofrequency radiation (RFR) being promulgated by the Federal Communications Commission (FCC) are not, in fact, based on a rigorous scientific inquiry conducted by the FDA itself. The FDA, by allowing its name and imprimatur to be improperly invoked by the FCC in public documents, misleads the American public and subjects millions of people to unacceptable health risks and harm.

I am a board-certified Internal Medicine Physician licensed in the states of New Mexico and Florida. I currently practice Integrative Medicine in Santa Fe, New Mexico and am active as a medical educator in in the growing field of Clinical Electromagnetics. The 2021 EMF Medical Conference on the prevention, diagnosis and treatment of EMF Associated Illness showcases the Clinical Electromagnetics approach and philosophy, which considers the electromagnetic environment as a modifiable determinant of health.[120] I served as Course Director for the conference, as well as a session moderator and speaker. I am an Editorial Board Member of the Medical Journal *Electromagnetic Biology and Medicine*, and have co-authored research in the fields of nutrient supplementation, clinical nutrition, and autonomic nervous system assessment.

Although most physicians are unfamiliar with the biological effects of radiofrequency radiation RF exposure, I can attest that harm from RF exposure is not a rare occurrence. In my clinical practice, I have dozens of patients who have been harmed by overexposure to RFR. In fact, my office receives between 2-4 calls per month from new patients with EMF Associated Illness.

As the prevalence of EMF Associated Illness continues to increase, a key factor enabling ongoing expansion of wireless emissions is the current FCC "guideline." To be clear, RFR including microwave radiation is an established environmental toxin. The basic science demonstrates that RF harms living cells and interrupts essential housekeeping functions (homeostasis) of living organisms. Harm is observed at levels a fraction of those deemed acceptable per current, non-biologically based guidelines.[121] The following is a partial list of documented RF bioeffects:

a. Oxidative stress or "free radical damage" – the physiologic "cost" of using oxygen. Linked with numerous chronic conditions including diabetes, cardiovascular disease,

[120] EMF – Medical Conference 2021 (emfconference2021.com)

[121] By guidelines, I refer to the current IEEE (Institute of Electrical and Electronics Engineers), FCC and OSHA (federal) standards.

Alzheimer's, infertility and aging. Free radicals, once formed, damage anything they run into, including proteins, cell membranes, and the cytoskeleton or matrix. [122]

b. Depletion/depression of key anti-oxidant mechanisms when needed most. Anti-oxidants are the first line of defense against oxidative stress, therefore EMF's not only increase oxidative stress, but they suppress natural mechanisms for coping with oxidative damage via:
    i. Suppression of melatonin, an anti-oxidant hormone.
    ii. Suppression of Glutathione and SOD (superoxide dismutase) – key free radical scavengers.[123]
c. Mitochondrial damage – RF damages the energy generating parts of cells.[124]
d. Genotoxicity – RF damages our DNA leading to mutations.[125]
e. Cell membrane damage – leading to leakage and wreaking diffuse havoc on normal physiology.[126]
f. Cellular stress – human cells respond to RF in the same way as they do to any other poison, by generating a stress response which includes production of heat shock proteins.[127]
g. Blood brain barrier leakage – RF damages the protective lining that keeps harmful substances out of the brain, resulting in brain cell damage and/or death.[128]

In addition to basic scientific evidence, there also exists over fifty years of clinical evidence to reinforce the basic science conclusion that RF is a multifactorial toxin. Examples of clinical evidence of harms from RF exposure include:

a. Clear evidence of cancer – Numerous experts concluded that based on current evidence, including the $30 million National Toxicology Program conclusions, RF should be reclassified as a class I carcinogen. A 2018 review declared: *there is clear evidence that RF radiation is a human carcinogen, causing glioma and vestibular schwannoma (acoustic neuroma). There is some evidence of an increased risk of developing thyroid cancer, and clear evidence that RF radiation is a multi-site carcinogen. Based on the*

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[122] Yakymenko, I., Tsybulin, O., Sidorik, E., Henshel, D., Kyrylenko, O., & Kyrylenko, S. (2016). Oxidative mechanisms of biological activity of low-intensity radiofrequency radiation. *Electromagnetic biology and medicine*, *35*(2), 186-202.

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[125] Phillips, J. L., Singh, N. P., & Lai, H. (2009). Electromagnetic fields and DNA damage. *Pathophysiology*, *16*(2-3), 79-88.

[126] Phelan, A. M., Lange, D. G., Kues, H. A., & Lutty, G. A. (1992). Modification of membrane fluidity in melanin-containing cells by low-level microwave radiation. *Bioelectromagnetics*, *13*(2), 131-146.

[127] Blank, M., & Goodman, R. (2009). Electromagnetic fields stress living cells. *Pathophysiology*, *16*(2-3), 71-78.

[128] Nittby, H., Brun, A., Eberhardt, J., Malmgren, L., Persson, B. R., & Salford, L. G. (2009). Increased blood–brain barrier permeability in mammalian brain 7 days after exposure to the radiation from a GSM-900 mobile phone. *Pathophysiology*, *16*(2-3), 103-112.

Preamble to the IARC Monographs, RF radiation should be classified as carcinogenic to humans, Group I.[129] [130]

b. The association of diabetes with RF exposure has been known for decades and is documented in the 1971 US Naval Medical Research Institute topic review.[131] Various researchers have shown that short term Wi-Fi exposure is a simple and effective means of creating a diabetic animal model in rats.[132] [133] As per the American Diabetes Association, diagnosed diabetes costs America $327 billion dollars annually (1 of every 7 health care dollars spent).

c. Sperm damage and reproductive harm.[134]

d. Deterioration of mental health, including our current nationwide epidemic of suicide. The science documents increased rates of depression, anxiety, anger, aggression, difficulty with impulse control and mood lability among individuals exposed to radiofrequency radiation.[135,136,137]

e. Antibiotic resistance has been documented in many studies of wireless radiation exposed bacteria.[138] This is important because of the cost of treating drug resistant infections in the U.S., estimated at $20 billion per year excess direct healthcare costs in 2008, and the danger of losing antibiotic efficacy.

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[129] Hardell, L., & Carlberg, M. (2019). Comments on the US National Toxicology Program technical reports on toxicology and carcinogenesis study in rats exposed to whole-body radiofrequency radiation at 900 MHz and in mice exposed to whole-body radiofrequency radiation at 1,900 MHz. *International journal of oncology*, *54*(1), 111-127.

[130] Miller, A. B., Morgan, L. L., Udasin, I., & Davis, D. L. (2018). Cancer epidemiology update, following the 2011 IARC evaluation of radiofrequency electromagnetic fields (Monograph 102). *Environmental research*, *167*, 673-683.

[131] Glaser, Z. R. (1971). Bibliography of reported biological phenomena ('effects') and clinical manifestations attributed to microwave and radiofrequency radiation. Naval Medical Research Institute Research Report Project MF12. 524.015-0004B. *Res. Inst., Nat. Naval Med. Center, Bcthesda, Md*.

[132] Salah MB, Abdelmelek H, Abderraba M, "Effects of olive leave extract on metabolic disorders and oxidative stress induced by 2.45 GHz WIFI signals," *Environmental Toxicology and Pharmacology* 36(3): 826-834 (2013).

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The current FCC “guideline” is over 20 years old and considers only effects from tissue heating such as burn and shock. Clearly, burn and shock from wireless technologies are not the main safety concern at present. The “guideline” is also not applicable to the chronic 24/7 exposures we now see, as the guideline is limited to short term, 30-minute exposures only, making it medically and scientifically irrelevant.

Physicians and other key policymakers rely on the false belief that the FDA has adopted the FCC’s so-called “guideline” which ignores the abundant science demonstrating non-thermal harm. This current situation provides false assurance of the safety of RF exposures and allows the ongoing proliferation of toxic emissions without any health protective regulation of RF emissions. Furthermore, this false claim of safety creates health hazards for vulnerable populations such as children, pregnant women, and individuals with chronic illness.

American people deserve transparency on this important issue that has been deliberately confounded for too long. I thank you in advance for your attention to this important matter.

Sincerely,

/s/Sharon Goldberg

Sharon Goldberg, MD
Associate Professor Community Faculty
Department of Medicine
University of New Mexico School of Medicine
sg@drsharongoldberg.com

J. Prashanthi Atluri, M.D.

My Name is Prashanthi Atluri, I am board certified adult Cardiologist and my husband is an Emergency Medicine doctor. We live in a suburb of New Orleans, Louisiana. We have two daughters, now 14 and 9 years old. In addition to general Cardiology, I am trained in nuclear cardiology and ultrasound technology. In my field we respect informed consent, explaining pros and cons of procedures to patients, always apply ALARA principles and every necessary precaution to control and limit radiation exposure on new patients. We scrutinize all new technology, and patients are well informed about the new technology limitations and harms.

I am writing this declaration in support of the petitioners who are attempting to hold our federal government agencies, particularly the Food and Drug Administration (FDA), responsible for providing consumers, school administrators and local governments with accurate, scientifically correct and up to date information about radiofrequency radiation and its potential impact on human health, in the same way we inform our own patients. This lack of current, health-based standards based on the latest science has resulted in great harm to families like ours across the country.

My general knowledge on cell towers and health began a long time ago (mid 2000s) when people and media in India were talking about cancer clusters in affluent neighborhoods with numerous cell towers. I thought in the US we would have better regulations, and was hoping to see the same good governance happen in India, too. Little did I know I would be learning about the bias of the Federal Communications Commission (FCC), telecom corruption and the failures of our national health agencies while I am fighting desperately to keep my kids safe from the irresponsible placement of towers in my neighborhood, and trying to save my beautiful home and the safety of my neighbors.

This is my story:

My older daughter had issues with attention, learning and focus at the age of five. We had her tested, and she was in speech therapy for two years. When she was later having issues with food sensitivities, I started researching why her food was causing her troubles. We learned a lot about food pollution, fake foods and chemicals in food that could be making her sick. We changed to a whole food plant based diet, and she felt better and overcame her learning issues in a year. I documented our healing journey in this blog post:
https://www.wellcure.com/health-journeys/33/i-tackled-my-daughter-s-attention-deficit-hyperactivity-issues-by-going-back-to-natural-foods

Fast forward to 2020, we lived at 30 Waverly Place, Metairie LA. Covid lockdowns began, kids were away from school at home doing virtual classes. While we were in our yard, I noticed a new, white tower that came up about 75 feet from my fence line. It wasn't there before! I hadn't seen it in the past. By the shape, it looked like a cellular tower. I didn't know who to ask, nor how to find out what it was (see the pic below). My daughter was spending a significant amount of time in her room to study (no laptop in her room), sleep or play. She started complaining of headaches, lack of proper sleep, thirst and dry mouth with disturbed sleep. Her headaches used to be so intense she would rub her base of the hands on her temples to a point,

after a few days, when we examined her we saw bald patches on her temple where she was putting pressure, and pressure spots on her base of her wrists. That's when we realized her headaches were severe, and my husband did a quick neuro eye exam on her. We didn't find anything ominous. We decided to get her checked by neurologist, get a CAT scan of her head in next few days. By then her school opened up, and she was no longer spending a lot of time in her room. Her headaches diminished. We started going to a farm to grow our own food on weekends and holidays. Gradually we forgot about the white tower, and we were making plans to move to the country in a year or two and settle there. At that time, I didn't connect her health issues with the white tower.



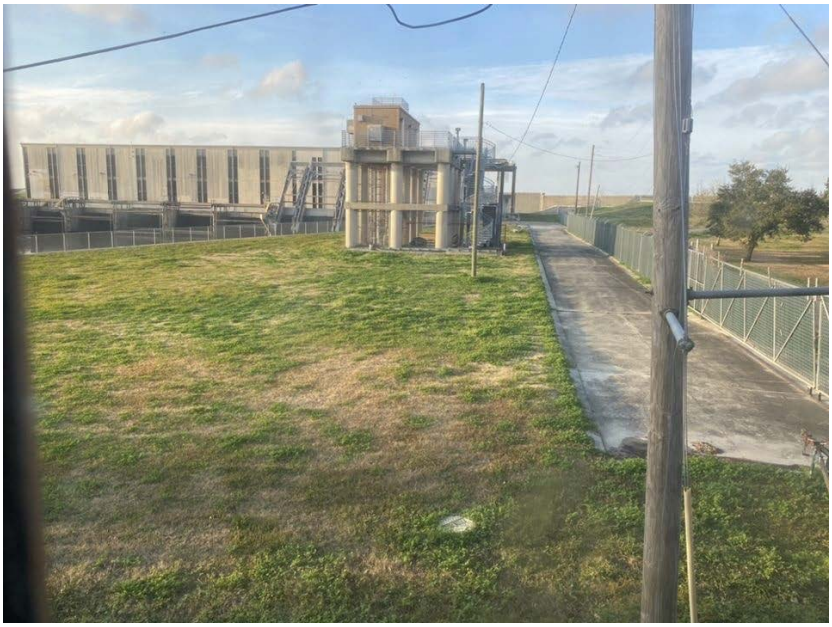


One cold winter evening (Jan 2021) a man came to our neighborhood knocking on our door; he said he was a contractor and he was informing us about a new proposal to build a cell tower (see the design below) 100 feet from my north side of my fence. None of the neighbors knew what to do. All they knew was that cell towers look ugly, and they didn't want any artificial constructions by the lake that would ruin the scenic bike pathways.

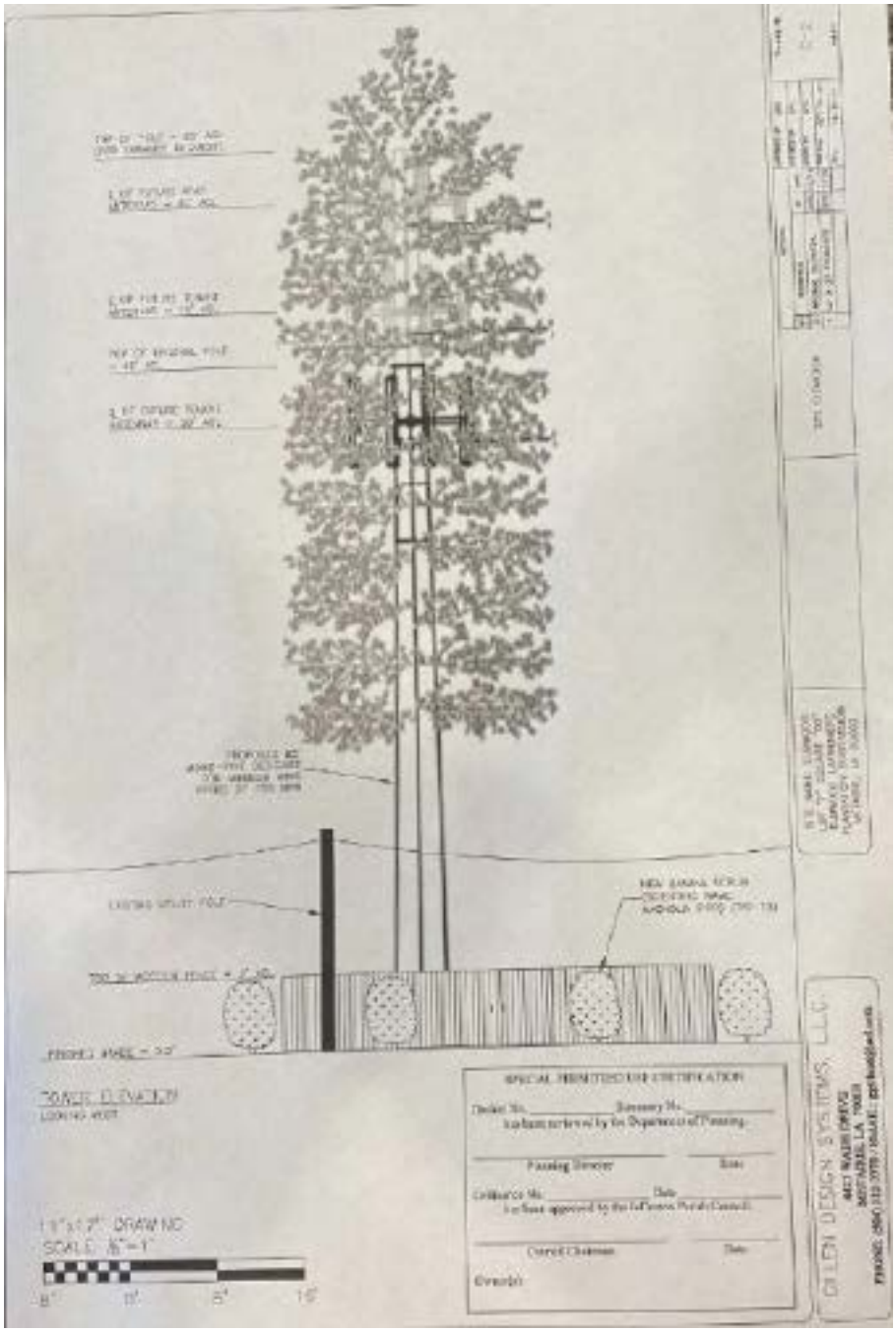
I started researching more to gain more knowledge of them, for example they were being called "cancer and sick towers" in India. I connected with 5G networks, many activists on social media and attended the EMF Medical Conference 2021 to gain necessary info. That conference was an eye opener to me, and the disconnect we have in regular medical world, and how we are not up-to-date with the latest research on EHS, Wi-Fi sickness, and environmental issues, was glaring at me. I told myself I would be including radiofrequency and electro-hypersensitivity in history-taking on all my patients, to evaluate them, make proper diagnosis, and help them figure out why they are having issues like chest pains, palpitations, headaches, arrhythmias, skipped heartbeats and many more, that could be attributed to abnormal, manmade electromagnetic fields.

I bought a Safe and Sound meter to check on radiofrequency levels in my home and neighborhood surrounding the white cell tower. We hardwired our home, turned off all the Wi-Fi. My home measured *Extreme* in most of the rooms, and my teen daughter, who was sick with headaches during summer holidays, was the highest level. The majority of my neighborhood was *Extreme* and *High*. All around the white cell towers it measured *Extreme* values. One by one, everything started to make sense to me. *My teen daughter developed electro-hypersensitivity issues from that new installed white cell tower that was built in our neighborhood without our consent*. I also found out we had a new electrical smart meter installed (I wasn't paying attention to it until I learned about smart meters during my research) and that happens to be *right under my teen's bedroom!*

Proposed new cell tower site in Jan 2021 - 100 feet from my daughter's bedroom window.

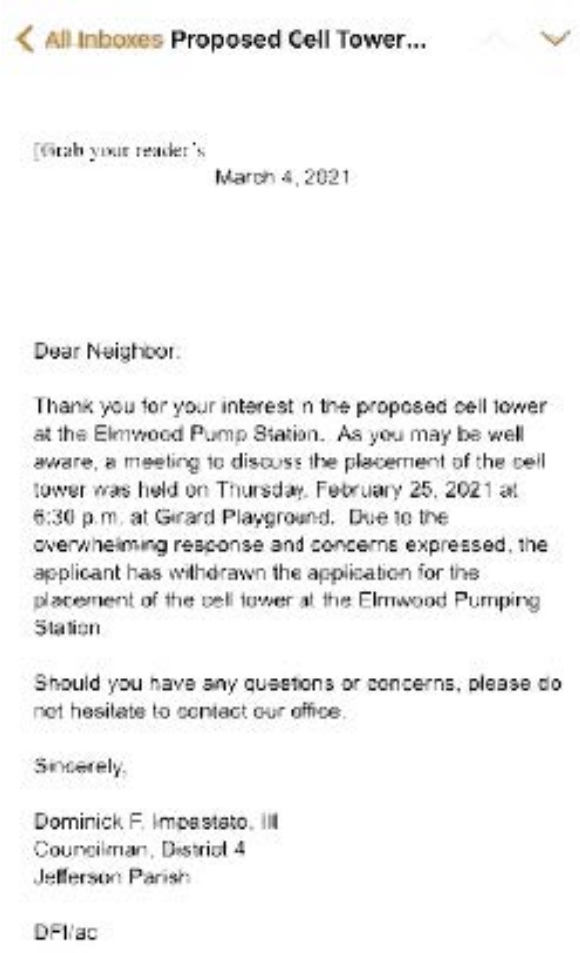


Proposed new Cell tower design below:



My neighborhood came together to protest the new cell tower that was proposed just 100 feet from my daughter's bedroom. We went to a townhall meeting with our city representatives. We asked questions on health, property value declines, and aesthetics. The Contractor had no clue on cell tower emissions, monitoring of our neighborhood for emissions, and health concerns that many neighborhoods with cell towers were experiencing. We were outraged, and in the end, We won! The Contractor withdrew his proposal and left our neighborhood intact.

Email from city:



All Inboxes **Proposed Cell Tower...**

[Grab your reader's

March 4, 2021

Dear Neighbor:

Thank you for your interest n the proposed cell tower at the Elmwood Pump Station. As you may be well aware, a meeting to discuss the placement of the cell tower was held on Thursday, February 25, 2021 at 6:30 p.m. at Girard Playground. Due to the overwhelming response and concerns expressed, the applicant has withdrawn the application for the placement of the cell tower at the Elmwood Pumping Station

Should you have any questions or concerns, please do not hesitate to contact our office.

Sincerely,

Dominick F. Impastato, III
Councilman, District 4
Jefferson Parish

DFI/ac

We won one battle, but the initial white cell tower that came up in March 2020 is still there. We tried our best to collect info on who it belongs to, and who to approach, as my neighborhood has extreme levels of RFR. There was no info regarding that cell tower with the city -- no owner, no apparent permits, NONE!

At that point, looking at all the health hazards of living in high RFR zones, we decided to move to a new neighborhood with minimal RFR levels. Our new place has no cellular reception inside the house, Wi-Fi is turned off, and whole house is hardwired. My daughter is doing better, her headaches, fatigue, irritability disappeared and her quality of sleep has improved a lot.

Wireless companies claim their antennas and other wireless equipment meet all Federal Communications Commission (FCC) exposure guidelines, and that may be true back then, but the guidelines themselves are almost 25 years out of date, and are not designed to protect children and individuals with pre-existing health issues. Cell towers don't belong in residential neighborhoods and schools with children. They are constant emitters of radiofrequency radiation and electromagnetic fields that create unnatural environmental exposure that needs more research and caution. Over the past several decades, independent researchers have published

thousands of peer reviewed scientific studies documenting serious adverse health impacts from exposure to wireless radiation, ranging from neurological and behavioral problems to cancers.

In 2013, the American Academy of Pediatrics (AAP) complained to the FCC (see https://ehtrust.org/2013-american-academy-pediatrics-letter-fcc-outdated-radiofrequency-cell-phone-wireless-radiation-exposure-limits/) that its exposure limits do not account for the unique physiological vulnerabilities of children, nor do they reflect current use patterns of wireless devices.

At this point, in looking at the corruption, irregularities and lawlessness of construction and maintenance of these cell towers, I want every citizen to be aware of the risks of this mindless use of newer technology that came out without adequate evidence of safety, and wish we would have more education on the risks of unwanted exposure, just like how careful we are with driving lessons to teens, and basic road safety instructions. Giving and selling a cell phone to anyone should come with pledge of care, responsibility and a easy-to-read safety manual. My wish is that we have more access to safer, responsible technology that is hardwired and proven safe.

I hope the telecom giants and FCC start to take responsibility for their actions, use some moral sense and apply ethics. I'm praying these cell towers disappear from neighborhoods, schools and playgrounds!

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/Prashanthi Atluri
Prashanthi Atluri, M.D.
4909 Folse Drive
Metairie LA 70006

K. Tahoe Stewards, LLC

Declaration of Tahoe Stewards and Tahoe for Safer Tech: How Detrimental Reliance on Misleading and False Claims is Resulting in the Sacrifice of America's Historic National Heritage.

This declaration is being submitted by Tahoe Stewards and Tahoe for Safer Tech, on behalf of over 4,000 community supporters who believe that irreparable harm is being caused by misinformation and disinformation being disseminated and promoted by wireless companies to convince citizens and local government officials that chronic exposure to radiofrequency radiation from cell towers is perfectly safe. This assertion is made, in part, based on claims by the Federal Communications Commission (FCC) that its so-called "safety guidelines" are based on corroborating evidence from the Food and Drug Administration (FDA). This is patently false, and is resulting in harm being caused to citizens across the country who find themselves in situations such as ours.

Tahoe Stewards, LLC is a not for profit foundation that was created to support environmental protections and to identify a vision of sustainability for Lake Tahoe and the surrounding areas.

On October 14, 2021, Tahoe Regional Planning Agency (TRPA) Hearings Officer Marsha Burch approved a controversial application for a 112-foot macro cell tower at 1360 Ski Run Boulevard, South Lake Tahoe. The proposed cell tower, located at the base of Heavenly Ski Resort in the middle of a residential neighborhood, has been vigorously opposed by hundreds of Tahoe residents over the past two years at public hearings before the City of South Lake Tahoe Planning Commission and City Council, before moving on to the TRPA for final permit approval. (The TRPA is the federal agency charged with protecting Lake Tahoe's environment.)

One day before the hearing, opponents of the tower permit submitted into the TRPA record thousands of pages of public comment, legal analysis, and peer-reviewed scientific studies on the environmental, health, and fire risks posed by macro cell towers such as the one (among many hundreds) proposed by Verizon in Tahoe's sensitive and federally protected ecological environment. The hazards to wildlife (including the bald eagle, deer, and at least one endangered species), as well as many RFR sensitive plants, presented by cell tower densification are likely to be irreversible and irrevocable.

The proposed tower will continuously bathe the surrounding residential community with up to 47,000 watts (47 kilowatts) of RF radiation. There is strong scientific and clinical evidence that anyone who is continuously exposed to 47 kilowatts of radiative power will likely become seriously ill. TRPA is not requiring Verizon to take accurate measurements of the dose effects, using available measurement equipment and protocols developed by members of the Congressionally authorized National Spectrum Management Association.

TRPA concedes that the Telecommunications Act of 1996 does not preempt the Interstate Compact as to environmental concerns, meaning TRPA recognizes that it has the power to regulate RFR emissions in the Lake Tahoe Region. But TRPA contends that the Agency and the

telecom providers get to decide how to "harmonize" their interests with the Public Trust established by Congress to protect Tahoe's unique and fragile environment. Opponents disagree and point to Article VII of the Compact and the TRPA's own Regional Plan, which explicitly require that TRPA prepare a Comprehensive Environmental Impact Statement (EIS) and analysis of the Wireless Tahoe Plan developed by a coalition of telecom companies and their lobbying arm, the Tahoe Prosperity Center.

TRPA and Verizon assert there is no problem with segmenting and piecemealing each tower permit decision, as illustrated in the recently approved Verizon macro cell tower application. Opponents contend that piecemealing, supported by arbitrary conclusions, violates the federal Administrative Procedure Act, as well as the recent decision on August 13, 2021 of the DC Circuit Court of Appeals in *Environmental Health Trust/Children's Health Defense v. FCC.* In this decision, the federal Circuit Court ordered the FCC to evaluate thousands of recent scientific articles and commentary about serious detrimental health and environmental effects of wireless radiation from cell towers and wireless equipment, and to engage in a reasoned decision-making process to determine whether the FCC's 1996 wireless radiation emissions standards need to be updated, based on the massive new evidence of linkages to harms documented in the past 25 years.

The Tahoe case illustrates how a single misleading and false claim can expand, compound, and cascade. The TRPA's and Verizon's counsel first wrongly assert that the FCC's thermal standard is the basis for "harmonization." Second, they assert and imply that the FCC's thermal standard applies to environmental effects, which it clearly does not. Third, by implication they suggest that the FDA has endorsed this standard, when the FDA has no jurisdiction whatsoever on environmental harms. In this way a series of misleading and false statements acquire a life of their own. The victim in the tragic case of Lake Tahoe is the loss of a unique national treasure.

Respectfully submitted,

/s/ Ben Lebovitz
Ben Lebovitz
o/b/o Tahoe Stewards
Tahoe for Safer Tech

L. Warm Beach Neighbors for a Safe Community

On behalf of Warm Beach Neighbors for a Safe Community, this declaration is submitted in support of the effort to hold the Federal Food and Drug Administration (FDA) accountable for establishing and promulgating a science-based standard for human exposure to radiofrequency radiation emanating from cell towers, antennas, smart meters and wireless devices of all kinds. Currently, the Federal Communications Commission, (FCC) is claiming – without evidence – that all such devices are "safe," asserting that it has been so advised by the FDA. Since the FDA has established no safety standards, this cannot be true. The result is that local and state officials across the country are making decisions about exposure to radiofrequency radiation based on a false premise, and creating an imminent hazard for the citizens they are sworn to protect.

We are a community concerned primarily with a 150 foot,12 antennae cell tower, with the potential for 24 more antennae, slated to be installed at the fire station in our rural community of Warm Beach, WA. This decision to grant the permit was made by the fire chief, John Cermak, and six elected commissioners, with no prior notice to the community, town employees and firefighters, or the Firefighters Union. The Union, the firefighters, and many members of the community have all been working to oppose this tower, to no avail.

Our top concerns are:

1. The permit cannot legally be denied on the basis of health concerns because the tower allegedly meets FCC "safety" standards, which FCC claims are based on input from the FDA. However, the FDA has no standard and no official policy! Proper testing was defunded years ago, and current testing only creates the illusion of safety. The FCC only looks at thermal standard, when there is much more that must be considered.
2. ALL firefighters in a study under these towers had brain damage, along with clinical symptoms, in a sworn affidavit. Similar studies have been published. The International Association of Firefighters is opposed to towers on or near fire stations.
3. At a 2019 U.S. Senate Hearing, telecommunication executives testified there are NO independent studies showing EMF exposure from 5G wireless technology is safe, and there are ample studies showing it is NOT safe. To believe that if it wasn't safe, a regulatory agency would step in, is in error. The telecommunications industry cannot even get liability insurance with regard to EMF exposure!
4. A handful of schools, including in Canada and California, have had to deactivate towers due to high numbers of children getting cancer and other serious illnesses directly correlating to the radiation from the tower.
5. The reach of the radiation is inconclusive, but some estimates are that it blankets more than three miles. Once this tower goes up in Warm Beach, hundreds of small towers will be set to go up in every neighborhood.
6. Radiation levels which meet current FCC limits have been proven dangerous by the FDA itself, yet the agency has failed to act. Health problems from high EMF levels are well

documented, exacerbated by the polarized pulsations of the radiation. Magnetic field exposure is also a major concern.

7. Fiber Optic to the Premises is a safer, reasonable alternative and should be prioritized.
8. We are deeply concerned that this tower will endanger the health of the firefighters and community residents, and impair the ability of firefighters to perform their jobs appropriately. Children, elderly, and those who are immune-compromised are particularly vulnerable. There is hard evidence that supports this and science is on our side. We believe those supporting this tower contract are operating on an assumption that the FCC and FDA have official policies stating that the RFR emission levels are safe, when there is no such official policy. Because of impaired performance due to RFR exposure, we are also concerned about the readiness of our firefighters. Firefighters in the state of CA sued on the basis of neurological damage and won; no towers are allowed to be erected fire stations in CA. Additionally, over 63 other cities have successfully banned these towers.
9. There are significant legal consequences, as there is a viable alternative supported with hard scientific evidence. We are concerned that the insurance provided by AT&T is grossly inadequate, and in fact the telecommunications industry cannot be insured for health and environmental damages caused by EMF exposure from their antennas and equipment.
10. We have offered public comment at many commissioners meetings, provided testimony at the public hearing, and met with the chief via Zoom and in person. We stated that the reliance on the thermal standard set by the FCC is in gross error, but our concerns have been dismissed. The law does not support the health and rights of the individual.

It is our belief that Chief Cermak and the commissioners have made a decision based on faulty safety standards, and that this decision will endanger the health of the firefighters and community residents, impair the ability of the firefighters to perform their jobs appropriately, and make North County Fire vulnerable to liability issues. They are operating on an assumption that federal agencies have examined the science and deemed it to be safe, when that is not the case at all. They have been effectively convinced that there is no other way to provide for the needs of the community other than allowing this dangerous technology. In spite of myriads of scientific studies proving otherwise, they cling to federal assurances that there is no possibility of harm, or that permitting harm is worth the benefits of providing a service that is their job to provide. In addition they have a duty to know and disclose the risks to the firefighters living there, and ensure that they understand the avoidable risk. They have not done so. Firefighters have not been given an opportunity to give their informed consent.

Submitted under penalty of perjury,

/s/ Heather Andrus
Heather Andrus
o/b/o Warm Beach Neighbors for a Safe Community
Warm Beach, WA

M. Eric Windheim



December 11, 2021

To Jennifer and Bud Andree:

The purpose of this report is to provide you with my opinion about the levels, dangers and recommendations of radio frequency radiation (RFR) present at the premises located at 9208 Daylily Court SE, Kirtland AFB, NM 87116 (the "Property"), **as a living example of the kinds of serious situations I face daily in my practice as a certified building biologist.** I am pleased to provide you with my **professiona**l **opinion** on the matter.

I must point out at the outset that none of these personal calamities would arise if the FDA were to clarify the present uncertainty relating to whether it has adopted RF safety standards. Many of my cases involve clients who are being left in a quandary on how to protect themselves, their families, employees, and neighbors. Their dilemma is a direct result of the belief and reliance by local authorities, personal physicians, school administrators, wireless providers, and others that the FDA, in contrast to the FCC, has in fact promulgated an official RF policy, when based on my research it has not. Indeed, the FDA is not only allowing such misinformation and disinformation to become endemic within the general public, it appears that it is actively encouraging it. In my view, widespread confusion and great personal suffering can be avoided if the FDA will simply clarify its official RF policy and regulations.

By way of background, I am a Building Biology Environmental Consultant (BBEC) and Electromagnetic Radiation Specialist (EMRS) having been trained and certified by the International Institute for Building Biology and Ecology since 2015: https://buildingbiologyinstitute.org/. In 2018 I completed the Radio Frequency Safety Officer Course (RFSO) accredited by the Institute of Electrical and Electronics Engineers, Inc. (IEEE). My experience includes consulting to detect, measure, and determine biological risk levels of property and to and provide written assessments and reports with effective solutions to homeowners, developers, medical doctors, notable scientists, municipalities, firefighter unions, housing corporations and high tech semiconductor companies. Further, I have significant training in the use of precision instruments that measure all EMFs including radio frequency radiation (RFR), AC magnetic fields (mG), electric fields (EF), and dirty electricity (DE). Attached are my certifications, bio and background that provides a more detailed information about my education and experience.

I see clients in all stages of injury and health decline from EMF exposure ranging from mild headaches, fatigue, ringing in the ears to debilitating insomnia, acute cardiac problems, emergency hospital visits and delusional psychosis. Many clients experience instant, rapid or complete recovery when the EMF exposure is reduced or eliminated. I find that immediate reduction or avoidance of EMF exposure is the key to symptom relief and recovery. Once you

are traumatized by EMF exposure, health, both mental and physical, declines rapidly. Some clients never recover completely.

My education about the biological harm caused by EMF began in 2012 when I met and assisted dozens of people who had been harmed by so-called Smart electric and gas utility meters to testify at public Board meetings of the Sacramento Municipal Utility District, SMUD. Twenty-three of these people submitted written declarations of harm and injury sworn under penalty of perjury. Most of these Smart meter victims very in perfect health until, unbeknownst to them, the Smart meter was installed in close proximity to the bed they slept in. We convinced the SMUD Board & Staff to allow us to have the electromechanical Analog meters returned or retained and most of the victims stated that pain and suffering ceased immediately while others took weeks, months or even years to recover. Very sadly, some of these victims never recovered and amazingly are currently painfully traumatized by most forms of electricity found in the average home and our modern electrified society. Sweden recognizes this as a functional impairment or functional disability.

I began to notice a pattern of symptoms related to synergistic EMF exposure. The victims with the most intense symptoms and those whose symptoms did not stop with removal of the Smart meter had multiple EMF exposures including mG fields, EF fields and dirty electricity, DE. This fascinating observation lead to my 2013 decision, at age 60, to become trained and certified as a BBEC & EMRS.

I performed detailed EMF measurements of the Property on June 2nd, 3rd and 4th, 2021. It was noted that there are two RF transmitting electric meters located on the exterior wall 1 foot from the pillow of the master bed. Both service entrance electric panels and both utility service laterals where at the same location: at the pillow of the master bed. In addition, there were two RF transmitting gas meters on a second bedroom wall about 20' distant which transmitted RFR at drastically higher power levels than the electric meters. To obtain a useful sampling of data I for mG, RFR and EFs I used currently calibrated GigahertzSolutions HF59B RF meters with the UBB27 antenna and the NFA1000 meter for datalogging of the RFR, mG and EF exposure. All of the findings are in my separate report for this property but I list the EMF exposure summary just below

1. Magnetic fields: Severe to 5X Extreme
2. Radio Frequency Radiation:
   - Electric Smart Meter pulses every 18 minutes: lower Severe,
   - Gas meter RF pulses every 4 hours: Extreme
3. Electric Fields: Severe
4. Dirty Electricity (DE): Severe to 3X Extreme

Comment: At bed pillow everything is Extreme except Electric fields which is Severe: symptoms are likely and could be expected sooner or later in all people. This is a synergistic exposure of all four EMFs.

It is well documented that the health consequences resulting from such significant multiple exposures include, but are not limited to mild to severe sleep problems, tinnitus, chronic

fatigue, headaches, concentration, memory, learning and immune system problems, heart palpitations, nausea, joint pain, swelling of face, neck, eye problems, rashes, and cancer. In this case, the levels of EMF measured are highly elevated and correlated to painful symptoms, neurological damage, disruption of hormones and deadly non contagious diseases.

Indeed, and as part of the scope of my work, I interviewed Mrs. Andree who told me that she was experiencing a number of these and other symptoms. She also told me that her health had so deteriorated that she was unable to reside at the Kirtland AFB Property. Further, the symptoms she identified for me were the same symptoms I noted above. Further still, Mrs. Andree told me that after she stopped residing at the Property, her symptoms greatly subsided but still persist at her new home in rural South Dakota.

Mr. & Mrs. Andree decided to buy a house in rural South Dakota for Mrs. Andree to live and recover in. I have visited, tested, assessed and remediated the house and Mrs. Andree reports that although she feels and sleeps much better than at Kirtland AFB she is far from recovered and has to sleep in the walkout basement with many electric circuits turned off at the panel.

In my opinion, my findings of multiple, synergistic and extremely high EMF exposure provide a clear explanation for the symptoms that were impossible for Mrs. Andree to avoid experiencing at the Kirtland AFB Property and her symptoms were a direct result of her exposure to the multiple Severe & Extreme levels of EMF. In Mrs. Andree's case, removing her from the triggering exposure was the only viable option.

Based on my background and experience, it is my professional opinion that:

1. The levels of multiple EMF exposure were highly toxic and hazardous.
2. The health symptoms reported by Mrs. Andree are consistent with the exposure to the Extreme levels of multiple EMFs. Peer reviewed studies worldwide show the same constellation of symptoms relative to these exposures. Close proximity to RF transmitting utility meters is very similar to close proximity to cell towers and studies show a high intensity of many neurobehavioral symptoms and distant proximity shows much less intensity and variety of symptoms. See Santini et al (France) in the attached exhibit #5).
3. The health symptoms reported by Mrs. Andree are directly and proximately related to her simultaneous, multiple exposure to the Severe and Extreme levels of EMFs at the Kirtland AFB Property.
4. It was impossible for Mrs. Andree to avoid experiencing her reported symptoms so long as she resided at the Kirtland AFB Property.

Mrs. Andree represented to me that she moved from the Property to a new location in rural South Dakota. It is my further professional opinion that Mrs. Andree had no recourse but to move and to remove herself from the hazardous levels of EMF exposure and that it was the only viable option for you. Please note that when a person is exposed to such an extreme and continuous dose of multiple EMF exposure within the home, there is very little hope of relief, much less recovery, as long as the exposure exists. The enormity of the EMF exposure at this

property makes it very reasonable that Mrs. Andree had no choice but to move out to a much safer, ultra-rural location.

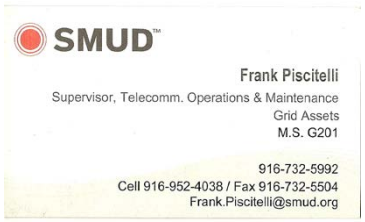
The opinions expressed in this report and the referenced assessment report of the Kirtland AFB Property are made within a reasonable degree of professional certainty.

Observations on utilities, FCC, FDA, EPA, IEEE and ICNIRP: these are the controlling agencies and engineering organizations that are supposed to be protecting us from harmful levels of EMFs.

RFR Transmitting utility meters: Gas & Electric.

Most electric utilities published false promises of Smart meter safety stating that the "Smart meter meet all FCC safety guidelines, only sends radio signals SIX times per day and are less powerful than cell phones".

Sworn utility testimony in court verifies that these exact same meters with exact same FCC ID Number actually transmitted 10,000, times per day, median count, and up to 190,000 times per day. How could they be so very wrong? All indications were that the Department of Energy (DOE) was responsible for the nationwide dissemination of the totally inaccurate and grossly negligent falsehood: or was it intentional deception or was it both? Electric utilities nationwide used the exact same verbiage: a sure indication of indoctrination from above.


SMUD™

Frank Piscitelli
Supervisor, Telecomm. Operations & Maintenance
Grid Assets
M.S. G201

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Actual testing of SMUD Smart meters by SMUD staff, Frank Piscitelli, using a $25,000 NARDA NBM-550 Broadband field meter, document that their Smart meters actually transmit at up to 240x more peak power than a flip cell phone, and 75x higher peak power than the Blackberry the SMUD staffer was using.

An elderly 78 year old female Holocaust survivor had 25 RFR transmitting Smart meters installed opposite her bedroom wall, and her testimony is documented here: https://youtu.be/2uMfx-FsJiE?t=2819

SMUD

Sacramento Ca.

Meter= NARDA Broadband Field Meter, 3 MHz – 18 GHz, Model # NBM-550
Calibration good until 12/10/12.

Measurements are in mW/Cm2

Measurements at SMART Meter Panel

	Directly on SMART Meter	Duration of Ping	3' from SMART Meter	Duration of ping	7" from SMART Meter	Duration of Ping
Peak Power	.0601	324 ms	.0004	372 ms	.0069	584 ms
Peak Power	.0743	1,450ms	.0005	340 ms	.0066	1,599 ms
Peak Power	.0959	377 ms	.0006	345 ms	.0075	343 ms

Measurements inside Apartment

Location/Item	Reading	Duration Of Ping
Inside Closet Wall	.0016	341 ms
Inside Closet Wall	.0015	727 ms
Inside Closet Wall	.0009	638 ms
Blackberry cell phone	.0013	N/A
Motorola flip phone	.0004	N/A
Microwave Oven	.3309	1 minute

Performed 10/16/12

While it is becoming increasingly apparent that peak, pulsed and modulated EMF, and RFR in particular, is much more harmful, the FCC and controlling agencies rely upon 30-year old analog signal testing standards which are not pulsed or modulated.

FCC public safety guidelines rely on 30-minute RMS time averaging, which can reduce a very powerful but very short Smart meter RFR transmission which happens every 18 minutes or 4 hours, to absolute insignificance, even though the impact of these "spikes" can damage living tissue. This is like time averaging the impact of a hammer hitting a nail head, and averaging in all of the time the hammer was not actually touching the nail between hits.

The biggest, and most recent, failing of the FCC yet is the fact that they recently lost a federal court challenge. A historic decision in Federal Court this past August orders the FCC to explain why it ignored mountains of scientific evidence showing harm from wireless radiation. https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/

While the USA has NO federal standards for AC magnetic field exposure, the IEEE recommends a public limit of 9,040 milliGauss (mG), and ICNIRP (a non-profit organization based in Germany whose conflicts of interest with the wireless industry are well-documented) recommends 2,000 mG for a public limit. There are independently funded, peer reviewed studies that show harms at levels 8,000x lower. See a few examples below:

- 16 mG Intermittent exposure to AC magnetic fields results in an 80% increased risk of miscarriage for pregnant women (Li et al 2002).
- ≥ 4 mG A 560% increased risk of all major cancers in Danish children living near high voltage power lines (Olsen et al 1993).
- ≥ 3 mG Children in remission from leukemia had a 450% increased risk of dying when recovering in homes with 3 mG or greater (Foliart 2006).
- 3 mG An 87% increased risk of hematological cancer in adults living near high voltage power lines (Youngson 1991).
- 2 mG Magnetic field exposure during pregnancy results in a 3.5 fold increased rate of asthma in children (Li et al 2011).
- ≥ 2 mG A 710% increased risk of childhood leukemia in children under four years of age sleeping in 2 mG or above magnetic fields (Michaelis 1997).
- 1.9 mG A 70% increased risk of acute myeloid leukemia and chronic myeloid leukemia for adults living near high voltage power lines (Feychting 1994).
- ≥ 1.4 mG A 570% increased risk of leukemia in children under six years of age than for children with exposure under 0.3 mG (Green 1999).
- ≥ 1.3 mG A 200% increased risk of ADHD diagnosis in children living in homes ≥ 1.3 mG; a 338% increase when ADHD persists into adolescence (Li et al 2020).

My assessment report on the Andree residence at Kirtland AFB clearly shows that the pillow on the Andree master bed averaged 1.4 mG with peaks up 7 mG.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

Eric Windheim

Eric Windheim BA, BBEC, EMRS, RFSO
Certified Building Biology Environmental Consultant
Certified Electromagnetic Radiation Specialist
Radio Frequency Safety Officer graduate
Windheim EMF Solutions

September 16, 2021

Exhibit 1: Site View: Google maps, distance from XXX Marshall Heights Dr to towers is 450'.

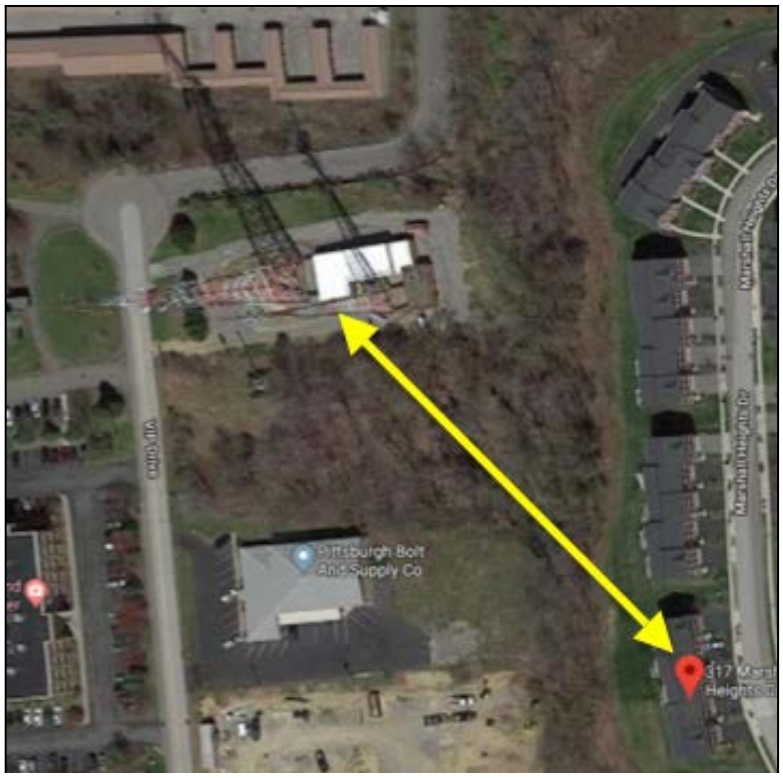


Exhibit 2: In front of residence 500’ from towers: 14,000 μW/m^2,
14X Extreme Concern.



Exhibit 3: 400’ or closer to the towers: >30,000 μW/m^2, >30X Extreme Concern.



Exhibit 4: Building Biology Precautionary Guidelines (SBM-2008)

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RADIOFREQUENCY / MICROWAVE EXPOSURE GUIDELINES

(High Frequency Electromagnetic Waves)

1› BUILDING BIOLOGY PRECAUTIONARY GUIDELINES (SBM-2008) For Sleeping Areas

Power density in microwatt	No Concern	Slight Concern	Severe Concern	Extreme Concern
per square meter µW/m²	< 0.1	0.1-10	10 - 1000	> 1000
per square cm µW/cm²	< 0.000,01	0.000,01 - 0.001	0.001 - 0.1	> 0.1

2› BIOINITIATIVE REPORT PERCAUTIONARY GUIDELINES (2007) www.bioinitiative.org/

Dr. Martin Blank - Columbia University

Biologically Based Precautionary Levels 1,000 µW/m² or 0.1 µW/cm²

3› CANADA AND USA GOVERNMENT GUIDELINES (1999)

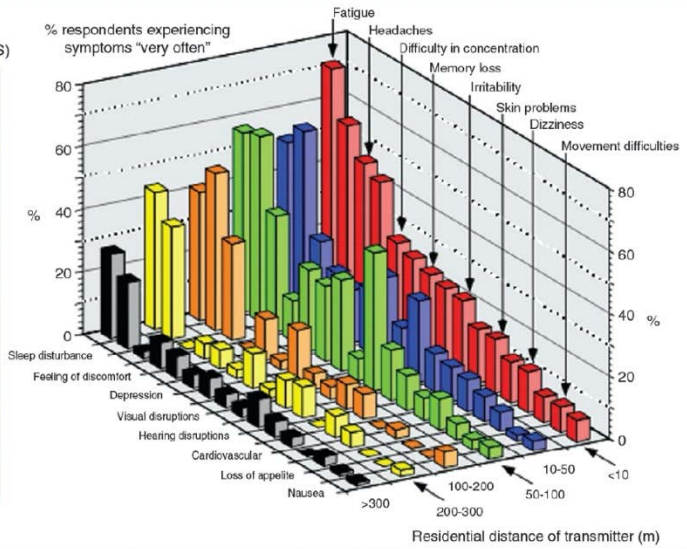
In Canada, guidelines for Radio Frequency Wave exposure lay under the jurisdiction of Health Canada. Safety code 6 was developed in 1999 and offers federal guidelines for safe RF exposure levels. These limits are in the range of **2,000,000 to 10,000,000 µW/m² or 200 to 1000 µW/cm²** and are based solely on the short term thermal effects or the heating of body tissue. Adverse biological effects have been documented at levels far below Safety Code 6 guidelines. No Canadian biological exposure guidelines exist for long term exposure to low level Radio Frequency Radiation. This also holds true for the USA.

Exhibit 5: Santini et al (France)

Neurobehavioral Symptoms near Cell Towers

Rapid aging syndrome (RAS)
Electro-Hyper-Sensitivity (EHS)

1. Fatigue
2. Sleep disturbance
3. Headaches
4. Feeling of discomfort
5. Difficulty concentrating
6. Depression
7. Memory loss
8. Visual disruptions
9. Irritability
10. Hearing disruptions
11. Skin problems
12. Cardiovascular
13. Dizziness
14. Loss of appetite
15. Movement difficulties
16. Nausea



Work of Santini et al (France): Pathol Biol. 2002;50:S369–73.

Creating a Sleeping Sanctuary

5 Easy Steps to Create a Sleeping Sanctuary

1 Use battery clocks near bed.

Research has shown exposure to high magnetic fields while sleeping can cause severe long-term illness. Many electric clocks produce high magnetic fields.

2 Turn off bedroom-affecting circuits

A restful sleep is necessary for health and a strong immune system. Electric fields affect you bio-communications, keeping you from sleeping soundly.

3 Eliminate or shield from RF.

Radio frequency (RF) signals from portable phones, cell phones, and wireless devices have been shown to interfere with the body's immune system.

4 Use beds without metal.

Metal frames and metal box springs can amplify and distort the earth's natural magnetic field, which can lead to a non-restful sleep. Use natural materials.

5 Make sure there are no elevated magnetic fields.

Magnetic fields from appliances and building wiring can penetrate walls into a bedroom and disrupt the body's communication system.

For more information:
Institute for Building-Biology® & Ecology
Reference: Sleeping Sanctuary ~ v4

Why do we need a sleeping sanctuary?

It's about Stress – and "de-stressing"

The human body is an amazing, self-rejuvenating entity that has the ability to repair itself while it sleeps. This is accomplished with its own, internal electrical system that functions with very weak electrical impulses. Electrical impulses are generated by the brain and are used for intercellular communication. This is possible because the body is composed mainly of water with a high mineral content making it highly electrically conductive.

Cells know when to divide by vibrating. Brain cells, nerve cells, bone cells, all vibrate at different rates in order to communicate with one another. Unfortunately, our bodies act like tuning forks. When you vibrate a tuning fork (external electrical influence), any turning fork (like our body) in its vicinity will start vibrating at the same frequency or rate, and therefore will be confused as to how fast to grow.[1]

In the typical sleeping area, electrical exposure from external sources (live electrical wiring in ceilings, walls and floors) is thousands of times stronger than the body's own electrical system. Long-term exposure to these high level electric fields can impair the body's ability to communicate within itself and impact health. The average person spends approximately 1/3 of their life sleeping. Doesn't it make sense to reduce exposure to electric fields in our sleeping areas?

Some people develop symptoms when they experience long-term exposure, especially at night, to elevated levels of electricity, such as: headaches, hyperactivity, nightmares, depression, fatigue, eyestrain, and muscle cramps.

Biological problems associated with electromagnetic stressors fall into two major categories[2]:

1. Brain (behavioral abnormalities, learning disabilities, altered bio-cycles and stress responses)
2. Growing tissue (embryos, genetics and cancer)

Research has shown that for a body to properly detoxify during sleep it must be alkaline, and high electromagnetic fields lead to acidity. This is especially true for heavy metal detoxification.[3]

[1] Oschman, James. *Energy Medicine*. London: Churchill Livingstone, 2000.
[2] Becker, Robert O. *Cross Currents*. New York: Penguin Group (USA) Inc., 1990.
[3] http://www.klinghardt.org/docs/Heavy%20Metal%20Detox%20Clinical%20Pearls.pdf [cited Feb 2007]

IBE is a non-profit organization dedicated to educating people regarding the biological impacts of homes and buildings
P.O. Box 8520 • Santa Fe, New Mexico 87504 • 866.960.0333 • www.buildingbiology.net

Certificate

Of Completion

INTERNATIONAL INSTITUTE FOR BUILDING-BIOLOGY® & ECOLOGY

Department for Certificates and Awards does hereby Certify that

Eric Windheim

has successfully completed all professional requirements and is awarded this Diploma as a

Building Biology Environmental Consultant

A Building-Biology Environmental Consultant (BBEC) is one who has demonstrated proficiency in the use of testing instruments, who can identify hazards in homes and offices, especially those that derive from the presence of AC electric & AC magnetic fields, VOC's, out-gassing chemicals from building materials, household chemicals, pesticides, and can propose remedies.

Final Project Commended, 03 December 2015

The International Institute for
Building-Biology® & Ecology
P.O. Box 8520
Santa Fe, New Mexico 87504

Michael Conn
IBE Executive Director



Certificate Of Completion

INTERNATIONAL INSTITUTE FOR BUILDING-BIOLOGY® & ECOLOGY

Department for Certificates and Awards does hereby Certify that

Eric Windheim

has completed advanced requirements successfully and is awarded this Diploma as an

Electromagnetic Radiation Specialist

An Electromagnetic Radiation Specialist (EMRS) is one who has demonstrated proficiency in the advanced use of testing instruments, who can identify hazards in homes, schools and offices, especially those that derive from the presence of AC electric & magnetic fields and radio frequency radiation, and can propose effectual remedies.

Commended: 16 February 2015

International Institute for
Building-Biology® & Ecology
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Santa Fe, New Mexico 87504

Michael Conn
IBE Executive Director



IEEE

Certificate of Completion

This is to certify that

Eric Windheim

has completed the course

Radio Frequency Safety Officer (RFSO) Course

8 March, 2018
Chandler, AZ, USA

2.4 Continuing Education Units; 24 Professional Development Hours

Vice President, IEEE Educational Activities

THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC. FOUNDED NEW YORK 1884

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CV of Eric Windheim

Eric Windheim is the owner of Windheim Environmental Solutions, a California high technology and environmental health and wellness company that he founded in 1991. The company is located in the Sacramento area with clients worldwide. Windheim EMF Solutions specializes in electromagnetic radiation and provides inspection, assessment, measurement, testing, abatement, and remediation of dangerous and unhealthy magnetic fields, electric fields, microwave radiation, and "dirty electricity." Clients can feel better instantly when effective EMF solutions are enacted.

Windheim is a Certified Electromagnetic Radiation Specialist (EMRS). He is an expert in EMF inspection, detection, measurement, and prevention, and is certified to advise homeowners, homebuyers, architects, builders, inspectors, and engineers in the methods and practices that create and maintain a minimized presence of electromagnetic fields in homes and low-rise commercial buildings.

He is also a Certified Building Biology Environmental Consultant (BBEC). He has demonstrated proficiency in the use of testing instruments, and can identify hazards in homes and offices, especially those that derive from the presence of AC electric and AC magnetic fields, VOCs, out-gassing chemicals from building materials, household chemicals, and pesticides. He can propose solutions that provide a healthier indoor living environment that uses nature as its model.

Education: Windheim graduated from the University of California at Santa Barbara and has studied Environmental Science, Earth Science, Geography, Geology, Hydrology, Remote Satellite Photo Interpretation, and Advanced Solar Engineering.

Professional Background: Windheim specializes in EMF Assessment and Abatement, providing inspection, testing and remediation of microwave radiation, dirty electricity, and electric and magnetic fields. Prior to this he was the Director of Technical Services for the Sheet Metal and Air Conditioning Contractors National Association (SMACNA), Redwood Empire Chapter, providing education to HVAC contractors for California Title 24 Energy Regulation compliance. He worked for more than fourteen years in industrial machinery sales, residential and commercial solar energy system design, and sales with FAFCO Inc.

In June of 2012 Mr. Windheim founded and became Director of the Sacramento Smart Meter Awareness action group. In one year, without an attorney or funding, he and dedicated local leaders successfully prevailed against Sacramento Municipal Utility District (SMUD) in regaining the safe and reliable Analog Meter option for all Sacramento County/SMUD customers in order to restore health, safety, privacy, and accurate billing. This is a national victory with SMUD becoming the first municipal electric utility to allow customers to again use Analog Meters. Windheim is working with others nationwide to achieve the same results and available for speaking engagements, presentations on EMF safety and human health, and a film screening of Take Back Your Power for your group or organization.

2. **BBEC**: When I started my certification training with the International Institute For Building Biology & Ecology I focused on getting my Electromagnetic Radiation Specialist, EMRS, certification. I completed that in February of 2015 and have been moving forward ever since.

I also wanted the additional training and certification on basic healthy building systems, remodeling, and air and water purification so I completed the curriculum and final project for BBEC, Building Biology Environmental Consultant in December of 2015.

Eighteen people have been fully certified by the Institute as both EMRS and BBEC since 1987.

Had my parents hired an EMRS or BBEC they could have detected and corrected problems that caused the Extreme Concern levels of dirty electricity and magnetic fields in their house. When was the last time your house had an EMF Risk Level Assessment? Schedule one soon and get the facts about your house.

3. **EMRS**: At this time there are only eight of us with this level of certification in the USA.

12 months, four certification seminars, 21 courses of study and 14,000 air miles latter I received my certificate as a Certified Electromagnetic Radiation Specialist (EMRS) in February of this year. Phwew, I made it. It was a big and all consuming task but it paid off in the skills that I learned and the new friends I made along the way. I really never ever thought about going back to school at my age but this is so fascinating that it more fun than work. The study and book learning were very informative and the exams were confirming and rewarding but the special EMF testing techniques and protocols that I picked up from the IBE instructors really made the difference. IBE instructors made the biggest difference for me.

Although I was involved in electric power quality improvement for electrical efficiency in 2008 it was the battle we had with our electric utility, SMUD, that really motivated me. Once we won the foothold of being able to have the safe and reliable analog meter back I saw the need to become aware of all facets of EMF assessment and remediation because *biologically experimental smart meters* were not the only EMF dangers in the American home. The so-called *smart meter* just pushed people over the symptomatic threshold into the realm of hypersensitivity to all things electric.

I really get a thrill from hearing my clients rave about the great sleep they are getting since I converted their bedroom into an ultra low EMF sleep sanctuary. Never did any of their doctors or druggists provide them with such a sound and refreshing sleep but none of those came to give the house a check up for EMF or knew how to do EMF remediation. Duh!

The other really rewarding activity is working with my certified electrician friend Dylan Lecair when we correct wiring code violations that cause dangerous magnetic fields. Although we know there is a code violation from my initial magnetic field survey it can take us 3 hours to 2 days to find it and correct it. Recently we lowered a 10 mG magnetic field found on the pillows of the master bed to a very low and safe level of .25 mG. It is a real challenge; a lot of fun and clients feel better as the result!

I have found what I want to do for the rest of my life: I get paid for helping people avoid pain, suffering and family injury in their own home and I have fun while I am doing it! I hope and pray that I can do my best with what God gave me for a very long time to come.

4. **RFSO**: As a Building Biologist Environmental Consultant (BBEC), and Electromagnetic Radiation Specialists (EMRS), I am required to obtain Continuing Education Units (CEUs) every two years to continue my Healthy Building Environmental Learning Center (hbelc.org) certifications to stay current with rapidly evolving Science and Industry latest developments.

I recently completed the Radio Frequency Safety Officer (RFSO) Course through the Institute Of Electrical And Electronics Engineers (IEEE) Professional Development Class.

Course Highlights

The course I took covers the way the FCC determines Safe Levels of RF Radiation, which considers only the thermal effect of RF radiation.

If it were not for my study of peer reviewed reports on biological damage caused by RF, case histories on communities that have cell towers, documenting biological RF radiation health damage and my own personal experience with my clients when the radiation is reduced or removed such as when a transmitting smart meter is removed I would certainly believe that the is no possibility of any harm until your body

Why I Took The Course

I took the course was to get the "Inside View" of how engineers for wireless are educated and what they use as guidelines.

I felt the course was very informative, believable and helps me understand why government leaders believe that there is no harm unless your body actually heats up by greater than1ºC (1.8ºF) from the RF radiation.

Final Thoughts

The RFSO training was very compelling and explains the way RF Radiation heats the body but it acknowledges that non-thermal biological damage is uncertain (in the eyes of the IEEE and FCC).

XII. APPENDIX 3: Declarations from Individuals

In this appendix are declarations from citizens whose lives have been altered because of their firm belief that exposures to supposedly safe RF emitted from devices and systems that they have used, or that have been in their environment, have caused them health, safety, and other quality of life-compromising challenges. In every case decision makers with authority are representing that the federal government (FCC and FDA) has promulgated official safety standards covering RF radiative emissions, when Petitioners and Declarants can find no credible evidence that such official FDA safety standards have in fact been formally adopted. The present state of regulatory uncertainty and ambiguity presents a risk of irreparable harm to these Declarants and many others and an Imminent Hazard to public health.

N. Ellen Marks

My name is Ellen Marks. I am submitting this declaration in support of an effort to compel the Food and Drug Administration to create, promote and enforce up to date, scientifically-based guidelines for human exposure in regard to emf/rf emitting devices before more people suffer the fate of my husband, Alan Marks.

In May of 2008, my seemingly healthy 56 year-old husband Alan had a grand mal seizure and subsequent diagnosis of a brain tumor. About a week later Senator Ted Kennedy suffered the same fate. Our son had worked for the Senator in his private office. Our son was in touch with Kennedy's staff and they informed him that the Kennedys believed the Senator's cell phone use was the most likely cause of his brain tumor.

I was stunned as my husband was in real estate development and sales and always held his cell phone to his right ear, exactly where the tumor developed. He had started using a cell phone in the late 1980's. I began researching the connection and reached out to scientists worldwide; I sent them his cell phone records and medical records. They all responded stating that my husband's glioma was more likely than not the result of his cell phone use.

In September of 2008, I was contacted by Congressman Dennis Kucinich to testify at a Congressional hearing on Cell Phones and Health. The telecom industry trade group (CTIA) was asked to testify, but refused. A representative from the FCC, sitting next to me, did testify, and when asked why they had not changed their outdated obsolete guidelines since 1996, he responded that Congress had not instructed them to do so. He also stated they have no scientific expertise in this area; they defer to other government agencies. The result of that hearing was that Rep. Kucinich introduced a federal cell phone Right to Know bill, but it died without passing when he left office. I learned quickly that telecom lobbyists have great influence over our legislators and follow the tobacco industry playbook. I have since testified in many forums with industry officials, and watched and listened as they spread misinformation broadly.

In 2012 I went to Washington again and met with officials of the General Accounting Office (GAO) at their request. They had been asked by several legislators to investigate this issue. The GEO released its report a short while later, instructing the FCC to reassess their guidelines for human exposure to cell phones. The FCC eventually opened a formal Notice of Inquiry and received thousands of comments from experts and individuals harmed by their exposure to wireless radiation. The FCC ignored the comments in their entirety and in 2019 decided - arbitrarily and capriciously –to keep the outdated guidelines in place.

I have educated myself on the science and the so-called "safety testing" of cell phones for 13 years. There is an abundance of published, peer-reviewed science demonstrating the clear link between cell phone exposure and brain tumors (and other cancers). Since I began speaking out about this in an effort to save others from the horror my family endured, I have met many other families suffering the same fate. Many of the people I met are now deceased – some as young as 18 years old! The cell phone industry likes to claim that brain tumors are not on the rise. That is based on a very biased analysis of the data. Brain cancers are indeed on the rise, especially in younger persons.

My husband had his first craniotomy in June of 2008. He was fortunate, as his glioma was a grade 2. However, it affected his cognitive abilities and behavior greatly. As his neuropsychiatrist stated “this tumor set off a nuclear bomb in your living room.” This tumor , caused by exposure to his cell phone and a lack of proper oversight by the FDA, robbed me of my real husband and our 3 children of their real father. In 2020 his tumor returned and this time the doctors informed us it is terminal. He recently underwent another craniotomy and is not doing well.

My husband had no other exposures to radiation or other risk factors which might have been the primary cause of his brain tumors. There is excellent science proving the link, yet the FDA is ignoring its responsibility to research, develop, promulgate and enforce true science-based standards for exposure to wireless radiation for devices like cell phones, and instead, is permitting the FCC to maintain non-protective standards while it spreads mistruths to the public, shareholders and legislators.

In 2019 Dr. Jeffrey Shuren, director of the Center for Devices and Radiological Health at the FDA, responding to questions posed by Representative Anna Eshoo concerning radiofrequency radiation and health, furnished an unsigned, so-called “scientific review” which was neither scientific nor peer reviewed. The report read as though it was written by the cell phone industry. This bogus document, filled with only industry funded studies, appeared to appease Rep. Eshoo and other members of Congress, and their inquiry died.

I note that Dr. Shuren has a clear conflict of interest regarding wireless radiation (his wife is a lobbyist for AT&T) and the FDA and FCC have a long history of a revolving door with the telecom industry. Neither agency is actually protecting public health, and my husband and so many others are paying the price. They are considered to be collateral damage in industry’s attempt to hold off public scrutiny for as long as possible while the industry reaps unprecedented profits.

The current guidelines promoted by the FCC, which the commission claims are based in part on ”advice” from the FDA, only take into account heating of tissues. Science has now proven conclusively that DNA damage (leading to cancer) is occurring below levels which cause heating. The public needs and deserves guidelines based on the truth- not on what helps telecom perpetuate their mistruths and pad their bottom dollar. Many cancers have long latency periods and children are sleeping with their phones on – basically using them 24/7. Children are most vulnerable to this exposure, but we may not see the impacts of their exposure for years or even decades.

My husband’s cancer from his cell phone has destroyed our lives. Another victim commented to me that “the only thing worse than dying from a brain tumor is living with one.” I agree. It is a horrific disease which affects the entire family.

I have worked endlessly to help cities and states adopt cell phone laws that require retailers to post advisories about the dangers of exposure at the point of sale. The public wants this, but the industry has used the courts to block any such laws. In Berkeley, CA the law

prevailed all the way to the Supreme Court of the United States. At the last moment the FCC joined in the case, stating they already have guidelines in place and therefore Berkeley's law was pre-empted. The Court agreed with the FCC, and once again, our government agencies kept the truth from the public, under the guise of already having provided "science-based" information. The plain fact is, the FDA/FCC guidelines are obsolete. They do not protect human health and are a disgrace and disservice to the American people.

I am not foolish enough to advocate against the use of cell phone use. This technology is here to stay. But we do need safer equipment (which I understand the telecom industry has already patented but not yet released), clear use instructions at the point of sale, and most importantly federal guidelines that truly protect human health.

Under penalty of perjury I submit this declaration.

/s/Ellen Marks
Ellen Marks

O. Jennifer Andree

My name is Jennifer Andree, and I write this declaration in support of an effort to have the Federal Food and Drug Administration fulfill its responsibility to document and promulgate a set of health-based standards for electronic devices, including smart meters. The lack of science-based standards and consideration of effects of radiofrequency radiation at non-thermal levels has led to a series of events that has completely devastated my life, and the lives of countless other Americans.

I am a wife, mother, nurse, veteran and a victim of exposure to smart meter radio frequency (RF) radiation. My official diagnosis is "Overexposure to Microwave Radiation." My husband Saniford and I and our son occupied a rental unit on a military installation where the smart meter RF exposure occurred. Saniford dedicated 30+ years of his life serving in the United States Air Force and continues to serve as a DOD civilian employee. I am making this declaration because I do not want others to suffer the catastrophic, disabling injuries I have sustained due to the lack of official health-based guidelines and regulations governing EMF/RF radiation emitting devices.

It is important to call to your attention to my diagnosis of "Overexposure to Microwave Radiation," and highlight the fact that my symptoms and physical ailments parallel the "Havana Syndrome." I do not claim to be a victim of a microwave emitting weapon. I do claim and have documented evidence that the microwave radiation emitted by the smart meters opposite my bedroom wall caused my health deterioration and subsequent diagnosis of "Overexposure to Microwave Radiation," which is also known as "Microwave Syndrome."

Before my exposure to smart meter RF radiation, I was a very happy, healthy, active person, frequently traveling to see family and friends. I can no longer say these things about myself. I now live a very isolated life. For three and one half months, when I went to bed at night, my head was situated approximately one foot away on the other side of a wall from an electrical panel containing two electric smart meters. That regular nightly RF smart meter radiation exposure, the source of which I was unaware at the time, caused me horrific and disabling symptoms. Once I found out the source of my health problems, I immediately moved out of the bedroom, and eventually moved out of the rental unit; however, constant head and neck pain, dizziness, and episodes of vertigo are just a few of the symptoms that plagued me.

Due to the smart meter RF radiation exposure, I developed Extreme ElectroHypersensitivity (EHS) and Chemical Sensitivity. Anything that carries an electrical current or radiates EMF, including Wi-Fi, cell phones or other wireless devices, and fluorescent lights, just to name a few, causes an adverse reaction in my body. Headaches, brain fog, and internal burning are just a few of the symptoms I still suffer from. Smart meter RF radiation exposure devastated my health and has been catastrophically disabling to me and my daily life. I can no longer tolerate living in an urban environment, so I have moved to South Dakota, to a cleaner environment in the country. Because of the harms I was exposed to, I am separated from my family, which has contributed to my suffering.

My daily life is a constant navigation process. I have over half of the electricity shut off in my house to help provide a safer environment for me, but I still have to navigate where to walk, sit,

stand, and sleep to help prevent exposure. There is no Wi-Fi in my house. My phone and computer are hard-wired, but even the use of these devices cause me symptoms, so I must wear protective clothing and gloves, and restrict my use. You cannot imagine how difficult it is for me to go out in public. I avoid it as much as possible. I have a nursing license, but can no longer work in my profession.

My exposure occurred in privatized housing owned and operated by Kirtland Family Housing (KFH), on Kirtland Air Force Base (KAFB) in Albuquerque, New Mexico. When we signed our lease with KFH, it included 16 Addendums covering everything from lead-based paint to radon. Nothing was ever mentioned about smart meter RF radiation. There are approximately 30 houses on this base with the exact same design as our house with smart meters installed next to where people sleep. There are two electrical smart meters mounted on the outside of the master bedroom wall, and two gas smart meters inches away from an adjacent bedroom wall. This is a very dangerous situation for everyone who is living in these units. Clearly, based upon the investigation we had performed by a Certified Electromagnetic Radiation Specialist, I, as well as my family, was being bombarded the whole time for months with RF radiation by all four smart meters. Findings by the Certified Electromagnetic Radiation Specialist confirm:

At the master bed pillow, Radio Frequency Radiation from the electric smart meters measured 160 - 306 $\mu W/m^2$ (lower to mid SEVERE). The gas smart meters measured 1180 -1260 $\mu W/m^2$ (above EXTREME).

Based upon this report, one can conclude, approximately 30 families on KAFB are being exposed to the same levels of RF smart meter radiation. The primary rooms that are being exposed are ALL bedrooms where families sleep. Adults, children, and infants are being exposed.

Upon contacting the housing custodians, seeking their help concerning this health and safety incident, I informed them I had been sleeping near an electrical drop panel and two smart electrical meters, and informed them of my rapid health decline and sickness. I was met with obfuscation and dismissal. In December of 2020, a KFH representative wrote in an email to me that their gas and electric utility company, Minol, stated, “it’s not the meters.”

At this point in time, neither KFH nor Minol had ever sent anyone to investigate; yet their response was that “it’s not the meters.” I persistently pursued the housing custodians to investigate, and two and one half months after I first reported to them, they finally sent out an Industrial Hygienist who was ill-prepared to conduct a thorough investigation. He brought only one piece of equipment, a low-frequency magnetic field meter, thus only checked for that one factor. He did NOT check for RF smart meter radiation. At the conclusion of his investigation, he told me that I put my bed in the worst possible place, and then he explained to me that his findings were within acceptable public standards. The guidelines he used stating 2000 milliGauss did not apply to the source of what was making me sick, which was RFR exposure, not low-frequency magnetic fields. The “so-called” FCC guidelines nonetheless are outdated, not based on clear scientific research, and not based on official FDA policies, including its own report on RFR harms. This false claim thereby gave cover to KFH and KAFB to rely on the false premise that RFR levels radiating base housing were safe. This particular base is NOT the only one that

allows smart meters on the bedroom walls; it is likely that every military base in the U.S. has some housing which has this harmful radiation issue. Countless peoples' lives, health, and well-being are potentially being detrimentally affected.

My husband and I requested a meeting with the KAFB commander. As a "read ahead" document for our meeting, we gave the commander a letter from my doctor confirming my diagnosis of "Overexposure to Microwave Radiation." The letter also listed the timeline of all my symptoms, examinations, and supporting evidence of two RFR emitting wireless electrical meters on the other side of the master bedroom wall next to my bed, with significant pulsations detectable in the bed (to 6,400 $\mu W/m^2$). These readings were taken in my home by my doctor with a HF 59B meter for radio-frequency radiation (RFR). This was compelling evidence of a health and safety incident caused by smart meter RF radiation, and the base commander neglected to investigate the incident. Also, the commander declined to grant my husband and I a meeting. Failing to investigate and address a health and safely incident involving smart meter RF radiation that potentially is affecting other military members and their families can be a serious national security risk. The seriousness of this situation is evident and far reaching, and it all stems from the false claims of safety promulgated by the FCC and FDA.

I continue to suffer every day from the injuries I sustained from smart meter RF radiation. Internal burning, numbness, weakness, brain fog, cognition and memory difficulties are part of my everyday life. It has become painfully clear that companies and their custodians rely on these false claims as their protective shield, to the detriment of people's good health and well-being. Current guidelines concerning EMF/RF radiation are not adequate to protect humans and the environment, especially with the speed at which more and more wireless technology is being imposed on Americans, and the health risks and harms have been irresponsibly denied (it is obvious that the wireless industry know their products cause harm, yet still they carry on harming an unsuspecting public). I know how detrimental RF smart meter radiation exposure is; I live with the consequences every day of my life. Please, it is time to write, pass, and enforce laws that regulate the use of EMF/RF radiation emitting devices for the protection of people's good health and well-being and our environment.

Thank you for your time and consideration.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/Jennifer Andree
Jennifer Andree
67 South Riverview Dr.
Glenham, SD 57631

P. Sally Jewell Coxe

To Whom It May Concern:

My name is Sally Jewell Coxe. I submit this declaration in support of a legal effort to have the Food and Drug Administration (FDA) research, develop and promote health- and science-based human exposure standards for antennas and other devices that emit radiofrequency radiation (RFR), to publicly admit that it has never developed such standards and no such standards exist, and to do so expeditiously to prevent further harm to public health.

I am grateful for this opportunity to share my experience with RFR in the hope that the FDA, as well as the Federal Communications Commission (FCC) and other relevant agencies within the US government will take responsible and immediate action to protect the public from the mounting and ubiquitous dangers of this invisible contaminant. My life and my health have been severely impacted by prolonged exposure to high levels of RFR from cellular antennas on the roof of the building where I reside.

When I learned what was making me so ill – a constant bombardment of microwave radiation – and that the US government was failing to conduct the necessary research to understand its impact on human health and our environment, I was astonished. I wanted to believe that the government of the United States of America was truly "for the people" when it came to basic health and safety, but in this case, tragically and unconscionably, it appears that government action (or inaction) is being directed by big business—i.e., the telecom companies. What is worse, our own government agencies have turned a blind eye to a plethora of scientific and anecdotal evidence that already exists as to the detrimental effects of this radiation on human health[139].

No insurance company – including Lloyds of London and Swiss Re, the two largest re-insurers in the world, nor any others – will insure purveyors of wireless technology against claims of harm to human health, ostensibly because they know that it is already making many people sick and the inevitable claims will be substantial. Meanwhile, the mega telecom corporations are racking up trillions of dollars and amassing unprecedented power and control. We all appreciate wireless technology and the conveniences it provides, but at what cost? Surely more informed regulation and scientific due diligence is warranted to mitigate harms to the health of those the technology is meant to serve.

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[139] On August 13, 2021, the U.S. Court of Appeals for the District of Columbia Circuit delivered a consequential ruling in the case of Environmental Health Trust et al. v. the Federal Communications Commission (FCC). The court found that the FCC failed to explain why it ignored abundant scientific evidence showing harmful effects from wireless radiation and that the FCC violated the Administrative Procedure Act because the FCC's decision not to update its 1996 exposure limits failed to address impacts of long-term exposure to RF radiation, the unique impacts to children, the testimony of people injured by wireless radiation, the impacts to wildlife and the environment, and impacts to the developing brain and reproduction, as well as technological developments that have occurred since the Commission last updated its guidelines, among other issues. See https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/#:~:text=The%20Court%20ruled%20that%20the%20FCC%20must%20%E2%80%9Cprovide%20a%20reasoned,cellphones%20and%20other%20wireless%20devices.

I have lived and worked in my apartment at 2701 Connecticut Avenue NW, Apt #702, Washington DC 20008 for the past thirty years, since December 31, 1991. My apartment is on the top floor of an historic, century-old building, now owned by Alonzo Bliss & Co. and managed by WC Smith & Co. Beginning in the mid-1990s, an increasing array of cell phone antennas has been installed on the roof. Now, there are six (6) installations, each with multiple antennas, belonging to Verizon and T-Mobile. (See Figures 1-3.)

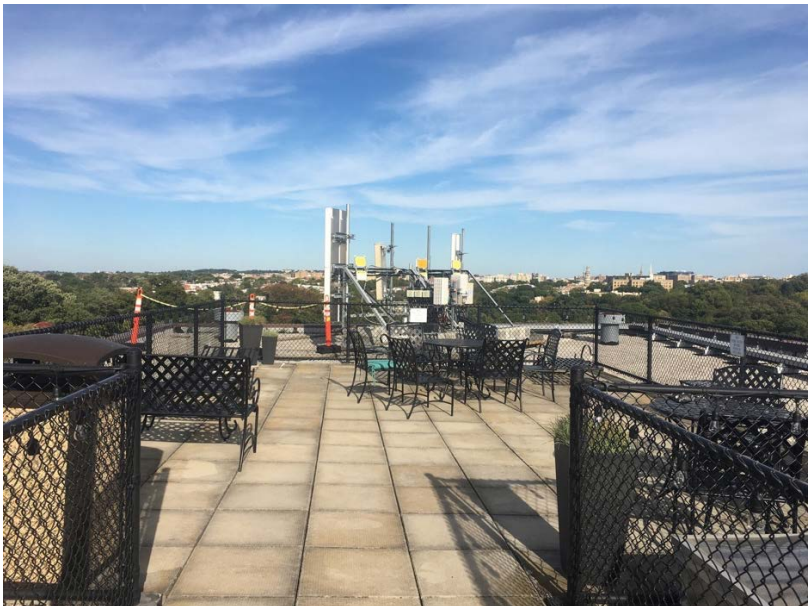


Figure 1



Figure 2



Figure 3

Not only has my apartment been my cherished home for half my life, it has also served as the headquarters and logistical hub of the international non-profit organization I co-founded in 1998, the Bonobo Conservation Initiative (BCI). Our mission is to protect the endangered bonobo and its habitat in the heart of the Congo rainforest. Bonobos are humankind's closest great ape relatives, sharing more than 98% of our DNA. I first learned about bonobos while working as a copywriter at National Geographic. Since then, protecting them has become my passion and my life's work. Distinguished by their peaceful, matriarchal society, their remarkable intelligence, and their free-loving nature, bonobos have a great deal to teach us humans about ourselves and our own origins. The last apes to be discovered by modern science, these exceptional primates have been revered for generations by indigenous people of the Congo; they serve as a powerful flagship to protect vast areas of rainforest.

Working with indigenous communities and the government of the Democratic Republic of Congo, BCI has helped to establish legal protection for nine million acres of rainforest to date in the Bonobo Peace Forest. This forest sequesters billions of tons of carbon and provides essential ecosystem services the whole world needs to mitigate climate change and ensure our own survival. See www.bonobo.org.

While the existential threat of climate change is finally being addressed by the world at large, I now find myself in the middle of another "inconvenient truth" — the fact that the wireless technology upon which we have come to depend can be toxic to the health of humans and our environment.

Sequence of events and health impacts

- Since the mid 1990s, more and more cell phone antennas have been installed on the roof of the building where I have lived for many years. In the past decade or so, more antennas have been placed in closer proximity to my apartment on the top floor of the building. The roof deck used to be a wonderful sanctuary, a place to relax with friends, with great 360-degree views of Washington. It was one of the main reasons I decided to

move into the building. Now, the views are ruined with so many antennas, which have also made the roof deck an unpleasant and dangerous environment.

- Over the past several years, I have experienced adverse health symptoms that I now know were clearly caused or exacerbated by exposure to inordinately high levels of RFR from the cell phone towers on the roof of my building.
- Some of the symptoms began previously but got much worse in 2019. I began to experience extreme fatigue, low energy, and cognitive problems: brain fog, difficulty concentrating, and memory impairment.
- I had trouble with my eyes—intermittent twitching, burning, vision problems and a blocked tear duct in my left eye.
- My hair started falling out and in the spring of 2019, I suffered a serious hormonal imbalance, which necessitated exploratory OB/GYN surgery. Thankfully, no cancer was found.
- I also had unusual rashes, including one on my back that has persisted since July 2018. The dermatologist did not know what it was nor what caused it.
- More and more, I experienced an overall jittery, anxious feeling. I got headaches more often than usual. My sleep was irregular and I began to exhibit symptoms of depression.
- I thought that some of these problems might be due to stress and perhaps I was "burned out." I am normally a very energetic person. I have never experienced such feelings of total exhaustion in my life.
- In May 2019, BCI held major events in New York City in honor of our 20th anniversary: a press conference at the United Nations announcing the Democratic Republic of Congo's endorsement of the Bonobo Peace Forest, and a gala event featuring actress Ashley Judd and renowned activist Gloria Steinem. Despite the excitement and importance of these landmark events, I struggled to keep up as my energy levels were so low and I had an overall feeling of "dis-ease" or discomfort.
- Toward the end of August/early September 2019, my symptoms became even more acute. At this point, I could not work on the computer without feeling ill. I also got nauseated and felt "zapped" in the head when in my apartment. I felt a numbness and tingling on the left side of my face and head when working at my desk—the side just next to the outside wall and window. These symptoms would abate somewhat if I got away from the radiation by going outside, especially around nature.
- Why did my symptoms escalate at this time? Likely reasons: a) Two cranes from Verizon and T-Mobile came in July and August 2019 to replace or upgrade the cellular antennae on our roof, in preparation for 5G. This could have increased the level of radiation exposure in my apartment. b) I had an eye surgery for a blocked tear duct on August 23, 2019 with general anesthesia. According to medical reports, head trauma can bring on or exacerbate electrohypersensitivity (EHS), especially if a person has experienced prolonged or high levels of RFR exposure. c) During 2019, cell phone antennas were installed on the building across the street, 2700 Connecticut Avenue, one of which points directly at my apartment.

- I talked with an old friend and described my symptoms. She thought perhaps I was being affected by EMFs. On September 8, 2019, she came over with a sophisticated EMF/RFR meter (Gigahertz Solutions HF 35C HF-Analyser) that measures non-ionizing radiation, i.e., Powerflux Density, in microwatts per square meter. The moment she turned on the meter, she exclaimed, "my God, you are living in a microwave!"
- We discovered that my apartment had exceedingly high levels of RFR, in some places beyond what the meter would measure (including my office, where I spend most of my time). My next-door neighbor joined us. We measured her apartment, which had much lower radiation levels than mine (about ¼). We discovered that the hallway on the top floor had high levels, the roof was so high it was beyond what the meter would measure, but in a first-floor apartment on the side of the building with only one antenna, the levels were much lower and near the safe range.
- The next day, September 9, 2019, I reported this to the Property Management at WC Smith. At that point, WC Smith was immediately responsive and understood that I needed to evacuate the apartment immediately. I spent 2 weeks in hotels in Washington at first, thankfully arranged by WC Smith.
- I began to research the problem and to alert other neighbors in the building, working in tandem with WC Smith.

Building Inspections

The first action taken by WC Smith was to set up an inspection performed by Site Safe on September 20, 2019. This assessment was actually arranged (and possibly paid for) by Verizon and/or T-Mobile. Their report only measured frequencies and thermal effects of microwave radiation, as per the current FCC guidelines. It was at this time that we learned that the FCC guidelines for RFR exposure are 25 years old—they have not been updated since 1996! They do not take into account the non-ionizing radiation, which many scientific studies show causes health problems in humans and other living things, including cancer, mitochondrial damage, and cognitive problems. The Site Safe report denied any danger and claimed that the antennae and resulting radiation are compliant with FCC standards.

When tenants learned that the Site Safe inspection had been arranged by Verizon, they complained and requested an independent assessment. WC Smith arranged another inspection by Washington Labs on October 8, 2019. Their report, although more extensive, basically corroborated that of Site Safe, and only measured frequencies in relation to the outdated FCC standards.

In an effort to get a more thorough and honest third-party assessment of the radiation affecting myself and other tenants, I arranged for an inspection by Ray Pealer of EMR Safety Consulting, which took place on October 9, 2019. Some other tenants on the upper floors participated and representatives of WC Smith were present. During the inspection, Mr. Pealer provided background and shared scientific reports about the dangerous health effects of non-ionizing radiation from cell phone antennas. He also discussed shielding options to reduce radiation within apartments in the building. The EMR Safety Consulting report confirmed that the antennas on the roof are exposing residents to extremely high and dangerous levels of RFR and

that some apartments are more affected than others—with my apartment and one other on the top floor receiving by far the highest levels—greater by orders of magnitude, due to their proximity and placement in relation to the antennas.

The EMR Safety Consulting report was distributed to WC Smith and a group of concerned tenants. Despite our requests that WC Smith inform all tenants in the building, this was not done. One tenant, who has lived on the sixth floor for many years, in the tier beneath the highest concentration of antennas, had been experiencing fatigue and thyroid issues. **He shared the EMR Safety Consulting report with his endocrinologist, who immediately ordered a sonogram and discovered that he had thyroid cancer.** He had his thyroid gland removed in December 2019 and continues to undergo treatment.

Health Impacts: Medical Diagnosis and Mitigation

I had little to no knowledge about the health effects of RFR until this all came to light in September 2019. Upon this discovery, I began intensive research and networking to learn about the health effects and how to ameliorate my symptoms. In October, I traveled to California for a wildlife conservation conference. Since I could not live in my apartment without getting ill, I arranged to stay with a long-time friend and benefactor, Lori Grace, at her house in Tiburon, CA as I tried to heal and get a handle on the problem.

In California, I was referred to Dr. Toril Jelter who is an expert in EMF/RFR related illness. She diagnosed me with Microwave Radiation Syndrome and Electrohypersensitivity (EHS). She advised me that the first most important thing to ameliorate the symptoms was to live away from radiation and if that was not possible to shield my living space and to reduce or eliminate exposure to non-ionizing radiation (i.e., RFR and EMF) as much as possible.

Beyond that, she provided a number of recommendations including antioxidant supplements and treatments to counteract the oxidative stress caused by microwave radiation. She advised me to engage an Integrative/Functional Medicine Doctor to identify metabolic dysfunction, oxidative stress, imbalances, and deficiencies and to treat them. She recommended that I spend at least one hour each morning doing physical grounding, exercise, and meditation to relieve symptoms and balance the limbic system, which goes into a “fight or flight” mode from the toxic radiation. She also advised me to have dental metal (i.e., metal fillings, crowns) removed by a specialist and replaced with non-metallic materials. She told me that I would probably need some regenerative therapies to help build up more resilience and to reduce the sensitivity, which even under optimal conditions can take up to 2 years.

This all happened at a pivotal time for my non-profit organization when we were developing new sources of funding and gearing up for a new phase of our work. During that time, I was distraught, still experiencing adverse health symptoms, and so sensitive to the computer, Wi-Fi, and my cellphone that I found it very difficult to work. This had real and consequential opportunity costs to my organization and funding proposals that were in progress at the time with USAID and large foundations because I was not able to effectively manage the work, due to this bizarre illness.

I have become a human antenna!

It is hard to describe what it feels like and what happens when you are electro-sensitive, as I have become—not to mention the fact that this condition affects multiple systems in the body, so it is hard to get a handle on it. While in California and up to now I cannot ride in an electric car without instantly getting a headache and nauseous. I experience similar symptoms in other contemporary vehicles with Wi-Fi and built-in GPS, and in offices and areas with high EMF or RFR. In other words, not only is this disabling condition affecting my livelihood and ability to work, but practically all areas of life.

It became clear that the only way I could re-enter my apartment—even long enough to move out—would be to shield it to reduce the radiation. I consulted Ray Pealer, the building biologist, who recommended using shielding paint and clear window film. His estimate was $8,000 for this work. This was rejected by WC Smith and they forbade the use of the shielding paint. My only recourse was to shield the apartment myself, using heavy duty aluminum and window screens. I had to hire labor to do this work and the WC Smith custodians also pitched in after hours.

I also had to purchase a protective bed canopy woven with silver fibers, which cost $2,000. Despite the exorbitant cost, this made all the difference and is the one place in the apartment that is truly an oasis of relief. Building biologists and medical experts advise that it is extremely important to sleep in a radiation-free area. With good sleep, the body produces melatonin, which acts as a powerful anti-oxidant that helps to recover from the effects of the RFR and strengthen resilience. I hired a technician to hard-wire my internet and eliminate Wi-Fi in the apartment. I purchased shielding clothing—a hoodie, pants, and lap blanket—to help mitigate the effects so that I could be out in the apartment.

I was able to partially shield my large two-bedroom apartment – most ceilings and outside walls – and screens over the windows. All of these measures have cost thousands of dollars and still the radiation in the apartment is too high to be comfortable or safe. It has also destroyed the aesthetics of my once beautiful apartment. It's like living in a tin can with aluminum all over the place.

It became clear that either the antennas would have to go, WC Smith would agree to provide better shielding, or I would have to move out. We were negotiating how to work it out when the Covid 19 pandemic hit. This further complicated matters.

I was able to arrange temporary lodging with family in my hometown of Asheville, NC, where I stayed during the lockdown in 2020. I was able to start getting work back on track. Since then, I have continued to seek medical advice from experts familiar with RFR illness. I found that most physicians are not even aware of it. I have consulted with Dr. Elizabeth Seymour of the Environmental Health Center of North Texas, which offers comprehensive integral medical services for EHS/microwave illness. Because treatment is an iterative process, depending on test results, she provided a reasonable estimate of the kinds of tests and treatments for people with my condition. Treatment usually takes at least two years and can run up to $15,000.

I have also consulted with Dr. Sharon Goldberg, Internal Physician, who is an expert on Microwave Radiation Illness. Highly recommended, Dr. Goldberg organized the recent EMF Medical Conference (http:/conference2021.com) and she has also testified before US Congress about this public health issue. I have continued to consult with Dr. Goldberg regularly. Dr. Goldberg has advised me on ways to ameliorate my condition and to create a safe living environment where I can heal, until I am able to pursue comprehensive treatment. Integrative medical services are not covered by my health insurance policy. As of now, I have not been able to afford specialized medical care and have paid out of pocket for consultations so far.

The proper testing will elucidate what further treatment is needed and if I have any other serious conditions beyond what is already known. RFR is proven to be cancerous and to cause cellular and cognitive damage. I have never been more concerned about my health.

Disruption and Damages

In October 2020, I went back to Washington, thinking that I would try to shield the apartment better and see if I could hold out a few more months while trying to work out solutions and raise funds to move. Within 15 minutes of being in the apartment, my entire face went numb and I realized that I really had to move out ASAP. I found a place to rent in Asheville in a rural setting, and sort of camped out there until I was finally able to arrange for movers, which was also a very expensive and exhausting enterprise. In addition to my apartment, I have rented two storage rooms in the building for myself and all of BCI's files and field equipment. Pulling up stakes after thirty years is no easy feat.

As of this moment, I am still holding out hope that WC Smith will do the right thing and stand up for the health of its tenants—and do right by me. Earlier this year, T-Mobile was preparing to install 5G on the roof. Due to ongoing concerns from tenants, WC Smith asked T-Mobile to wait on the 5G, at least until the pandemic had subsided. T-Mobile threatened to sue WC Smith for breach of contract, and the 5G equipment was installed at the end of March 2021. Since then, when I have been in the apartment, I experience extreme tinnitus – a very high pitched sound that is unnerving.

On November 3, 2021, additional measurements were conducted by Cardinal Communications using a large inventory of calibrated antennas and spectrum analyzers, which were operated by a professional radio site testing analyst. A report was subsequently issued December 19, 2021. Measurements revealed that according to Crest Factor analysis, the emissions routinely spike to 132-to-264% beyond the FCC Human RF exposure standard. Other very concerning data revealed that (i) Human RF exposure standards may be further impacted, and (ii) industry mobile telephone usage Specific Absorbtion Rate (SAR) guidelines may also be distorted, especially when people bring their mobile telephones to the rooftop terrace. [See ATTACHMENT 1]. Relatedly, the IEEE Microwave Magazine for January 2022 includes an article *Health Safety Guidelines and 5G Wireless Radiation* that validates that material gaps exist in studies across the

full range of wireless mobile bands and that there are "significant anomalies" in recently updated safety recommendations.[140]

I have appealed to WC Smith for "reasonable accommodation" as permitted by the Americans with Disabilities Act (ADA) and the Fair Housing Amendments Act (FHAA), but my requests have been denied. WC Smith and the telecom companies continue to rely on the false and outdated FCC standards as justification to avoid compliance.

My life, my health, and my organization's mission have all been severely damaged as a result of extremely high and prolonged exposure to RF radiation from the cell phone towers on the roof above my apartment. My requests to WC Smith for reasonable accommodation to provide safe living conditions and to ameliorate my injuries have not yet been honored—nor have requests from other tenants to address the problem, which also puts them at risk. Now more than two years after the problem came to light, I am still suffering from considerable financial losses and debilitating health issues. Up to now, I have not received the consideration and remuneration required to even begin to recover from these losses and the damages to my health, nor to cover the costs of moving to a new location.

The bottom line is: cell phone antennas should not be placed so close to human habitation! Having multiple cell phone tower installations right over our heads on a 100-year old building, just a few feet overhead, is extremely dangerous. It is proven that the magnitude of microwave radiation decreases with distance. No matter how convenient, or how much money can be made by renting space to telecom companies, it is not worth it because it is jeopardizing the health of people in close proximity. I am urgently calling on the FDA to do its job and please put reasonable safety standards on this health hazard before many more people become seriously ill or die from the exposures.

I hope that my experience can help to shed light on this growing problem and help others who are suffering from RFR exposure. A clarification of the FDA policy will contribute significantly to ameliorating my situation, and that of thousands of other tenants and real estate managers across the country.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

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[140] IEEE Microwave Magazine: For the Microwave & Wireless Engineer, Volume 23, Number 1, January 2022. *Health Safety Guidelines and 5G Wireless Radiation,* by Dr. James C. Lin. https://ieeexplore.ieee.org/document/9632507

Dr. Lin is Professor Emeritus in the Department of Electrical and Computer Engineering at the University of Illinois Chicago. He is an expert on the biological interactions of wireless radiation. He is a fellow of the American Association for the Advancement of Science and the Institute of Electrical and Electronics Engineers (IEEE). Since 2006 he has been the Editor-in-Chief of the *Bioelectromagnetics* journal published on behalf of the Bioelectromagnetics Society (BEMS), an international organization of biological and physical scientists, physicians and engineers.

/s/ Sally Jewell Coxe

Sally J. Coxe
2701 Connecticut Avenue NW #702
Washington, DC 20008
(202) 441-1599

November 16, 2021

ATTACHMENT 1

RF Exposure Analysis: 2701 Connecticut Avenue, NW, Washington, DC
Cardinal Communications, a Division of Thought Delivery Systems, Inc.
for THE BALANCE GROUP

Version: 12/19/2021, 8:20pm
SUBJECT: EXECUTIVE SUMMARY: HUMAN RF EXPOSURE ANALYSIS
LOCATION: 2701 Connecticut Avenue, NW, Washington, DC



Overview:

A detailed radio frequency (RF) emission field study was conducted on November 3, 2021 at 2701 Connecticut Avenue, NW, Washington, DC. Mobile network base stations are operating on and near the premises.

Insufficient Prior Studies: Previous Human RF exposure studies conducted at this location by carriers and also by private entities were reviewed. These studies appeared to not conduct and/or report measurements in critical tenant-accessible locations, nor to utilize calibrated instrumentation capable of measuring all the necessary cumulative emissions, nor to assess other aspects of RF emissions present.

FCC Human RF Exposure Standard Exceeded: Using very conservative measurements and analysis, the Federal Communications Commission (FCC) Human RF exposure standard appears to be regularly exceeded in the publicly accessible rooftop terrace area by a factor of ***at least 132.31%*** of the appropriate maximum FCC value when accounting for a mitigated Crest Factor.

- Approximately 43.23% of the FCC Human RF public standard was measured ***without*** accounting for mobile phone operations, especially SPECIFIC ABSORBTION RATE (SAR) and ***without*** accounting for any CREST FACTORS and ***without*** measuring all the radiation impacting the premises using ADDITIONAL EQUIPMENT.[1]

[1] For example, both spectrum analyzers detected a very strong approximately 660 MHz signal, using an AARONIA Omnilog Model 735 (700MHz-to-2.5 GHz uncalibrated whip antenna). A more sophisticated antenna, calibrated for that band may have provided additional measurements that may have added to the cumulative exposure values.

- This apparent 132.31% exposure over the FCC standard may be actually significantly higher because it does not account for:

(1) Human RF exposure from mobile phones on the premises. Mobile phone base stations communicate with mobile phones and typically other base stations (depending on backhaul systems, and hand-off architecture, etc). Mobile phones operated next to a base station, for example on a rooftop terrace that also houses base-station installations, add to the cumulative RF exposure of those human beings which may be on the rooftop, in the building, or nearby. The mobile phones and the base stations are part of the same network operation. Mobile phones also have separate FCC Human RF exposure standard Specific Absorption Rate (SAR) requirements. When operated so close to mobile network base stations, (i) mobile phone operations may also have their usage guidelines distorted or violated, and (ii) reasonable and normal mobile phone usage on the premises may require alteration, and (iii) people on our near the premises may not be sufficiently noticed as to these mobile phone usage dynamics.

(2) No Crest Factor Mitigation. In the event that the rooftop and nearby mobile base stations were not deployed with Crest Factor mitigation techniques, the FCC Human RF exposure standard appears to be regularly exceeded by a factor of at least 264% of the appropriate maximum value.[2]

(3) No Additional Calibrated Antennas for Specific Spectrum Bands. It is possible that cumulative RF exposure levels may be detected if additional instrumentation is brought to the premises, such as additional, specialty calibrated antennas (as noted in footnote 1), and signal analyzers.

Assessments conducted by:

T.Brinkoetter (measurements and analysis) J. Sandri (research and development)

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[2] The actual cumulative exposure levels may be higher when also accounting for:

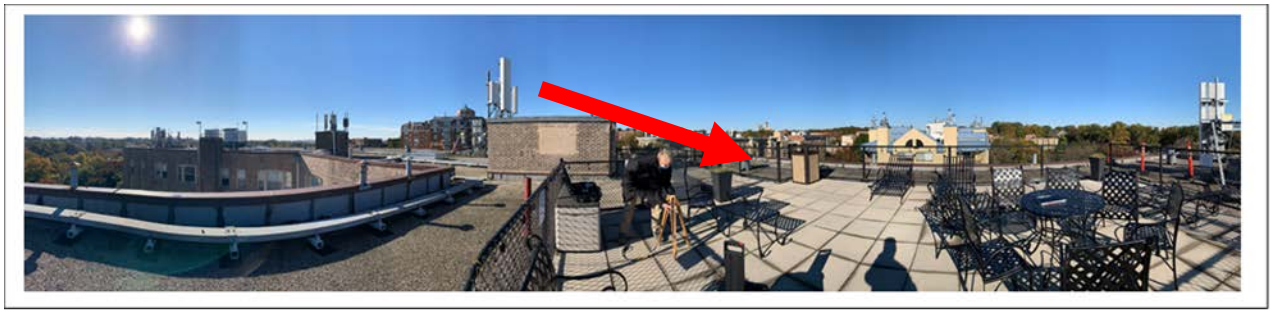
(i) Human RF exposure from mobile phones on people and/or on premises. Mobile phones have separate FCC Human RF exposure standard Specific Absorption Rate (SAR) requirements. When combined with the mobile network base stations, the mobile phone operations may also have their usage guidelines violated. By engaging in reasonable and normal mobile phone usage on the premises, mobile phone users may not be sufficiently noticed about safety concerns or possible Human RF exposure violations by the radio frequency licensees whose base station emissions are contributing 5% or more of the cumulative signal; and

(ii) Introducing additional calibrated antennas to more accurately measure exposures in other spectrum bands, such as at 660 MHz (as noted in footnote 1).

Cardinal Communications, A Division of Thought Delivery Systems, Inc.:

www.ThoughtDelivery.com ph: 202.223.2003 Cardinal@ThoughtDelivery.com

NOTES
NOTE 1: The 143dBuV/m field strength measurement was arrived at using CALIBRATED ANRITSU Spectrum Analyzer Model MS2090A coupled with ANRITSU 2000-1791-R EMF isotropic antenna probe.
NOTE 2: Two calibrated spectrum analyzers were used (i) ANRITSU MS2090A Spectrum Analyzer, which can assess from zero (0) MHz-to-43 GHz, and (ii) Rhode & Schwarz Model FPH, which assesses from zero (0) MHz-to-4GHz. ANRITSU found on the rooftop approximately 43.23% of the FCC Human RF public standard ***without*** accounting for mobile phone operations, especially SPECIFIC ABSORBTION RATE (SAR) and ***without*** accounting for CREST FACTORS. Both spectrum analyzers detected a very strong approximately 660 MHz signal, using an AARONIA Omnilog Model 735 (700MHz-to-2.5 GHz uncalibrated whip antenna).
NOTE 3: 4G and 5G modulation CREST FACTORS are typically 20x (i.e., 13dB). CREST FACTORS currently cannot be completely eliminated in field operations. In the event that the mobile operators deployed CREST FACTOR mitigation, a conservative analysis was also conducted that only calculated using a much reduced 10x (ie, 10dB) crest factor. CITE for 20x (13dB) standard CREST FACTOR: http://justinpanzer.com/wp-content/uploads/2019/04/RF-Globalnet-Talkin-Test_Aug11_08.pdf
NOTE 4: The number reaches 132.31% (apparently violating FCC standard when including conservative 10x (10dB) CREST FACTOR). This 132.31% does not even include calibrated measurements related to the (Approx 660 MHz band) base station signal found using both the ANRITSU Model MS2090A and the Rhode & Schwarz Model FPH spectrum analyzers.
NOTE 5: The HUMAN RF standard reaches 264% (apparently violating FCC 100% standard when including the normal 20x (13dB) CREST FACTOR).
NOTE 6: Impacts to mobile telephone operational guidelines based on these measurements are analyzed elsewhere in this study.
NOTE 7: Measurements of the millimeter wave (mmWave) band from 26.5 GHz-to-40 GHz were conducted using the ANRITSU MS2090A Spectrum Analyzer coupled with the WR-28 Omni Directional Antenna made by Sage Microwave.
NOTE 8: CREST FACTOR measurements can be taken using signal analyzers, such as the Tektronix RSA 306B Analyzer. For example, a recent 4G LTE base station's 751 MHz operations were measured at another location and revealed a peak to average of 14.88 dB. The measurements and analysis at 2701 Connecticut Ave, NW, Washington, DC used a more conservative 10 dB Crest Factor and still resulted in apparent FCC Human RF Exposures spiking over the FCC Human RF exposure value by at least 132%.



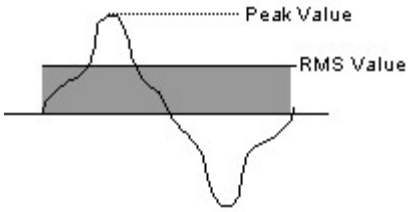
DIRECT HUMAN EXPOSURE CALCULATED *AT LEAST OVER 132%* OF THE ALLOWABLE FCC HUMAN RF EXPOSURE LIMIT WHEN INCLUDING AN ASSESSED, MITIGATED CREST FACTOR. IF THERE IS NO CREST FACTOR MITIGATION, THE EMISSIONS *MAY BE AT LEAST OVER 264%* OF THE ALLOWABLE HUMAN RF EXPOSURE LIMIT.

XIII. Crest Factor

What is Crest Factor

The crest factor is the ratio of peak value to RMS[141] value of waveform as shown in below figure.

This ratio is also called to peak-to-RMS ratio. The crest factor is expressed as follows: Crest Factor (peak-to-RMS ratio)= (peak value)/(RMS value)

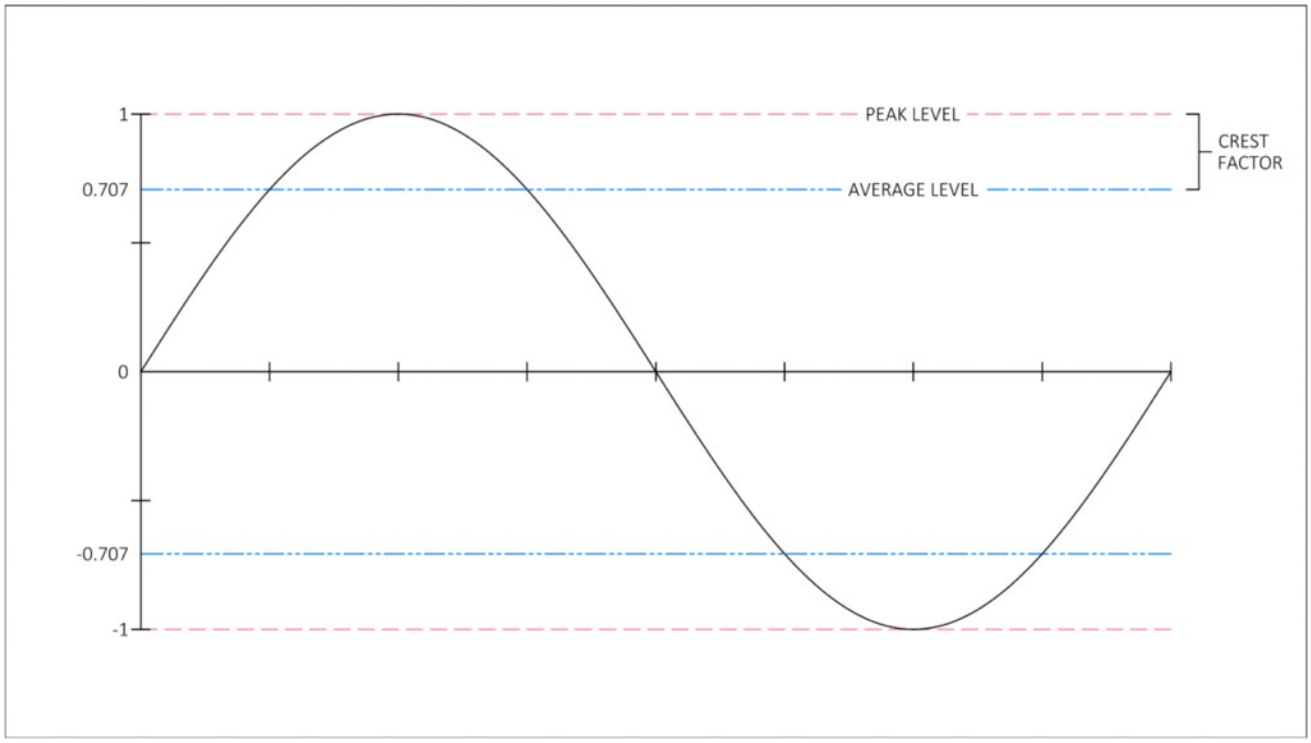


"Crest factor, defined. Simply stated, crest factor—sometimes called peak-to-average ratio—is the difference in decibels between the peak and average levels of a signal. In the strictest technical sense, it only applies to steady-state signals like sine, square, saw, or triangle waves."[142]

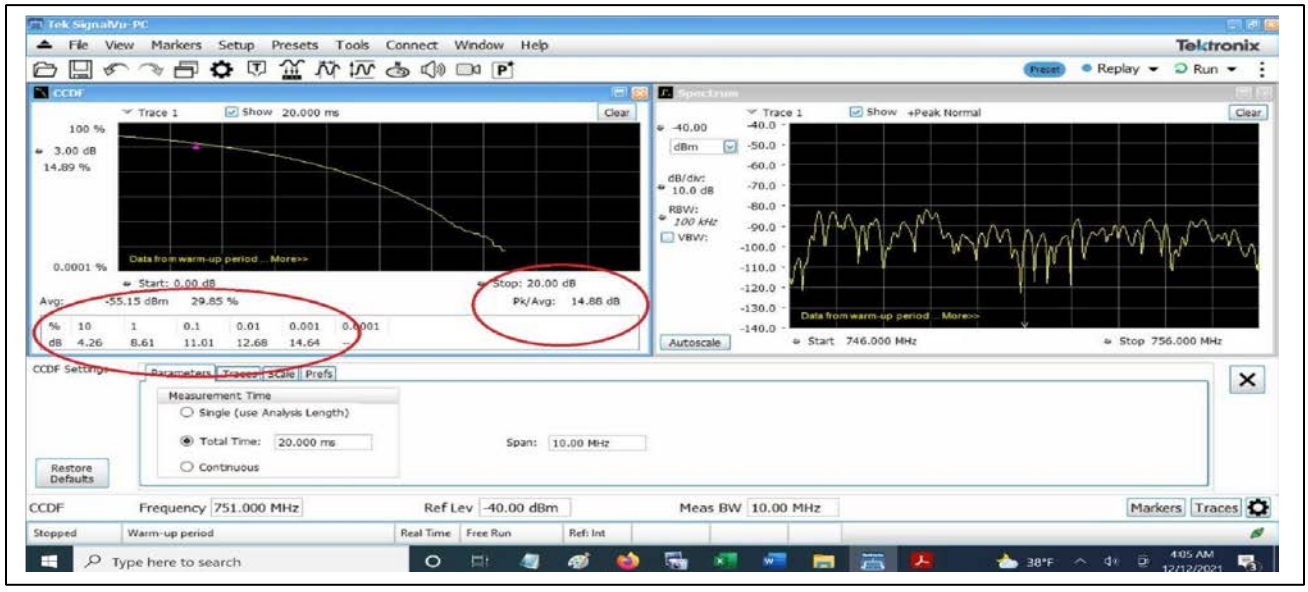
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[141] The RMS value of a set of values (or a continuous-time waveform) is the square root of the arithmetic mean of the squares of the values, or the square of the function that defines the continuous waveform. In physics, the RMS current value can also be defined as the "value of the direct current that dissipates the same power in a resistor." "Root-mean-square value". A Dictionary of Physics (6 ed.). Oxford University Press. 2009. ISBN 9780199233991

[142] "What Is Crest Factor and Why Is It Important?" by Ian Stewart, iZotope Contributor July 28, 2020, https://www.izotope.com/en/learn/what-is-crest-factor.html (last accessed, Nov. 17, 2021).; For further information on Crest Factor see also: (i) L. D. da Silva and E. G. de Lima, "A Novel Limiter with Application in Crest Factor Reduction Techniques for Wireless Communications," *2018 31st Symposium on Integrated Circuits and Systems Design (SBCCI)*, 2018, pp. 1-6, doi: 10.1109/SBCCI.2018.8533234, A Novel Limiter with Application in Crest Factor Reduction Techniques for Wireless Communications | IEEE Conference Publication | IEEE Xplore, [last accessed, December 10, 2021] ; and (ii) "Wireless Base Station With Reduced Crest Factor," by Manoj Gupta, Hamid Ali, International Journal of Scientific & Engineering Research, Volume 6, Issue 5,



A typical Crest Factor measurement using a Tektronix RSA306 Analyzer at a 4G LTE base station at 751 MHz: Peak to average is 14.88 dB.



May-2015 ISSN 2229-5518 https://www.ijser.org/researchpaper/WIRELESS-BASE-STATION-WITH-REDUCED-CREST-FACTOR.pdf

Q. David Benedict

September 24th 2021

To whom it may Concern,

My name is David Benedict. My home for the last 25 years has been at 3585 Needlepeak Rd., South Lake Tahoe, CA. I have Multiple Myeloma, a cancer of the blood in bone marrow. I completed a clinical trial and lengthy chemotherapy at UCSF earlier this year and will be starting chemotherapy again in October.

My Oncologist at UCSF, Dr. Nina Shah, is extremely concerned that if I am continuously exposed to high levels of EMF radiation at my home in South Lake Tahoe from the two Verizon Wireless Cell Towers nearby my home, I will suffer expected high levels of continuous and cumulative oxidative stress which will worsen my prognosis. I have repeatedly asked Verizon for a reasonable accommodation after returning home to South Lake Tahoe, but that request has been denied.

I believe that Verizon and our local officials are acting on the assumption that the human exposure guidelines promulgated by the Federal Communications Commission (FCC) are based on sound science, that the Food and Drug Administration (FDA) has been consulted on those guidelines and, after rigorous scientific inquiry, has approved the guidelines. They therefore reason that any claim of harm due to continuous 24/7 exposure to radiation from a cell tower cannot be based on science, and can be dismissed.

The ADA and FHAA require "reasonable" accommodation. The specific request I am asking is for local officials to require Verizon Wireless to move, shut off the power, turn the antenna away from my home, or shield its small cell wireless facility at 3565 Needlepeak Road, approximately 280 feet from my bedroom window.

Here are a few of the options a building biologist has come up with for a reasonable accommodation.

- A new pole with shield on it to block the radiation from entering my property;
- Outrigger with adjustable shield on it on existing pole;
- Hundreds of feet of aluminum mesh screen stapled to the wood on the side of my house;
- Screen of trees on my property;
- Move my sleeping area and shut off circuit breakers when going to bed.

I am without financial means and do not have the energy to cover the side of my house with aluminum mesh screens. When I have to go to UCSF for cancer treatment, I stay with friends as long as I can. I would expect the City of South Lake Tahoe and Verizon Wireless to cover my costs so I can live and sleep without stress and be protected from contaminating EMF irradiation while I continue my regiment of ongoing chemotherapy.

The City of South Lake Tahoe and Tahoe Regional Planning Authority (TRPA) have the authority to request Verizon to turn off its antenna, move it, or shield it to protect me while I undergo more chemotherapy required after the Car-T drug trial.

Verizon's attorney Paul Albritton claims that our building biology consultant, Eric Windheim's EMF report, and Verizon's consultant Hammett & Edison, Inc., both say the RF emissions at 3565 Needle Peak Rd. are "well below FCC regulations." This is based on the false assumption that the FCC and FDA have an official policy based on the Administrative Procedure Act on maximum RFR emissions, when in reality they are based on nothing but a commentary letter from an FDA official.

Attorney Paul Albritton has also stated that if Verizon protects me, they will have to protect others. He and South Lake Tahoe's city attorney also claim I am not a disabled individual, and therefore do not qualify for ADA/FHAA accommodation.

These false claims have caused me much stress and anxiety. An important part of recovering from cancer is to think positive and reduce stress. I have started to see a therapist and a psychiatrist at UCSF.

I believe there should be restrictions on how close to schools and residential areas RFR emitters can be located. I also hope that someday soon the information on RFR is released to the public. And the Precautionary Principle should not be ignored. People's lives are at stake.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/ David Benedict
David Benedict
3585 Needle Peak Rd.,
South Lake Tahoe, CA 96150

R. Monica Eisenstecken

My name is Monica Eisenstecken. I was born and raised in Lake Tahoe, and my family has lived here since the 1950s. Lake Tahoe is a beautiful place. I remember that when I was growing up, the air was extremely clean and the lake was pristine. The trees were so fresh you could smell their greenness. It breaks my heart to see such a beautiful place being spoiled. You can't smell the trees anymore; you can't smell the forest anymore. That smell is completely gone. And there is a haze now in the sky. There never used to be a haze. It used to be crystal blue sky. On top of it all, the panoramic landscape is now dotted with cell towers and antennas, polluting our already degrading environment with radiofrequency (RF) radiation that is a proven hazard to human health.

This is the story of my personal struggle to fight the construction of a giant cell tower in my neighborhood, and how the lax oversight of both the Federal Communications Commission (FCC) and Food and Drug Administration (FDA) regarding exposures to RF has inflicted real and measurable harm on me, my family and thousands of people in my community.

The Coming of the Cell Towers

The cell tower companies began arriving in 2006; and in recent years it's gotten worse, much worse. There are hundreds of towers, downtown on the tops of the casinos and hotels. Ugly wireless infrastructure, sometimes designed to try to imitate real trees, dot the landscape. They're not fooling anybody – they're just completely fake. You'll be driving down the road and all of a sudden you'll see this huge fake tree rising 30 feet above the other trees, and it sticks out like a sore thumb. It just breaks my heart to see such a beautiful natural place is being ruined like this, and for people to be exposed without their knowledge or consent.

My Struggle

Since 2018, my family and I have been struggling not only to protect our home, but to raise awareness around the valley about the dangers of all these cell towers. A wireless telecom company applied for a permit to build a 112 foot tower next to my house, but we were given no written notice, and none of my neighbors had any opportunity to voice their concerns.

We did not receive a notice from the City of South Lake Tahoe about the meeting to grant the permit. I had to call the City more than once to ask about the City's public meeting about the tower. I did receive something from the Tahoe Regional Planning Agency (TRPA); it said that I would get a notification from the City but it never arrived. So I called again, and was told that the tower had already been approved, right above my property where my family has lived for over sixteen years. This was my father's dream house where he raised his family in the quiet and beauty of Lake Tahoe.

Right away I felt a sense of deception. My instinct told me something was not right. The City told me on the phone that I literally had one hour to appeal the ruling. I didn't even know what exactly I was appealing. I went down to the City and I paid $150 fee and said I wanted to appeal this action, not knowing at that point what I was appealing.

Then I started doing my own research, calling around and looking on the internet, and I found Eric Windheim, a building biologist. He was the first person I called. Eric told me some pretty disturbing things about these towers and what they do. I learned the radiation is invisible, but it can give you headaches and anxiety and cause sleep problems. I started doing more research, and calling attorneys to get some help to try to figure out what was going on, and why we didn't receive any notice? What were they hiding? The more I learned, the more deceived I felt.

Our home is supposed to be a place where we feel safe. My dad built his dream home here, my children live here. Safety is obviously my number one concern. We have spent a huge amount of time and money basically just trying to protect ourselves from them building this cell tower.

We received a lot of misleading information from the City, things that didn't add up. I don't know if you'd call them lies, but definitely misinformation. People weren't telling the truth. We discovered many things on the tower application from the telecom industry that didn't match up. We asked the City about them, but they wouldn't answer our questions. It just didn't seem right.

We created two organizations, Tahoe for Safer Tech and Tahoe Stewards. Our members are residents who really care about our community, our health, and the beauty of Lake Tahoe. We want to protect Tahoe and we want the truth about what is happening to it to be told. We attended every City Council meeting and during the public comment period we kept trying to explain our concerns in the 3 minute time we were given, but they rudely cut us off.

How Tahoe Residents Are Being Harmed

I would like to record first how my family has been harmed, and then express my concerns about how many other residents have been and continue to be injured by the densifying cell towers in our community. We know that others can expect the same catastrophe that our family is suffering.

To begin, we've been forced to draw upon our life savings just to protect our family from the danger of the proposed tower next door - well over $100,000, and this doesn't include all the time that I've invested in all this, and other people's time as well. It's like a full-time job. I've probably spent about 60 hours a week, for over a year, and I sacrificed a lot. I missed out on the fun times with my kids. And I was always stressed out. I actually had to quit my job. And my father lost everything that he always wanted in his life. This was his dream property, his heaven. He's 82 years old. And he built his dream home basically to leave for his legacy. He lost everything.

We had to sell our house at a significant loss because buyers did not want to purchase a house with a macro tower looming above and irradiating it. Now we're renters, and we're being forced to leave. We're refugees in a housing market that we can hardly afford.

And then there was the harassment and outright slurs. At the public hearing the attorney for TRPA called us “crazies” simply for voicing our concerns. He said that we're not “real people”—“fake people.” And the TRPA Council wouldn't let us speak freely; they cut our time to speak, while they gave the wireless industry representatives almost unlimited time. They treated us like we were the criminals, like dirt basically, and they treated the wireless companies as if they were the heroes. It seemed as the meeting was already rigged against us as the people. We had over 4,000 signatures, more than 1,000 from local people against the tower, and they just ignored everyone. We put volumes of evidence on the harms into the public record, but the TRPA Board and its attorney dismissed and ignored everything. They acted like they didn't see anything.

We have also been harmed by the radiation my children are exposed to in school. I was concerned about RFR exposure in their school from wireless computers, tablets, routers and smart meters, as well as big cell towers right next to school property. My two children have recognized disabilities. I tried to set up a meeting to discuss the possibility of the school making some reasonable accommodation for them. I sent school officials a link to three webinars developed by Tech Safe Schools, explaining the legal rights of schools to establish safe learning environments for students and teachers, scientific and clinical evidence, and the technology of how to establish wired internet in classrooms. Neither the principal or superintendent of schools would consent even to meet with me and other parents concerned about irradiating our children in Tahoe’s schools.

As I am trying to explain, this is not only about me and my family. Potentially, thousands of other permanent residents of Tahoe are facing, or will soon face the dangers I have been warning against. My neighbor next door has cancer and is trying to stop multiple cell towers from irradiating him. And he's been on drug trials for his cancer, and his condition is getting worse, I believe, from RFR emanating from the cell towers.

I had a talk with a gentleman who has a tower on his property. He told me that the two people that live next to him, where they kept the equipment for the cell tower, both died of cancer. Another lady I know suffered a heart attack immediately after the telecoms installed a cell tower near her home. She fell down her stairs, and she's forgetting things now. She forgets where she put her keys. And she told me that this all happened after they put up the cell tower near her house.

“Our Hands Are Tied”

When I first started asking about the cell towers, I just heard from people that there’s so much money at stake, there's nothing you can do. And the City, from the very beginning, said we can't talk about health effects. That because it's preempted by the 1996 Telecommunications Act. You can't even talk about it, you can't even bring it up. Our hands are tied. There's nothing we can do.

But this is all based on the claim by the wireless companies, the City and TRPA that the FCC says the radiation from the tower is totally safe, that there is no problem. So, when neighbors hear this, they believe it and are reassured. On the one hand, the City’s hands are tied;

on the other, it's not a problem because RFR exposure under the present FCC's standard is safe for communities. But what if that standard is not based on science to protect people, but instead it protects the wireless companies? Don't people matter?

Specifically, when we would bring up health in their public comment period, the City, or TRPA board, say they can't consider health effects. There's nothing they can do. Our Tahoe community's health and safety has been taken care of by the federal government. Effectively, they are telling us that whatever protections we have under federal law, and under California state law -- for example, the civil right to be free from assault, or trespass; or our right to protect our children from endangerment -- that we no longer have any of these basic rights.

False Claims

All of this makes me feel extremely vulnerable. I know that these things are not safe. But yet I can no longer even protect myself or my family or my home. I feel like we're not living in the United States of America anymore. I don't feel safe. I feel like all my rights to protect my family, my home, it's all been taken away. It's all been stripped away.

And it's all based on misinformation. The FCC implies that its exposure standards are endorsed by the FDA, but that's not true. The FCC knows it, and the FDA knows it, but neither one is admitting the truth: the standards are based on old science that does not protect the public.

I do believe that once people in Tahoe learn that these are simply misleading and false claims, many people will support getting rid of all the towers in Tahoe. It will give our community more confidence to step forward and say something and do something positive and constructive, for our community, our children, and our environment.

Our schools are an excellent example where things may start changing. I think many parents are going to be very upset to learn that the federal government is encouraging local school superintendents to believe it is okay to expose our children to high levels of RFR in schools. I believe parents will not tolerate this. It's all about being curious, to be informed, and, ultimately, caring for each other.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/Monica Eisenstecken
Monica Eisenstecken
Soon to be moving from:
3605 Needle Peak Road
South Lake Tahoe City, CA 96150

October 2, 2021

S. Marcia Haller

To Whom It May Concern,

My name is Marcia Haller and I live at 7420 Rice Lake Road, Duluth MN. I am submitting this written testimony to support a petition to federal agencies to please establish and promote science-based health standards for exposure to radiofrequency radiation. The current standards being promoted by the Federal Communications Commission (FCC) are hopelessly out of date, and fail to protect the public from harm. Meanwhile, the Food and Drug Administration, our nation's primary health agency charged with protecting the public from harm, has been officially silent on the issue, allowing the public to assume (and the telecoms to imply) that it has formally approved of the FCC guidelines, when it has not. This situation cannot be tolerated, as it poses an imminent threat of harm to the American public, including myself.

I would like to share my experience about RFR with you. Most of my career has been bookkeeping and doing payroll for a few small businesses, but my passion was always helping people. Several years ago, I joined our local fire department and knew I found my calling. I was very active in the department and even had been mentioned as making the most calls on more than one occasion. I enjoyed it so much I decided to further my devotion and enroll in college to become a registered nurse. After a couple semesters I started working as a CNA at our local hospital, I was in school at the time and still fulfilling my duties on the fire department. It was a lot of work, but I managed.

Then one day my world changed forever. Our rural home is located about 800 feet from a cell tower. When we built on our property, we were unaware that a cell tower had gotten approval and was under construction at the same time. This was in 2008, when we realized this, we didn't think much about it. But in late September early October of 2019 workers arrived at the tower with a large crane for about a week. Once the crane came down and in less than a week that is when my world changed forever.

I immediately began having severe vertigo, headaches and confusion. We went to the emergency room, and I was diagnosed with vertigo. A week went by with no relief, and I went back to the emergency room, and they thought it could be Multiple Sclerosis, but then more testing and brain imaging showed multiple lesions, or Transient Ischemic Attacks. They ruled out M.S. but they were still unsure what was causing me to have multiple brain lesions. All of October 2019 was trips back and forth to the hospital, each time showed more and more strokes. In November I was accepted to the Mayo clinic in Rochester, MN, where I was diagnosed with a very, very rare autoimmune disease called Susac syndrome (See Attachment 1—Timeline), at that time I believe there were fewer than 375 cases in the world. After being diagnosed and after starting the treatment process that would normally work on this rare auto-immune disease in high hopes that my strokes would stop, I found out it wasn't working. The doctors were starting to question their prognosis. They did more testing and, still unsure, they decided to start me on a chemo drug called cyclophosphamide, and then my strokes stopped.

In the meantime, my husband had a flash of insight one night that my health crisis may be the result of too much radiation exposure from the cell tower. We started doing some research online, and to our surprise, I was having many of the symptoms that are related to RF over-exposure.

After reaching out to many people trying to find answers, I stumbled across Dr. Beatrice Golomb. I emailed her my story, and to my surprise, she emailed me back. We have been working together ever since. She is doing a case study on me and my family. She believes that the cell tower antennas are the cause of my health issues. As she and I have talked, things that have happened to me and my family in the past, even before 2019, could have been caused from the RF radiation emitting onto our property from the cell tower. I have also spoken with Dr. Sharon Goldberg, who also believes that the RF radiation emitting onto our property has caused my illness, including my strokes, and she is concerned that if the tower radiation continues, it will lead to my having new strokes and continuing illness.

In March 2020, we moved out of our house and into my parents' home that is a mile down the road. They work out of town, and we thought that if it is the tower making me sick, it would be best to get away from it and see if I feel better. And guess what? It worked! After staying at my parents' for a while, I started to feel better. I was sleeping better, I had more energy, I was thinking more clearly.

In October of 2020 my parents were coming back home, so my husband and I had no other choice but to move back to our home, still of course being irradiated from the tower. After being back home, I started to feel ill again. I felt nauseous, dizzy, unsteady, pressure in my head almost like a vibration feeling. I have a sound in my head that sounds like a motor running constantly, ringing in my ears, joint pain, insomnia, and fatigue. I have cognitive issues, and my head at times feels full.

One day I was walking down the driveway and my head started to feel a lot of pressure and my ears started to hurt. I told my husband when he got home, and he followed me with our Trifield consumer grade EMF meter, telling me to stop if I felt that feeling again. When I did, he read the meter at that spot and the RF readings were higher. We then continued to walk around, and whenever I had that feeling in my head I would tell him. And the meter would show similar increased RF readings.

This is when my husband and I decided to hire a building biologist to come to our home and do some readings (see Attachment 2). The report by the building biologist showed very high readings. So my husband decided to build a Faraday Cage in our garage for us to sleep in, and for me to go into whenever I feel I need to. Being in the Faraday Cage makes me feel like when you have been working a long day, and you get home and take off your shoes and put your feet up. It is like that "Ahhh" feeling! That is what my head feels like when I'm in the Faraday Cage. Otherwise, when I am not, I start feeling ill.

Since my husband built the Faraday Cage in October of 2020, we sleep in it every night. In the Faraday cage there is one single bed and one bunk bed where my husband and son sleep, and a small battery operated TV. There are no windows, no lights, no running water. If I need to use the bathroom, I need to go into the house. And believe me, in the wintertime that is no fun in the subzero temperatures and snow. I also go into the Faraday Cage during the day when my head feels too bad.

My husband and son have also experienced health problems that are related to symptoms of radiation over-exposure. My husband was diagnosed with rheumatoid arthritis in 2014. He has recently seen a doctor because of abdominal pain. After an ultrasound, he was told he has cysts

on his liver and a slightly elevated Mean Corpuscular Hemoglobin Concentration (MCHC). My husband read that elevated MCHC can be caused by RFR over-exposure.[143]

My son has had problems with anxiety, which was severe when he was first diagnosed in 2012. He has also recently been diagnosed with fatty tumors on the side of his abdomen.

We also believe the radiation over-exposure lead to our dog's premature death, and also affected the wildlife around our property. My family and I had to put our dog of ten years down due to fatty tumors, and her inability to walk around without pain and discomfort. She had tumors all over her body (see Picture 1).



Picture 1

This was our dog Daisy Doo. We had to put her to rest on 12/31/2020 at the age of ten because of her lack of mobility and quality of life due to tumors all over her body. The veterinarian at Airport Animal Hospital stated, "I have never seen anything like it."

Some of the deer that come onto our property have antlers with bizarre, unnatural shapes (see Pictures 2 and 3). And a few of them also have lumps on them that to me look like fatty tumors.



Picture 2



Picture 3

We also feed hummingbirds with two feeders, one of which needs regular refilling, while the other stays full. My husband noticed that the feeder that the hummingbirds prefer is not in the direct line of the tower and is blocked by trees, while the one that stays full is in a direct line of

[143] Effect Of Electromagnetic Field On Body Weight And Blood Indices In Albino Rats

sight of the tower. We decided to do a little experiment and move the one that they never drink into the same tree that is not in the direct line of the tower. They started drinking from that one almost immediately. I have videos of this.

Not only has our family and wildlife around us been affected, but our neighbors have also been tragically harmed. One neighbor died at the age of 58 of a stroke in January 2020; she was also fighting cancer as well. Her house is the same distance from the tower as our home. Another neighbor that lives across the road from us also died from cancer from a brain tumor in December of 2017 at the age of 59. His wife also has medical problems. She has recently just found her dog dead in the yard; it, too, had a mass growing in his abdominal area.

My husband and I have been asking our local government to help fix this problem that is causing my health issues along with my family, neighbors and local wildlife, but they continue to say their hands are tied because of federal preemption by the FCC's so-called FCC "safe" guidelines.

Our local town board consists of 5-6 members on the planning and zoning commission, and the board itself has 3 members, 2 supervisors and 1 chair. Meetings are held twice a month, which makes it difficult to get anything done in a timely manner. There is a clerk and deputy clerk, but they only are available on Wednesdays.

We have attended every town board meeting for over a year; half of those were Zoom meetings due to Covid restrictions. We have supplied them with a lot of information to help educate them, only to be told there is nothing they can do. At the last meeting, we presented a "soft" cease and desist-type letter, based on the August 13, 2021 building biologist's findings. The experience of many people living close to this tower clearly shows it is harming our lives, and the federal maximum exposure guidelines that the town is saying "ties their hands" are NOT safe.

We initially asked the town board to influence American Towers to redirect the antenna overlooking our home. The town contacted American Towers and presented the responsible official with our request, along with the RF survey we paid to have done. American Towers' response was to have their own survey done based on information from AT&T and T-Mobile on antenna type, placement and height. American Towers hired a company of their choice to do a computer model of RF emissions. The findings showed a 6-foot-tall man standing 200 feet away from the base of the tower would be in a safe zone (see report). They also went as far as to call this building biologist we hired "unqualified" and attempted to discredit his 40 years of experience in this field. The town board agreed the survey from American Towers was very poorly done, and we needed something more to prove our home is safe from radiation exposure.

American Towers finally agreed to send a team out to our property and conduct their own RF readings. Their main demand was that only members of the town board could be present, along with the homeowner and family. I asked if Frank DiChristina, the building biologist we hired, could be present for the readings; their response was "no," and if anyone else was present that the readings would stop, and they would immediately pack up and leave. They also said there would be no interaction between their team and anyone present, due to Covid. On their arrival, we all introduced ourselves, we had a couple members from the board along with our town lawyer. They sent a two-man team, one man was an area manager, the other a site manager. My husband asked what their job qualifications were. One said he cut grass and picked up fallen trees. The other said something about flying a drone over the site. Either way, these men were

clearly not RF engineers. They had brought personal protection equipment to perform the readings, none of which read in actual real-time power levels, but in percentages. People that work around cell tower antennas wear the devices, which sound off when workers are exposed to too much RFR. The readings started, and the device read 4%. The men said: See, it's only 4%, its safe. I said: 4% of what? Their response was: I don't know.

I have been told since then by other people in the RF field that the device they used measures and calculates the person's daily/weekly RF radiation absorption limits, and sounds an alert when the worker needs to get out of there, kind of like a carbon monoxide detector. The readings came to an end, we said our goodbyes and everyone went home. A few days later a follow-up conversation between the town lawyer and American Towers revealed that the limits were safe and in compliance with the FCC guidelines and there is nothing that can or needs to be done (see Attachment 3).

The remedy that my family is urgently requesting is that the tower be taken down because the FCC guidelines that are being cited as the basis for allowing the tower to radiate our community are not based on the latest scientific research and do not protect us from RFR exposure, and the tower is therefore making many people and animals sick.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/Marcia Haller
Marcia Haller
7420 Rice Lake Road, Duluth MN 55803
218-391-0234

October 5, 2021

Attachment 1—Timeline

- In the end of September, early October of 2019, a crane was placed against the existing cell tower. After the crane was taken down, I began to feel ill. I was dizzy, I had a headache, I was nauseous. I couldn't pick my head up off the pillow without the room spinning and feeling very sick.
- October 7, 2019 – I went to Urgent Care (ED) and was diagnosed with vertigo.
- October 10 - 13, 2019 – I went to the ED and was diagnosed with strokes, vision loss and balance difficulties.
- October29 – 31, 2019 – I went to the ED and was diagnosed with strokes.
- November 5- 7, 2019 - I went to the ED and was diagnosed with strokes. From there I signed myself out and went to the Mayo Clinic in Rochester, NY.
- November 8, 2019 – I was at the Mayo Clinic where I was diagnosed with a rare autoimmune disease called Susac syndrome.
- November 8 – 22, 2019 – I was at the Mayo clinic receiving treatment.
- November 25, 2019 - Started getting headaches and feeling dizzy. This went on almost every day all day. (See journal)
- December 11 – 12, 2019 - I went to the ED and was diagnosed with strokes.
- December 16, 2019 - Had pain in the back of my head. (See journal)
- December 23, 2019 – I had hearing loss in my left ear.
- December 26, 2019 – I went to Rochester – St. Mary's. I was showed I had more TIAs and hearing loss in the left ear.
- December 26, 2019 – January 2, 2020, I was at St. Mary's hospital and Mayo Clinic in Rochester receiving treatment.
- January 2 – 6, 2020 – I was at home.
- January 6 – 10, 2020 – I went back to the Mayo Clinic for more treatment.
- January 10-12, 2020 - I was at home.
- January 12- 16, 2020 – At Mayo Clinic.
- January 13, 2020 – MRI showed I had numerous new TIAs.
- March 3, 2020 – Moved into my parents' house.
- October 2020 – Moved back home.
- October 16, 2020 – Had building biologist Frank DiCristina analyze our home. In attendance was also Carter Williams (Chair of Gnesen Planning and Zoning board), Peter Berman (Gnesen Planning and Zoning board member), and Kevin Middleton (Gnesen Planning and Zoning board member). Kevin called my husband Jason after he had left and said he had a headache after being at our home.
- Late October 2020 – Jason built a Faraday Cage in the garage to block all the RF.

- April 30, 2021 – Jon Nelson (Board Chair of Gnesen Township) came to our home to see the tower and watched us take some readings. He also stated he experienced some of the symptoms we feel when we are at home, which went away as soon as he left. (related to us in zoom meeting May 10, 2021).
- May 6, 2021 – Had two employees from American Towers, Nate LaCousiere (Gnesen's Attorney), Jon Nelson, and Nathan Horyza (Zoning Officer for Gnesen) over to do some readings with American Towers equipment. Also showed Nate LaCousiere and Nathan Horyza the Faraday Cage room in the garage where we sleep.
- August 10, 2021 – Met (via telehealth) with Sharon Goldberg, MD.

Attachment 2 — Building Biology Summary Report by Frank DiCristina, BBEC, EMRS

10/18/2020

I was hired to inspect a property at 7420 Rice Lake Road, Duluth, MN 55803 owned by Marcia and Jay Haller. I arrived on October 16, 2020 at 12:30pm. Upon arrival I was met by Jay Haller and then shortly afterwards his wife Marcia. Immediately I noticed the cellular antenna tower on the adjacent property out past their back yard. The Hallers informed me that they have been living on the property and that the cellular tower was installed in the past few years.

Marcia said she started to have health issues shortly after a crane was observed at the cellular tower site performing maintenance. Some of her complains were headaches, dizziness, lethargy, and other symptoms which she has now seen medical care for. I informed Marcia and Jay that I am not medically trained so I cannot make any observations, I am a technician and I take measurements.

My background is 40 years in the industry as a technician in the aerospace, industrial, avionics, and computer industries. My main job in most of these industries was repair and measurement of interference noise in systems. My job was to find the interference and advise the engineers on my findings so we collectively can come up with a solution to resolve the issue. Radio Frequency exposure or "leakage" is solved 1 of 3 ways typically, reduction, elimination, or shielding. In this particular case shielding an entire home is not practical. So either reduction or elimination is the best option.

Readings:

Location	Power Density (mW/m^2) (1 mW/m^2 = 1,000 $\mu W/m^2$)
Side porch	10 mW
Back porch	11 mW
Back yard near house	12 mW
Back yard near metal stake in ground placed by client	16 mW
Inside house at dining table	11mW
In bedroom	11mW with a peak of 18 mW

These readings were taken over a period of 3 hours. Meters used were a GigaHertz 59B and a RF Explorer Spectrum Analyzer. The client also had a Trifield TF2 (consumer grade). Antennas used were an Omni directional antenna and a "Christmas Tree" directional antenna for the 59B, and 2 Omni direction antennas for the RF Explorer.

Building Biology Standards related to RFR (High Frequency, Electromagnetic Waves):

Power Density (µW/m2)	**Level of Concern**
< 0.1	No Concern
0.1-10	Slight Concern
10-1,000	Severe Concern
> 1,000	Extreme concern

The readings taken were well above **Extreme** Concern range — in other words, my meters never read lower than **10 mW** when I should have been reading no higher than **1µW**.

I was also informed that at nighttime the readings get much higher, but I have not verified this as of yet.

The information provided here is to the best of my knowledge and true. None of the readings taken were altered or doctored.

/s/Frank DiCristina, BBEC, EMRS
Frank DiCristina
8509 Bryant Avenue South
Bloomington, MN 55420
frank@gratefuldowsing.com
www.gratefuldowsing.com
612-384-1334

Attachment 3 — American Towers Email

Gmail **Marcia Haller <marciahaller01@gmail.com>**

Fwd: American Towers Communication

Jason Haller <jhaller0611@gmail.com> Wed, Jul 28, 2021 at 8:16 AM
To: Marcia Haller <marciahaller01@gmail.com>

---------- Forwarded message ---------
From: <nathan@gnesen.org>
Date: Tue, Jul 27, 2021, 7:30 PM
Subject: American Towers Communication
To: jhaller0611@gmail.com <jhaller0611@gmail.com>

Jay,

As requested, this email is to capture our conversation this evening on 7/27/21 concerning American Towers response to our request to reposition one of the cell antennae's that appear to be pointed toward your residence.

American Towers communicated to the Township through our attorney that they have no evidence that shows the equipment on the tower is out of compliance with FCC regulation. As such they have told us that they will not be repositioning the antennae in question.

I know this is not the news you were hoping for but as long as they are following FCC regulation, there isn't much more the township can do at this point.

Feel free to call with any questions.

Nathan Horyza
Gnesen Zoning Officer
218-341-0208

T. Robert Strayton

My name is Robert Strayton. I live on the island of Chappaquiddick, a small peninsula off the island of Martha's Vineyard, and part of the Town of Edgartown, MA. I am writing this document to support the petitioners who seek the establishment, by the Food and Drug Administration, of a science-based standard for exposure to radiofrequency radiation (RFR) which takes into account not only the latest science, but the life-threatening potential of RFR to disrupt the proper functioning of critical medical devices.

I am currently a chef and owner of two restaurants, but from 1990 through 2017 I worked for, and eventually managed, and then owned, a strategic communications consultancy focused on technology companies. Over that nearly 30-year span the majority of my client companies were designing and building hardware, software and devices targeted at telecommunications carriers and telecom infrastructure suppliers. For 30 years I was intimately involved in the creation and development of the various telecom technologies we largely take for granted today, including voicemail, automated attendant, call forwarding, three-way-calling, and perhaps most fittingly, Voice over IP (VoIP) and Video over IP (i.e. Zoom), the things that literally enable cellular networks to function.

While not an engineer, I have a deep and broad understanding of the various technologies, at a level of granularity far beyond the average lay person. If you tell me that a telephone call is being made from a cell phone using CDMA, connecting to a tower connected to a fiber-ring then I know it's CDMA to ATM to simply connect the senders handset to the network. In other words, in every hearing I was the most knowledgeable person in the room when it came to telecom technology, how it works and the obvious limitations and vulnerabilities of the site selected. A prescience borne out by the need, now, to construct the "Katama Silo" tower, and the inability of residents across our little six square mile island to connect to the current tower.

In 2018, the Town of Edgartown approved the construction of a 120-foot cell tower in the front yard of my neighbor's 1/2-acre residential lot. They did this in spite of there being at least 425 locations on our 6-square mile island where a cell tower could be built. Instead, the site of this tower is in the most densely populated year-round neighborhood of a largely wooded, uninhabited island (year-round population about 200). The current tower is 33 feet off the public right-of-way, within 130 feet of 3 neighboring homes, within 500 feet of nearly two dozen homes and is less than 200 feet from my property.

Under the initial configuration the tower pulses out roughly 45,000 Watts of electromagnetic radiation.

Readings taken by a certified building biologist showed very high levels of radiation everywhere on my property, and very significant levels in my bedroom, kitchen and other areas of my home.

These high levels of radiation are a problem for me because in November 2018, less than two months after the approval of this tower, I had a serious ST Elevated myocardial infarction (STEMI), a "heart attack" in the second proximal artery of my left anterior descending (LAD) artery. As a result of that heart attack, and subsequent complications, my cardiologist prescribed

a blood pressure monitoring device and an at-home EKG monitor to track and monitor my cardiac health and function.

Both devices, my Welch-Allyn Blood Pressure machine and my AliveCor KardiaMobil 6L EKG device, specifically state they can and will malfunction in the presence of strong electromagnetic radiation fields. The manuals go on to provide a table of radio frequencies, power outputs and minimum safe distances from a radiated energy source. They also provide formulae to calculate minimum safe distances from other radiating devices.

Utilizing the specifications from the original tower design submitted to the Town of Edgartown as part of the permitting application, we calculated wattage outputs of 43,000+ Watts of radiation, and a minimum safe distance at over 840 feet, well outside my property lines.

In other words, there is nowhere on my property where I can expect to get accurate readings on these highly sensitive, FDA-approved medical devices. The inability to accurately monitor my health, to get accurate, reliable readings from my devices does endanger my health and places my very life at risk.

Perhaps worst of all, this tower was touted for its "public safety benefits," but that has proven to be a complete fabrication on the part of AT&T, its attorneys Anderson & Krieger, and its then attorney, Brian Grossman. In fact, the tower failed to provide emergency communications to the Edgartown Fire Department on December 4, 2020 at 11:30 AM when I experienced supra-ventricular tachycardia (SVT), an uncontrolled heartbeat that can lead to stroke, cardiac arrest and death.

On that day, the Edgartown Fire Department (EFD), in spite of being less than 300 feet from the tower, in spite of all Edgartown Firefighters and paramedics being equipped with AT&T phones, the EFD could not communicate using the tower. It could not transmit my EKG to the MV Hospital Emergency Department (ED), it could not receive authorization from the ED to administer adenosine to stop my heart temporarily (hopefully), and it could not contact another paramedic to assist in my transport and care.

It was not until we reached the far western side of Chappaquiddick, the actual ferry landing, where the EFD could, using the North Street tower in Edgartown, transmit my EKG (my heart rate then at 225 beats per minute, or nearly *four beats per second*), receive authorization to administer adenosine and stop my heart, all while waiting to board the ferry for the trip across Edgartown harbor and then 15-minute ride to the hospital.

The important thing to understand is up until that day, the day AT&T was literally adding 5G to that tower, I had never, at any time in my life, even during my heart attack, had an irregular heartbeat. I did not ever experience SVT, I had never been diagnosed with aFib. Even while I was having a heart attack, even while my interventional cardiologist had a wire in my heart, did I have an irregular heartbeat. One month later, on January 2, 2021 I again experienced SVT, my heart rate climbing precipitously, and again requiring a visit to the Martha's Vineyard Hospital ED and medical intervention to bring my heart rate back to a somewhat normal resting heart rate.

As a result of these two episodes, I was asked to wear a "Holter Monitor" a device that monitors constantly your heart rhythm, for two weeks. The device transmits EKG information on an irregular heartbeat over a cellular network to a monitoring company which evaluates the EKG and transmits the results to my cardiologist. In this case, AT&T's network (AT&T and Verizon use totally different and incompatible transport technologies: CDMA v. GSM) but, again, in my home, less than 300 feet from the AT&T tower, the Holter monitor could not connect, could not transmit my EKG information.

The response to these two events was to TRIPLE the amount of metoprolol I was taking on a daily basis. Prior to these events I took 25 mg once a day, that was doubled to 25 mg twice a day in December and an additional 25 mg per day was prescribed in January so that now I take 50 mg in the morning, 25 mg at night. Triple my initial dose! Also as a result, my blood thinner was altered from a single Plavix (10 mg 1x/day) once a day, to Eliquus, taken twice a day. These medications do not come without risks, side effects or consequence. This tower is literally endangering my life every single day, with no recognizable public safety benefit.

If the tower does not work literally in its own shadow, and if it endangers my health, my life, by its very existence, then it does not provide a public safety benefit; in fact, it represents a grave danger to people's health. Whether from deadly radiation emissions, to unsubstantiated claims about emergency communications, to ice falling from a bare galvanized steel structure looming dangerously over the road, this tower is not simply a nuisance, but a danger to me, and every single person passing by that most egregious location.

AT&T claimed this tower "meets FCC standards" and that emissions from the tower "were within FCC guidelines." What AT&T did not say, would not say, was that the emissions from the tower are "safe," that they will not cause physical harm. They know the emissions are dangerous to human health, and they know the emissions interfere with medical devices, the Food & Drug Administration identified medical device interference years ago, specifically as it relates to cardiac devices and monitors.

When questioned on the safety of tower emissions, the permitting authority, the Edgartown Planning Board stated, "it had no expertise to evaluate the safety of the tower" but perhaps more egregiously, refused to allow anyone to ask health-related questions of the tower, claiming they could not "listen to any 'health' questions or objections." An effective denial of citizens First Amendment rights, and a denial of due process under the law. The Town of Edgartown relied upon a theoretical report provided in the application as to the "safety" of radiation emissions from the tower. The Planning Board abdicated its responsibility to the citizens it serves, and stated that if the tower met FCC emission standards there was 'nothing' it could do.

I argued throughout the public hearing process that there exists better, safer, more compliant, less impactful locations on Chappaquiddick to site a cell tower. That was true then, it is true now. There are at least 53 locations on Chappaquiddick that AT&T themselves have said would "substantially fill the known coverage gap" and which meet the minimum lot size under Edgartown Zoning laws (R-120, 3+ acres, no commercial or industrial use), at least a dozen of those sites are on large 6+ acre town-owned parcels, with no homes within 1,000 feet.

The fact that the minute 5G was added to that tower I suddenly developed an irregular heartbeat should give one pause. Was that the cause of my irregular heartbeat? Nothing else had changed in my life except for the 5G emissions. What is certain is that the tower does not work as claimed, does endanger innocent people, benefits one man who made a unilateral decision, and was approved only through a series of illegal and backroom deals, the details of which I will not delve into here, but the proof of which can be supplied.

In deciding to approve the tower, local officials are relying on telecom claims that their equipment complies with FCC exposure guidelines. In turn, the FCC claims that its 25-year-old exposure guidelines are the product of careful consultation with the FDA. But the fact is, FDA has not developed nor issued any exposure standards of its own, particularly standards that would prevent towers like the one near my home from interfering with critical medical devices. This inaction on the part of the FDA and the deceit by the FCC may very possibly cost me my life. This must be remedied immediately.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/Robert Strayton
Robert Strayton
307 Chappaquiddick Rd.
Edgartown MA 02539

U. Shirley Jackson

My name is Shirley Joy Denton Jackson. I live at 12875 Barrow Road, North Palm Beach, FL 33408. I've been an educator my entire career, with varied system-wide and college positions. I am also electromagnetically sensitive. My career was cut at least five-years short due to experiencing a mysterious constellation of substantial health effects that prevented me from fulfilling my job responsibilities at that time. Although I had evidence that it was the environment that was severely impacting my performance, my request for accommodation was denied.

Rather than spend time in an uphill fight about something that still was very mysterious to me, I was fortunate enough to be able to retire early and use my professional skills to discover what was happening and how could I regain my previously active, physically, mentally, and emotionally vibrant and well-balanced life. Since then, I have been actively involved in sharing the peer-reviewed research on adverse health effects and helping people prevent or mitigate negative impacts. There are many ways to handle and deploy technology more safely: the problem is our regulatory agencies, cowered by the power of industry influence, have shirked their responsibilities.

The tragic impacts of FDA and HHS failing to fulfill their responsibilities to the American people are already upon us. Their job is to proactively keep citizens safe by having a science-based policy and alerting the public to the scientifically known adverse effects of radio frequency microwave radiation (RFMR) and other wavelengths on the electromagnetic (EMF) spectrum. I hereby declare my support for this Petition.

The adverse health effects of RFMR that have been, in essence, kept from public knowledge, are crucial and pivotal information for local agencies, such as the School District of Palm Beach County (SDPBC) and the Board of County Commissioners of Palm Beach County (BCC-PBC). These elected leaders are our front-line citizen champions, also charged with fiduciary responsibilities to ensure the public's safety.

But with the FDA, HHS and FCC failing to properly do their job, these leaders have decided to trust vendors' assurances that their wireless technologies are "FCC-certified" or "FCC-compliant," with the horribly tragic and false implication that such a designation means it is safe. No… being FCC-certified or compliant does not mean it is safe from adverse biological health effects. Even the industry's CTIA wireless association has covered itself via circular statements, carefully avoiding the word "safe" and simply restating that their equipment is "compliant."

This has resulted in, and continues to constitute, an Imminent Hazard to the Public.

As the DC Circuit Court judges ruled on August 13, 2021, the FCC has not properly monitored or responded to the latest science. It has not established clear policies (like establishing biologically-based human exposure limits rather than its currently thermal-only human exposure limits) for considering the risks of exposure. The simultaneous dereliction of duty by the FDA and HHS has allowed our local officials and the world instead to depend upon the false premise that "exposure to RF radiation at levels below its current limits causes no negative health effects." People's lives, especially children, those with compromised immune systems, those with implanted medical devices, pregnant women and those with disabilities are unknowingly being exposed and endangered because of this. Additionally, the FDA declines the

opportunity to monitor human safety by registering complaints about malfunctioning radiation-emitting devices, while ignoring complaints about adverse human experiences resulting from exposure to RFMR.

AS A RESULT: The School Board has purchased millions of dollars of wireless curriculum and equipment for even its youngest and special needs students. In late 2016 and early 2017, without any deeper review except assurances of compliance from their vendors, they purchased online reading curriculum for the elementary students and installed wireless technology throughout their buildings, including in classrooms where the most vulnerable special needs students spend their day. Despite citizen requests for a task force to establish Wireless Safety protocols for students and teachers, none were pursued because the vendors implied that compliance with federal regulations meant their products were "safe" – causing no negative health effects. Instead, chronic radiation exposure levels directly increased for 165,000 children with no informative precautionary guidance and no monitoring provided – that is a ridiculously avoidable Imminent Hazard to the Public and to the future viability of our country.

When COVID shut-downs occurred, the School Board eagerly rushed to partnership efforts and purchases with the county Wi-Fi Mesh Network, driving the push for more deployment, now in the public right-of-ways outside and then inside students' homes, with Wi-Fi Extenders transmitting 24/7. In the meantime, free vendor hotspots were installed, especially in the homes of low income families whose health risk factors are known to be higher, all because there were no official alerts about adverse effects, and the vendors kept touting compliance.

Without any assurances of safety other than its IT department parroting the false implications of safety from vendors' claims of being FCC-certified, the PBC Board of County Commissioners has rushed to deploy a Wi-Fi Mesh Network. Despite citizen requests to pause, and technical evidence of overpowered, unneeded and improperly located permits and research that had been submitted to the FCC, but arbitrarily and capriciously discounted, the deployment of 1,400 unregistered antennas in the community and 96 root radios on school grounds is nearing completion.

Despite the peer-reviewed science documenting the adverse effects, the county is marching on. There will be yet another heavy blanket of RF Radiation transmissions broadcast that will certainly, according to peer-reviewed science, cause subtle but toxic changes at the cellular level: multiple oxidative stress indicators will flourish and the calcium channel disruptions, basic to cell functions, will effect various adverse reactions. Reality check: diabetes and A1C levels have significantly risen in recent years. A1C indicators are proven to rise with exposure to wireless transmission frequencies. Shouldn't regulatory agencies determine safety? Shouldn't we pro-actively have a positive campaign about good wireless safety, especially because the wireless industry has shrunk its legal notifications to almost nothing? Citizen warnings have been to no avail, because the supposedly authoritative regulatory agencies have shirked their duties.

WHY SHOULD YOU LISTEN TO ME… a retired educator who has this little known (in the United States) functional disability referred to as Electromagnetic Sensitivity or Radiation Sickness? Because I am uniquely qualified to comment because of the research skills and expertise that I have acquired both professionally and personally.

My expertise includes:

-- a multi-year certified Florida Performance Management System observer, trained by leading industry practitioners (Motorola and Florida Power and Light) on the statistical and process tools of quality management.

--an experienced educator with a deep understanding of student risk factors -- originator of an innovative district-wide database system using at-risk indicators to identify and plan supportive interventions for individual students and whole schools.

--an experienced researcher, well versed in the science and technology of measuring and mitigating exposures to RFR fields.

– extensive skills and knowledge obtained through the Building Biology Institute

Here is a practical example of my expertise: In 2017 I entered a restaurant, immediately sensed and measured high RFR exposures in the foyer (over 1000 microwatts per meter squared), but I was hungry and searched further. I found that most of the restaurant was quite tolerable (below 100) except that one spot in the foyer. We were seated next to a table of apparently a grandmother and two adult daughters waiting for a third adult and her daughter. Suddenly I heard an ear-piercing shriek from the foyer, like an animal being wounded. I immediately knew what had happened. A child had just felt that same invisible but sudden blast of localized high exposures that I had experienced and measured. As the mother and young girl came to sit at the table, the girl wiggled and squirmed in her seat. The mother softly spoke as if this had happened other times… "if you can't handle sitting still, then say so and we will leave. We can see them later." The little girl said she couldn't. The mom and little girl left.

I went to the table when the remaining family were finishing up. I told them of my professional and my personal background, & what I had noticed and said I understood…could I ask just a few questions. Turns out the little girl had been a fine student, loved school. I asked about "date of on-set." I talked with them, and "it all changed" after some school holiday. Anything different in school after that? Well, they did start a new reading program the day they returned. Every second grade child was given a wireless iPad on that day.

I do not want any child or life debilitated when it is easily preventable with knowledge and precautions. I contend that the wounded animal shrieking from that little girl may well be an acute example of the documented adverse effects that many students have endured (brain fog, lack of concentration, hyperactivity) when their chronic exposures are increased…but we must truly monitor and act on the truth rather than avoiding it. Dr Toril Jelter's submitted testimony to the FCC and the *Environmental Health Trust et al v FCC* case helps open our eyes. This **is** an Imminent Hazard to the Public. It must change.

To conclude, the following are excerpts from the August 13th Ruling. They are included so that local officials, not familiar with it as this court is, should read and become informed, realize their fiduciary responsibilities have not been well supported by the FDA and other federal regulatory agencies.

AUGUST 13TH RULING - *Environmental Health Trust et al v FCC*

The August 13, 2021 federal DC Circuit Court ruling decisively stated the ways that the FCC had violated the Administrative Procedures Act (APA). Because of my experience as a lifelong educator, I particularly noticed that they failed to respond to the record evidence.

P9 – “When an agency in the Commission’s position is confronted with evidence that its current regulations are inadequate or the factual premises underlying its prior judgment have eroded, it must offer more to justify its decision to retain its regulations than mere conclusory statements.”

P9 - “Under this highly deferential standard of review, we find the Commission’s order arbitrary and capricious in its failure to respond to record evidence that exposure to RF radiation at levels below the Commission’s current limits **may cause negative health effects unrelated to cancer**.” (emphasis added)

P10 - “That failure undermines the Commission’s conclusions regarding the adequacy of its testing procedures, particularly as they relate to children, and its conclusions regarding the implications of long-term exposure to RF radiation, exposure to RF pulsation or modulation, and the implications of technological developments that have occurred since 1996, all of which depend on the premise that exposure to RF radiation at levels below its current limits causes no negative health effects. Accordingly, we find those conclusions arbitrary and capricious as well. Finally, we find the Commission’s order arbitrary and capricious in its complete failure to respond to comments concerning environmental harm caused by RF radiation. (emphasis added)

Petitioners point to multiple studies and reports, which were published after 1996 and are in the administrative record, purporting to show that RF radiation at levels below the Commission’s current limits causes negative health effects unrelated to cancer, such as reproductive problems and neurological problems that span from effects on memory to motor abilities.” (emphasis added)

The School District of Palm Beach County Florida is currently being sued because of an alleged poor application and overuse (sudden 56% increase beginning two years ago) of invoking the Baker Act to remove oddly behaving students who are disproportionately minority and disabled from school for an involuntary psychiatric evaluations. I hope they open their eyes and check out the possibility that such behavior and the sudden increase may be linked to an increase in classroom radiation exposures. Having only federal guidance to date that is based on false and misleading information has robbed these educators of fulfilling their fiduciary responsibilities. It has denied them full knowledge about how radiation can affect and also be mitigated for the well-being of their students. As an educator committed to Safe Schools and productive learning and well-being for our children and families, that is an outrageous and avoidable Imminent Hazard to the Public.

Under penalty of perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

/s/Shirley Jackson
Shirley Jackson
12875 Barrow Road
North Palm Beach, FL 33408

V. Laurie Brown

My name is Laurie Brown. I am submitting this declaration in an effort to compel the Food and Drug Administration to review all the scientific studies on biological harm caused by exposure to non-thermal levels of RadioFrequency (RF) radiation. Once reviewed, to set limits, to regulate, to establish proper protocols for measuring these exposures in real time, and to enforce human protective guidelines and standards to protect the public from physical harm caused by pulsating wireless devices emitting biologically disruptive radiation.

Despite the proliferation of wireless antennas, wireless devices, and the installation of cell towers and access points for Wi-Fi and wireless connectivity, no one is regulating and ensuring the public's safety and exposure to RF radiation. The current FCC guidelines are outdated and are only thermal based. The FDA needs to weigh in, acknowledge, and address the biological harm caused by the increasing and limitless saturation of wireless radiation in our environment. The public deserves to know the truth and to be protected from increasing exposures that cause biological harm, symptoms, and diseases, preventing individuals from working, attending school, and living a healthy and fulfilling life.

I taught middle school for the Los Angeles Unified School District (LAUSD) for approximately 26 years. I rarely was ill and accumulated approximately 800 hours of sick time during my career, the equivalent of nearly 7-8 months of work. I enjoyed a normal, healthy life and never had to concern myself with routers, Wi-Fi or electro-magnetic radiation. Unfortunately, my career, health, and life as I knew it changed in April 2015, when my school "upgraded" our Wi-Fi system and added 190 access points, two in every classroom, and brought in wireless devices, increasing the total wireless radiation on campus. My District did little to protect me from the peaks or spikes of radiation emitted from all the wireless devices on campus.

Our system was activated in April 2015. After a few hours on campus, I would begin to feel ill and experience symptoms such as headaches, heart palpitations, skin burning, earaches, nausea, foggy headedness, inability to concentrate, and many other debilitating symptoms – all symptoms of microwave sickness. I was becoming electro sensitive and was diagnosed with Chronic Inflammatory Response Syndrome caused by exposure to RF radiation . After a few consecutive days of work and increased exposure on campus, I started using my illness days. Some other staff members experienced physical and debilitating symptoms from the increased radiofrequencies on campus, too. My Principal contacted LAUSD's Office of Environmental Health and Safety (OEHS) and wrote to the Inspector General of LAUSD sharing his concern as well as staff members' concerns. The District's OEHS Initially waited approximately 6 weeks, until Common Core Testing was over, when fewer students would be operating devices and on campus with cell phones, to measure the RF frequencies in specific classrooms. On June 22, 2015, during the summer break, my principal wrote to LAUSD's Inspector General stating**,** "After the system was turned on**,** several employees complained of illness (headaches, light headedness, etc.)."

After the installation of the new commercial Wi-Fi system at my school and becoming ill from my exposure to EMF/EMR, I learned LAUSD had been **warned** by doctors and scientists,

prior to installation, that the commercial grade Wi-Fi being considered was untested and potentially dangerous in school environments.

As an example, a written rebuttal to LAUSD's plan was prepared by Cindy Sage, an EMF expert, environmental scientist, and co-editor of the Bioinitiative Report. Sage critiqued URS Corporation's evaluation and stated she could not support URS' conclusions regarding the safety of LAUSD's proposed Wi-Fi system because data supporting those conclusions was being withheld. In February 2017, Sage wrote the following to LAUSD:

> "What LAUSD has created with its wireless classrooms is essentially the set-up of one of the **largest unsanctioned children's health experiments in US history**. No research institution would be given permission to do this without Institutional Review Board approval for conducting human experimentation in research. Children who attend LAUSD schools are being placed into classroom environments with pervasive exposures from wireless routers and devices, and for some of them, is likely to result in **permanent electro hypersensitivity characterized by chronic health and cognitive impairments.** The same is already true for some teachers who have sought accommodations due to their acquired hypersensitivity to wireless exposures."(Emphasis added.)
>
> "On March 13, 2013, the Executive Committee of the American Academy of Environmental Medicine wrote to LAUSD and stated, "it is unlikely that there are currently enough doctors in Los Angeles County familiar with the biological effects of microwave radiation to diagnose and treat the numbers of children who will potentially become symptomatic from exposure to your wireless system should you elect to install it. Statistics show that you can expect an immediate reaction in **3% of your students and time-delayed reactions in 30% of them. This will also include teachers."**(Emphasis added.)

In my opinion, by using averages compared to "raw" data, the RF peaks/spikes students and staff are exposed to each day, every day, over the course of an entire school day or school year (cumulative effects of spikes and exposure), are mitigated and diluted **on paper,** likely creating, and providing a false sense of safety to the public, parents, staff, and students. Clearly, spikes, density, and time (duration) of exposure are important and should matter to those responsible for protecting the public and assuring safety measures.[144]

The FDA should not continue to ignore the overwhelming abundance of scientific studies proving biological harm caused by pulsed EMR/EMF/RF nor should they allow RF spikes to be

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[144] Here is an example of LAUSD's RF protocol and evaluation: "Data was collected in general accordance with the URS monitoring protocol. This protocol standardizes the preparation and operation settings of the NARDA SRM 3006 (Selective Radiation Meter) monitoring device."
"For the purpose of the evaluation, The **AVE** data set was evaluated and compared to the LAUSD adopted criterion**.** A combination of the magnitude and the duration of the energy bursts are integrated by the SRM-3006 to provide the **AVE** power density results which are **averaged** for <u>each</u> frequency. The **AVE** power density are lower than the Maximum power density results. The **average** of the **AVE (AVE-average**) of each measurement is used for comparison to the adopted criterion**."** (Emphasis added.)

averaged and diluted over time. Medications are prescribed with specific instructions to minimize side effects and over dosing. The same safety precautions and concerns apply to overdosing on wireless radiation. More is not better and controls and guidelines are necessary. The FCC's old guidelines and school districts' RF protocols are not sufficient to protect children and the public. The FDA must address this immediate public health crisis. Protocols and protective measures must be developed and applied in real time, before it is too late.

Today, I no longer teach, something that was not only a career, but a great passion in my life. I loved teaching, found it stimulating, rewarding, and incredibly fulfilling. Because I enjoyed it so much, I intended to work for a lot longer, until a ripe old age, but I found it difficult to return to work without being reasonably accommodated. Unfortunately, I am unable to fill all my free time with meaningful activities and work due to the proliferation and installation of wireless antennas and devices everywhere. Therefore, I limit my time and exposure to RF radiation. Fortunately, my friends are willing to turn off their cell phones when they are out with me and in my home. My husband and I removed our Wi-Fi and cordless phones, turned off our wireless emitting devices, and use hardwired connections. I have a cell phone, but do not turn it on often and my husband mostly keeps his off around me. I know longer have the same freedom or luxury to enjoy limitless time out, travel, staying in a hotel, visiting family, and grocery shopping as I once did.

Living with Chronic Inflammatory Response Syndrome caused by EMFs (microwave sickness) is challenging and limiting. My quality of life has been severely reduced and none of it occurred by my choice. My health, lifestyle, quality of life, and freedom to come and go as I please have been drastically and negatively affected. In addition, my income and retirement have been significantly reduced. I am very fortunate to have a supportive and loving husband and family. Still, though, my condition and losses have impacted us.

Federal guidelines, limits, and protocols are needed to monitor and ensure the public's safety from exposure to wireless radiation. No longer can we ignore biological effects caused by pulsed, wireless radiation. Although it may be an inconvenient truth, more is dangerous and is very unhealthy. Too many people are already sick and more people will become seriously ill if we stand by and do nothing to address our chronic and limitless exposure to wireless radiation. I do not want others to suffer the same fate as me.

Under penalty of perjury I submit this declaration.
/s/Laurie Brown
Laurie Brown
4221 Noble Ave
Sherman Oaks, CA 91403

W. Ruth Fennesy Moss

I am writing this declaration because of the failure of the Food and Drug Administration (FDA) to develop and promulgate science-based human exposure standards for all wireless devices, including cell phones, computers, routers, “smart” utility meters, 4G/5G antennas, cell phone towers and other wireless devices. This failure is causing severe physical, economic and mental harm to the American public, and I am one of the victims of the agency’s failure.

A digital utility meter has ruined my life. After a wireless Automated Meter Reading (AMR) device was installed on my house by my local utility in 2008, I began to experience dizziness, flu-like headaches, and a frequent racing heart. These symptoms slowly escalated over several years. Never did I suspect that the electric meter on the side of my house was the cause. When that possibility was presented to me by a friend on July 1, 2015, it seemed absurd.

Nonetheless, on that very day I went outside to study the meter. While standing directly in front of it so I could read the small type, I suddenly felt a horrific thud in my chest. From that moment on, I could no longer use my cellphone, portable phone, or be in Wi-Fi without experiencing an extreme version of the symptoms I already suffered from — headaches, dizziness, and heart palpitations. This direct confrontation with the meter made me know, without question, that my condition was linked to radiation exposures emanating from the digital meter on the side of my house.

What followed immediately was a nightmarish month of escalating, blinding headaches until I finally got the meter removed. I believe the only reason the AMR meter was replaced with a safe analog meter was that I had overheard a phone conversation between two utility employees discussing the possibility that people were getting sick from the meters and that the signals probably could be causing cancer — I had documented the entire conversation and had the names to prove it.

The headaches improved over the coming days but tragically, the sensitivities have never gone away. I can no longer use a cellphone which means I can’t call my family for any reason if I’m out of the house, The pain in my head would be too severe and would last for days. The same is true of using my portable phone inside the house. I use a landline on speaker mode only — because putting it up to my ear hurts.

Wi-Fi causes me overall nerve pain and dizziness so everything in our home is hard-wired. I cannot go to stores or restaurants that have high Wi-Fi signals. Recently, my best friend’s son got married and I couldn’t attend. When I do enter Wi-Fi, out of sheer necessity, it takes a few days to recover.

I can no longer use a computer. The only device I can view (only view) is an iPad (I’m grateful for that) but I cannot touch it and must sit at least 4 feet away. I use it mostly for Zoom meetings.

As I'm a writer and engaged in two huge projects, I must hire an assistant to type all my emails and creative pieces from dictation. I've tried countless treatments to recover, and will continue to do so, but as of yet, nothing has made a difference. In addition to the physical and practical burdens of bearing these symptoms, there is a tremendous financial burden. It's a money pit that doesn't seem to have a bottom.

In conclusion, the FDA's continued failure to protect the public from this clear and present danger is disrupting lives and causing severe physical harm, economic hardship and mental anguish to a large and growing number of Americans. It blows my mind that the country whose flag I saluted growing up would ever permit, let alone force, a known toxin to destroy my health, my life, and the lives of so many others.

Under penalty of perjury I swear the foregoing is true and correct.

/s/ Ruth F. Moss
Ruth F. Moss

December 17, 2021

X. Courtney Kelly

Between my first and second year of law school I underwent a double mastectomy after discovering breast cancer exactly where I had been tucking my cellphone. I would take mountain bike rides from my house up table mesa in Colorado and during those bike rides I would put my cellphone in my sports bra. I would listen to music and podcasts and take 4-5 hour bike rides. When I got home, I noticed a red mark on my breast where my cellphone was.

My oncologist ordered the 250 gene panel genetic testing and it came back negative and therefore believes ***it is something external, environmental that caused the breast cancer***. I am an attorney; I know how to read and research and the research is very alarming. It is unequivocal that the radiation from your cellphone can be carcinogenic, particularly when it is held up to or on your skin. There is just a concerted effort to keep the knowledge from the public.

I have been through grueling treatments. I have had a recurrence which is terribly frightening, and I live in fear that I won't conquer this cancer. I have two small children and worry that I will not live to see them grow into adulthood. I am currently still under treatment years later and the side effects make day-to-day living difficult.

I hold our federal public health agencies responsible for allowing the public to believe these devices are safe, as well as the manufacturers who know of the dangers but do everything possible to keep that knowledge from the public.

I declare under penalty of perjury that the foregoing is true and correct.

/s/ Courtney Kelley
Courtney Kelley
6657 E. Dartmouth Avenue
Denver, CO 80224

Executed on December 14, 2021

Y. Margot Shaw

I am dying because the telecommunications industry has hidden the truth about the fact that cellphones cause cancer and put profits over the health and well-being of consumers, and the government agencies we depend on to protect public health have allowed this situation to exist without correction. I was led to believe the damned things were safe and they are not.

I developed a type of breast cancer that is not detected in mammograms or breast exams because I was led to believe cellphones are safe and clearly they are not as evidenced by ***the 11 centimeter tumor, the size of my cellphone, exactly where I have been tucking it in my bra for years.*** The tumor went undetected until the cancer had metastasized to my bones so there is no cure. My journey will be filled with pain and horror as the cancer eats away at my bones and travels throughout my body. Make no mistake, my cancer was caused by carrying and using my phone close to my body. I have no history of breast cancer in my family going back many generations so this is not a genetic issue and there simply is no other explanation when you consider size and location.

We have all been lied to by the cellphone manufacturers and misled by our public health agencies. I asked the apple experts why my iphone got so hot and was told it was nothing to worry about. The genius bar experts never said anything when I pulled my phone out of my sports bra , with the specially designed pocket to hold my phone, to show them how hot it was.

I now know that the industry has quashed research studies, manipulated data and promoted misinformation in the form of biased results from studies that they funded for over a decade resulting in countless women like me being misled. The American Cancer Society and Suzanne B Koman say there is no risk, but that opinion is based on the research that was funded by the industry. As a result women like me are dying from or battling breast cancer and countless more are at risk because they do not know.

The industry promotes cellphone usage to the point that it is now referred to as an addiction, all the while knowing and hiding the risks. I, like all users, came to rely on the phones so much so that I had to have it handy at all times. The countless apps that alert us to everything under the sun is proof that this was a campaign to addict for profit just like we saw with the cigarette industry. I, like everyone else used phones to keep track of finances, children, businesses and more. Apps that relax and entertain are more than abundant and pushed on us at every turn. Streaming while we exercise, drive and clean house has become the norm without any warnings about radiation and the risks.

The industry has overturned legislation that would have simply required that a warning be posted where every user would see it. (Berkley Right to know) Clearly the industry is concerned that people might curtail their usage if they were afraid of getting cancer. The government has failed to protect me and others as evidenced by last August's ruling in a case against the FCC which determined that they were capricious in ignoring the research.

As a result, I live with pain and the horrible side effects of treatment. I cannot live a normal life and must everyday try to muster the courage to plan for what is coming, wheel chairs , being bed

ridden and extreme pain. My loved ones will be burdened with watching helplessly as my body deteriorates and crumbles. The idea that my children will have to take care of me and watch me die a slow and terrible death is unbearable. My income has ended as I can no longer work and I must now rely on help from others when I should be helping them. I will not see my grandchildren grow into adults. The fear is all consuming and all of this was preventable.

I have lived a healthy active life only to be duped by an industry and abandoned by federal agencies that should be protecting us from dangerous companies and products.

I declare under penalty of perjury that the foregoing is true and correct.

/s/ Margot Shaw
Margot Shaw
106 Vanita Drive
Moon Twp, PA 15108

December 14, 2021

XIV. APPENDIX 4 — Examples of Media's Reliance on FDA

MAJOR NEWS SERVICES

1. **Associated Press**

Audience:
Associated Press, a worldwide nonprofit news agency, states that more than 15,000 news outlets publish its coverage every day.
Coverage:
Cancer from cellphones? New studies say no need to hang up
February 2, 2018
https://apnews.com/article/d8a5df8a466e40d58f41b65f843aba42
Key quote:

> The current safety limits for cellphones are acceptable for protecting the public health," FDA radiation health chief Dr. Jeffrey Shuren said in a statement.

Cross talk: Federal agencies clash on cellphone cancer risk
November 1, 2018
https://apnews.com/article/business-science-ap-top-news-us-news-health-4da5f1cdfd774af29143ff3f5ccffa0b
Key Quote:

> The FDA immediately disagreed, firing off a press release assuring Americans that "decades of research and hundreds of studies" has made the health agency confident that the current safety limits for cellphone radiation protect the public health.
>
> Plus, FDA pointed out confusing findings from the rodent study — such as that the radiated rats lived longer than comparison rats that weren't exposed to the rays. The toxicology agency said it appeared that the radiofrequency energy helped older rats' kidneys.

2. **United Press International**

Audience:
United Press International states that it "delivers an objective, continuously updated stream of breaking news from the United States and around the world at UPI.com, as well as digital, mobile, print and research licensing clients."
Coverage:
FDA: Magnets in cellphones, smartwatches may affect pacemakers
May 16, 2021
https://www.upi.com/Health_News/2021/05/16/FDA-warning-smartwatch-cellphone-battery-pacemaker/9371621186092/
Key quote:

> The U.S. Food and Drug Administration is warning that strong magnets in some cellphones and smartwatches can interfere with pacemakers and other implanted medical devices.

MAJOR CABLE AND BROADCAST NETWORKS

3. CNN

Audience:
CNN is an international cable news network with associated digital properties. It reaches more than 2 billion people, according to a CNN factsheet. The network's digital site has 200 million unique visitors per month.
Coverage:
Cell phone radiation study finds more questions than answers
February 7, 2018
https://www.cnn.com/2018/02/02/health/cell-phone-radiation-cancer-nih-study-bn/index.html
Key quote:

> "It's important to understand that – as is commonly done in these types of risk assessment studies – the study was designed to test levels of radio-frequency energy exposures considerably above the current safety limits for cell phones to help contribute to what we already understand about the effects of radio-frequency energy on animal tissue," Dr. Jeffrey Shuren, director of the FDA's Center for Devices and Radiological Health, said in a statement after the release of the reports.
>
> "The current safety limits are set to include a 50-fold safety margin from observed effects of radio-frequency energy exposure. From the FDA's understanding of the NTP results, male rats that showed carcinogenic activity were exposed to a radio-frequency energy exposure rate that is much higher than the current safety standard," he said.
>
> "Looking at the results in animals, the conclusions still require careful discussion, as our preliminary understanding of the NTP results is that the study found mostly equivocal, or ambiguous, evidence that whole-body radio-frequency energy exposures given to rats or mice in the study actually caused cancer in these animals."

Federal health agencies disagree over link between cell phone radiation and cancer
November 1, 2018
https://edition.cnn.com/2018/11/01/health/cell-phone-radiation-cancer-nih-fda/index.html
Key quote:

> "After reviewing the study, we disagree, however, with the conclusions of their final report regarding 'clear evidence' of carcinogenic activity in rodents exposed to radiofrequency energy," Dr. Jeffrey Shuren, director of the FDA's Center for Devices and Radiological Health, said in a statement Thursday in response to the report.

One thing the two agencies, which both fall under the US Department of Health and Human Services, agree on is that the findings of these studies in rats and mice should not apply to human cell phone use.

4. **CBS News**

Audience:
CBS News, a division of the CBS radio and television broadcast network, reports daily on national and worldwide news. CBS News claims more than 1 billion visitors to its broadcast and digital venues each quarter.
Coverage:
Have a pacemaker? Keep your cell phone at least 6 inches away
May 13, 2021
https://www.cbsnews.com/news/pacemaker-iphone-smart-phone-cellphone-danger/
Key quote:

> Magnets used in portable devices including cellphones and smart watches may impair pacemakers and affect other implanted devices, the Food and Drug Administration warned Thursday.

5. **NBC News**

Audience:
NBC News, a division of the NBC radio and television broadcast network, reports daily on national and worldwide news. NBC Universal, the parent company, claims to be able to deliver 700 million people to advertisers, but does not break out audience size for NBC News on its website.
Coverage:
Cellphone radiation may cause cancer in rats, report finds
November 1, 2018
https://www.nbcnews.com/health/health-news/final-report-says-cellphone-radiation-may-cause-cancer-rats-not-n929781
Key quote:

> "Based on our ongoing evaluation of this issue, the totality of the available scientific evidence continues to not support adverse health effects in humans caused by exposures at or under the current radiofrequency energy exposure limits," Shuren said.
>
> "We believe the existing safety limits for cell phones remain acceptable for protecting the public health."

MAJOR NEWSPAPERS AND ONLINE NEWS SITES

6. **USA Today**

Audience:
USA Today is a nationally distributed newspaper which claims a circulation of its print edition of 535,000 daily and 609,000 for its Friday/Weekend edition. Readers of the print

edition number 2.6 million. Gannett Co, Inc. owns USA Today and more than 300 digital properties in 46 states which have more than 150 million visitors a month.

Coverage:

Can cellphones cause cancer? 5 steps to minimize the risk

July 22, 2021

https://www.usatoday.com/story/tech/columnist/komando/2021/07/22/cancer-debate-5-steps-minimize-risk-cellphone-radiation/8000241002/

Key quote:

> While there's been no direct response to Berkeley's research, the Food and Drug Administration has long maintained that there's no consistent scientific evidence of health problems caused by exposure to the radiofrequency energy emitted by cellphones.

7. **The Washington Post**

Audience:

The Washington Post provides national and international coverage of news, business, sports and entertainment. The Post claims 1.6 million readers of its print edition each week and 104 million unique visitors a month to its website.

Coverage:

Cellphone radiation study finds mixed effects in rodents, without clear implications for human health

February 2, 2018

https://www.washingtonpost.com/news/to-your-health/wp/2018/02/02/cellphone-radiation-shows-mixed-effects-in-rodents-without-clear-implications-for-human-health/

Key quote:

> The Food and Drug Administration, which commissioned the study, released a statement describing "the mostly equivocal, or ambiguous, evidence that whole body radio-frequency energy exposures given to rats or mice in the study actually caused cancer in these animals."
>
> Jeffrey Shuren, director of the FDA's Center for Devices and Radiological Health, noted that there were unusual findings in the study and said his team is continuing to assess them, but he emphasized that, based on all available scientific information, the agency does not believe there are adverse health effects in humans caused by cellphone radiation.
>
> "Even with frequent daily use by the vast majority of adults, we have not seen an increase in events like brain tumors," he said. "Based on this current information, we believe the current safety limits for cellphones are acceptable for protecting the public health."

8. **The New York Times**

Audience:

The New York Times is a nationally distributed newspaper and online news site. The outlet claims more than 6.1 million readers.

Coverage:

Cancer Risk From Cellphone Radiation Is Small, Studies Show

February 2, 2018

https://www.nytimes.com/2018/02/02/health/cell-phones-cancer.html

Key quote:

> The Food and Drug Administration issued a statement saying it respected the research by the toxicology program, had reviewed many other studies on cellphone safety, and had "not found sufficient evidence that there are adverse health effects in humans caused by exposures at or under the current radio-frequency exposure limits."
>
> The statement, from Dr. Jeffrey Shuren, director of the F.D.A.'s center for devices and radiological health, also said, "Even with frequent daily use by the vast majority of adults, we have not seen an increase in events like brain tumors."
>
> The Federal Communications Commission sets exposure limits for radio-frequency energy from cellphones, but relies on the F.D.A. and other health agencies for scientific advice on determining the limits, the statement said.

9. **Chicago Tribune**

Audience:

The Chicago Tribune, a daily newspaper based in Chicago, Illinois, claims a Sunday circulation of 764,000 and 18 million visitors a month to its website.

Coverage:

We tested popular cellphones for radiofrequency radiation. Now the FCC is investigating.

August 21, 2019

https://www.chicagotribune.com/investigations/ct-cell-phone-radiation-testing-20190821-72qgu4nzlfda5kyuhteiieh4da-story.html

Key quote:

> Despite the changing ways people use phones, both the FCC and FDA said the current exposure limit protects the public.

10. **Star Tribune**

Audience:

The Star Tribune, a daily newspaper based in Minneapolis, Minnesota, claims 1.4 million readers a week and 7 million unique visitors a month to its website.

Coverage:

Researchers probing how magnets may disable medical devices

July 23, 2021

https://www.startribune.com/researchers-probing-how-magnets-may-disable-medical-devices/600080823/

Key quote:

> "We believe the risk to patients is low. … However, the number of consumer electronics with strong magnets is expected to increase over time," Dr. Jeff Shuren, director of the Food and Drug Administration's medical device division, said in a statement following a broad study by the agency in May.

11. Los Angeles Times

Audience:
The Los Angeles Times, a daily newspaper based in Los Angeles, California, claims more than 4.8 million readers weekly.
Coverage:
Radiation from cellphones is not hazardous to your health, government scientists say
February 2, 2018
https://www.latimes.com/science/sciencenow/la-sci-sn-cell-phone-dangers-20180202-story.html
Key quote:

> In the nearly 20 years since that request, hundreds of studies by scientists at the NTP and elsewhere have allowed the FDA to say with confidence that "the current safety limits for cell phone radiation remain acceptable for protecting the public health," Dr. Jeffrey Shuren, director of the FDA's Center for Devices and Radiological Health, said in a statement.
>
> "Even with frequent daily use by the vast majority of adults, we have not seen an increase in events like brain tumors," he added.
>
> The FDA and the Federal Communications Commission share responsibility for regulating radiofrequency-emitting devices like wireless phones and televisions.

12. Newsweek

Audience:
Newsweek, a widely recognized weekly news magazine for decades, is now a heavily visited news and information website. The site claims 72 million unique visitors a month.
Coverage:
Do Cellphones Cause Cancer? Government Study Reveals 'Stunningly Important' Findings
July 19, 2018
https://www.newsweek.com/2018/07/27/cancer-cellphones-ntp-findings-toxicologists-brain-cancer-us-1024633.html
Key quote:

> Current cellphone safety regulations are based on a premise that is now arguably false: that cellphone radiation can cause harm only by heating tissue. The FDA, however, has no plans to strengthen the regulations. It has "confidence that the current safety limits for cellphone radiation remain acceptable for protecting

public health," said Dr. Jeffrey Shuren, director of the FDA's Center for Devices and Radiological Health, in a statement issued after the NTP's results were released. "We have not found sufficient evidence that there are adverse health effects in humans caused by exposures at or under the current radio-frequency energy exposure limits."

13. U.S. News and World Report

Audience:
U.S. News and World Report, a widely recognized weekly news magazine for decades, is now a heavily visited news and information website. The site claims 42 million unique visitors a month.
Coverage:
Magnets in Cellphones, Smartwatches Might Affect Pacemakers, FDA Warns
May 14, 2021
https://www.usnews.com/news/health-news/articles/2021-05-14/magnets-in-cellphones-smartwatches-might-affect-pacemakers-fda-warns
Key quote:

> The U.S. Food and Drug Administration is warning that strong magnets in some cellphones and smartwatches can interfere with pacemakers and other implanted medical devices.

MAJOR SCIENCE JOURNALS

14. MIT Technology Review

Audience:
MIT Technology Review describes itself as "a world-renowned, independent media company whose insight, analysis, reviews, interviews and live events explain the newest technologies and their commercial, social and political impacts." The site claims 5 million unique visitors a month.
Coverage:
No, there's no evidence that cell phones give you cancer
February 11, 2020
https://www.technologyreview.com/2020/02/11/844856/no-theres-no-evidence-that-cell-phones-give-you-cancer/
Key quote:

> A new review from the FDA says it finds no evidence linking the two, but that research should continue.

15. Scientific American

Audience:
From the Scientific American website:
"Scientific American covers the advances in research and discovery that are changing our understanding of the world and shaping our lives. Founded 1845, it is the oldest continuously published magazine in the United States and now **reaches more than 10**

million people around the world each month through its website, print and digital editions, newsletters and app."

Coverage:

New Studies Link Cell Phone Radiation with Cancer

March 29, 2018

https://www.scientificamerican.com/article/new-studies-link-cell-phone-radiation-with-cancer/

Key quote:

> In a February 2 statement, Jeffrey Shuren, director of the FDA's Center for Devices and Radiological Health, wrote that despite the NTP study's results, the combined evidence on RF exposure and human cancer—which by now amounts to hundreds of studies—has "given us confidence that the current safety limits for cell phone radiation remain acceptable for protecting the public health."

MAJOR MEDICAL INFORMATION SITES

16. WebMD

Audience:

WebMD describes itself as a source of "credible information, supportive communities, and in-depth reference material about health subjects." The site claims that 1 in 3 U.S. adults use WebMD each month.

Coverage:

Cell Phones and Cancer Risk

May 25, 2020

https://www.webmd.com/cancer/cell-phones-cancer

Key quote:

> The FDA says that neither research results nor public health statistics have clearly shown that normal use of cellphones raises the risk of cancer.

17. Medscape

Audience:

Medscape describes itself as "the leading online global destination for physicians and healthcare professionals worldwide, offering the latest medical news and expert perspectives."

Coverage:

FDA Warns Cell Phone, Smart Watch Magnets Can Affect Medical Devices

May 13, 2021

https://www.medscape.com/viewarticle/951089

Key quote:

> The US Food and Drug Administration (FDA) is recommending patients and caregivers keep cell phones and smart watches at least 6 inches away from implanted medical devices, such as pacemakers and defibrillators.