ORAL ARGUMENT NOT YET SCHEDULED
20-1025 (Lead); 20-1138 (Consolidated)

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

ENVIRONMENTAL HEALTH TRUST; CONSUMERS FOR SAFE CELL PHONES; ELIZABETH BARRIS; THEODORA SCARATO

CHILDREN'S HEALTH DEFENSE; MICHELE HERTZ; PETRA BROKKEN; DR. DAVID O. CARPENTER; DR. PAUL DART; DR. TORIL H. JELTER; DR. ANN LEE; VIRGINIA FARVER, JENNIFER BARAN; PAUL STANLEY, M.Ed.
Petitioners

v.

FEDERAL COMMUNICATIONS COMMISSION;
UNITED STATES OF AMERICA
Respondents

Petition for Review of Order Issued by the
Federal Communications Commission

PETITIONERS' JOINT REPLY BRIEF

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SUMMARY OF ARGUMENT

1. The FCC's Brief uses impermissible *post-hoc* rationalization and wrongly cites to extra-record documents, some of which did not even exist at the time of the *Order*.

2. The FCC's arguments for extraordinary deference mischaracterize the nature of the case and the relief Petitioners seek. The *Inquiry* had the same purpose and design as informal rulemaking. Petitioners did not ask the Court to order a new rulemaking; they request *vacatur*, remand for reasoned decision-making, and an order requiring the Commission to resolve the issues set out in the *Inquiry*, assess all the material evidence and properly balance all interests in accordance with the policies underlying the Communications Act.

3. The FCC refused to meaningfully assess the vast amount of reliable peer-reviewed scientific and medical evidence generated after 1997 indicating current and potential health risks from currently-authorized exposures, and gave inappropriate weight to unreliable and conflicted views and opinions by industry-supported sources. It irresponsibly refused to confront the evidence showing that many individuals have already become seriously ill from exposures that cannot be escaped.

4. The FCC erred by deferring to the FDA's unsubstantiated opinion and assuming that other agencies' silence indicated support for the current regulations.

5. The Order never addresses NEPA or related public comments and thus the Commission's response is waived. Further, Petitioners never argued a supplemental environmental impact statement is required; rather, the Commission fails to recognize the Order itself is a "major federal action" triggering NEPA as it affirmatively determined the 1997 RF/EMF standards can be safely applied to an entirely new wireless environment.

6. The FCC wrongly refused to address material comments and requests for clarification regarding whether the regulations pre-empt federally-guaranteed statutory remedies and constitutional rights relating to disabilities and self-determination.

I. STANDARD OF REVIEW

A. FCC Response Uses *Post-Hoc* Rationalization and Improperly Relies on Extra-Record Evidence.

Much of the FCC Brief unlawfully attempts to rewrite the *Order* to justify the Commission's failure to meaningfully consider and address extensive record evidence demonstrating adverse human and environmental effects at or below the FCC's allowable exposures.

The FCC repeatedly defends its action on arguments and analyses not stated in the *Order*. The "grounds upon which an administrative order must be judged are those upon which the record discloses that its action was based." *SEC v. Chenery Corp.*, 318 U.S. 80, 87 (1943). This Court may not accept "*post-hoc* rationalizations for agency action," *Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 50 (1983), and must "judge the propriety of [the] action solely by the grounds invoked by the agency," *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947); *Williams Gas Processing-Gulf Coast Co., L.P. v. FERC*, 475 F.3d 319, 330 (D.C. Cir. 2006).[1]

The FCC Brief also improperly cites to and relies on documents and other materials not in the administrative record. 47 U.S.C. §402(a) of the

[1] For instance, FCC Br. 21 maintains the *Order* represents "the sort of priority-setting in the use of agency resources that is least subject to second-guessing by the courts." The *Order* does not invoke this rationale and it is thus waived.

Communications Act contemplates review limited to the agency record under the Administrative Procedure Act ("APA"), 5 U.S.C. §706(2). *Rural Cellular Ass'n v. FCC*, 588 F.3d 1095, 1107 (D.C. Cir. 2009). The FCC Brief repeatedly strains to find facts to support its decision by impermissibly adducing extra-record evidence, including citations to agency correspondence, scientific studies, reports, and other inadmissible documents.

Petitioners identify below instances in which the Commission persistently crosses these lines.

B. This Court Must Engage in a Full and Complete Review Under the Arbitrary and Capricious Standard.

The FCC argues the *Order* is merely a decision not to initiate a rulemaking and, therefore, this Court should apply a high level of deference even under the arbitrary and capricious standard. FCC Br. 19-20. The Commission mischaracterizes the nature of the *Order* and fails to recognize that even when high deference is due this Court still requires reasoned decision-making, including responses to material comments that do not support the agency's decision and adequate explanations for discounted or disregarded evidence.

The FCC Brief misconstrues the relief Petitioners seek. Petitioners did not ask the Court to order a new rulemaking. They requested *vacatur* and "remand for proper disposition." Pet. Br. 96. The FCC did not do what it promised in the

Inquiry it voluntarily opened in 2013: to honestly and fully assess the entire record and affirmatively determine whether the current RFR regulations remain safe despite a wireless environment and scientific evaluation that has vastly changed since 1997. The *Inquiry* was necessary because today's RFR exposures and potential health risks differ greatly from those evaluated in 1997.[2] There has been a sea change over the past quarter century, including saturation of new and more powerful radiation sources and a pending massive rollout of 5G infrastructure that will rely on even-riskier RF/EMF emissions.[3]

The Court should be wary of applying an extreme level of APA deference here. The *Inquiry* had the same purpose and design as a full-blown rulemaking (*i.e.*, to "open a science-based examination of the efficacy, currency, and adequacy" of the 1997 RFR limits).[4] Accordingly, the *Order* and the FCC's

[2] JA__, ¶216 (FCC stating further investigation needed "in light of the increase in numbers and usage of fixed transmitters and portable and mobile devices, as well as changes in usage and consequent [RFR] exposure patterns"); ¶206 (FCC noting "ubiquity of device adoption [and] advancements in technology…since establishing our policies in 1996 warrant an inquiry to gather information to determine whether our" RF standards "are still appropriately drawn").

[3] Pet. Br. 34-36.

[4] JA__, ¶210.

conclusion the existing regulation is protective should be subject to less deference than the FCC demands.[5]

Even where courts allude to a higher degree of APA deference when an agency has denied a rulemaking petition, they still demand the same reasoned decision-making typically seen under the APA. This holds particularly true when new information or circumstances place into question the merit of an existing regulation and the agency fails to adequately confront such evidence or explain its action. *Am. Horse Protection Ass' Inc. v. Lyng*, 812 F.2d 1 (D.C. Cir. 1987) is illustrative. There, plaintiff requested a rule governing the humane treatment of show horses be amended to reflect new developments, including an academic study justifying more restrictions. *Id.* at 2-3. The Department of Agriculture, however, did not address the study and, in conclusory fashion, denied the petition. *Id.* at 5. This Court remanded for a better explanation, and noted that even with heightened deference agency decisions must be "reasoned" and the agency must "consider[] relevant factors" and "explain[] the facts and policy concerns relied on." *Id.* at 5 (citations omitted).

[5] *See Fox Television Stations, Inc. v. FCC*, 280 F.3d 1027 (D.C. Cir. 2002) (Court vacated FCC's closing of a *Notice of Inquiry* and decision not to modify two regulations or initiate a new rulemaking based on rigorous arbitrary and capricious review without mentioning heightened APA deference).

Likewise, Petitioners seek remand for an adequate response to thousands of peer-reviewed[6] studies published since 1997 and evidence of growing sickness due to the RFR regulations' failure to protect human health and the environment. Petitioners demonstrate below the majority scientific view is now that chronic non-thermal RF/EMF exposure causes harmful biological responses. People are getting sick in rapidly growing numbers.

FCC Br. 16 argues the Commission is not required to "address every single individual objection or to independently evaluate every conflicting study and opinion." Pet. Br. 51, 62-65, 79-80, however, explained that agency action is arbitrary and capricious if it entirely fails to consider an important aspect, offers an explanation that runs counter to the record evidence, fails to take a "hard look" at "all relevant issues" or does not employ "reasoned decision-making." Agencies cannot completely ignore evidence they do not like, must review the whole record including evidence contrary to the decision, and cannot minimize such evidence without adequate explanation. *AT&T Corp. v. FCC*, 86 F.3d 242, 247 (D.C. Cir. 1996).

[6] Peer review alone is not dispositive, but it does signify enough seriousness to warrant individual evaluation. When thousands of peer-reviewed studies have similar findings more analysis than occurred here is certainly required.

Substantial evidence must support an agency decision. *Nat'l Lifeline Ass'n v. FCC*, 921 F.3d 1102, 1111 (D.C. Cir. 2019). "Evidence that is substantial viewed in isolation may become insubstantial when contradictory evidence is taken into account." *Genuine Parts Co. v. EPA*, 890 F.3d 304, 312 (D.C. Cir. 2018).

Equally important, the agency must adequately respond to all material public comments, especially those that cast doubt on its decision and would require a rule change. *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 35 n.58 (D.C. Cir. 1977). "Conclusory explanations for matters involving a central factual dispute where there is considerable evidence in conflict do not suffice to meet the [Court's] deferential standards." *Genuine Parts*, 890 F.3d at 312.

As discussed below, the *Order* nowhere addresses potential impacts of new technologies, recent studies establishing a variety of non-carcinogenic health risks, extensive research demonstrating increased risk of certain cancers, or pleas for relief by many individuals who credibly claim present harm.

II. ARGUMENT

A. New Evidence Since 1997 Changed the Scientific and Medical Public Health Consensus.

The decision here involves public safety, where "lives are at stake," "the harms are irreparable," and "people could be injured or die." *Mozilla Corp. v. FCC*, 940 F.3d 1, 62 (D.C. Cir. 2019). Pre-1997 predictions of disease and sickness have now been vindicated. A significant number of people have already been seriously injured by authorized RFR exposure levels. Other human and environmental impacts that can be credibly attributed to exposure are appearing in increasing numbers. The post-1997 scientific, medical and human evidence directly challenges the essential premises underlying the current regulations.

Nonetheless, the FCC Brief repeats nine times the "scientific consensus has not changed." The Commission, however, failed to explain how it concluded what the "consensus" "is" or identify the particular "scientists" that form this consensus. The FCC mentions groups like the International Commission on Non-Ionizing Radiation Protection (ICNIRP) and the World Health Organization's EMF Project. But the record reveals these groups have clear conflicts of interest and are unreliable medical/scientific sources. *See supra* at 25-27.

Moreover, even if these industry-affiliated groups are considered they represent a minority opinion. The scientific consensus of independent biomedical RF/EMF scientists and public health experts is reflected by the BioInitiative Report ("BioInitiative"), hundreds of expert signatories to the EMF Scientists Appeal and other scientists and medical appeals, resolutions and expert opinions. *See* Pet. Br. 14-16. Former senior experts from government agencies responsible for this issue, including Drs. Birnbaum,[7] Portier,[8] Blackman (JA__, __, __, __), Melnick (JA__, __), Frey (JA__, __) and Manville (JA__, __) are also in the majority.

B. FCC Denies the Current Scientific Consensus that Non-Thermal RF/EMF Exposure Causes a Biological Response.

The FCC insists the only health risks from RFR emissions can come from "thermal" levels that heat tissue. For example, FCC Br. 56 states "[t]he lowest levels of exposure that may cause known effects are due to thermal mechanisms." FCC Br. 27-28 cites a 2012 engineering association statement to deny RFR "biological effects." This viewpoint is based on outdated engineering assumptions (not evidence) that contradict established biological and medical evidence.

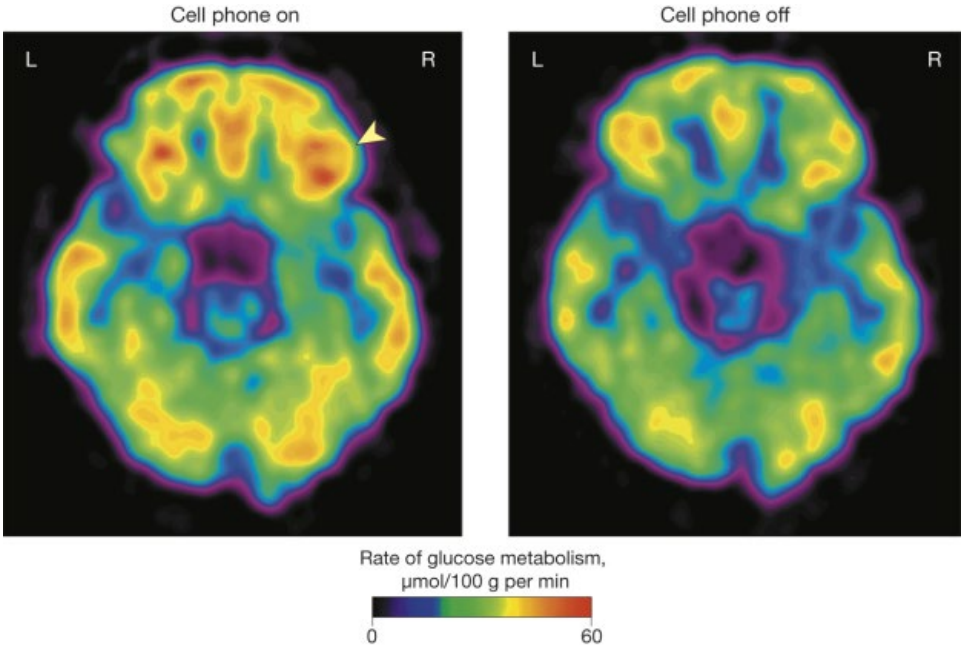
The post-1997 scientific research and medical practice information in the record shatters the "thermal-only" construct. Humans are bioelectrical beings. Our

[7] Former NIEHS Director. (JA__).

[8] Former Director, CDC National Center for Environmental Health. (JA__ , __, __).

bodies use internally-generated non-thermal EMFs to function. Exposure to external RF/EMF evokes biological responses that have nothing to do with power level or tissue heating. The *Order* summarily rejected this evidence without meaningful analysis.

A 2011 National Institutes of Health ("NIH") study (JA__, __, __) demolishes the FCC's denial there are biological effects. Brain scans of 47 human participants revealed non-thermal radiation induced biological brain glucose metabolism changes in every subject. See image below.[9]



[9] Other EEG studies reveal changes in cortical activity, brain activity synchronization and induced seizures. (JA__).

The FCC has never explained how its position can co-exist with the fact that physicians routinely use FDA-approved, non-thermal pulsed EMF devices to treat diseases, bone fractures and chronic pain (Pet. Br. 19-20) or that RF/EMF is used to treat cancer. (JA__).

The only question is whether the biological responses can be adverse. The evidence clearly shows the body responds through established *causal mechanisms of harm* such as Oxidative Stress that often lead to adverse health effects, disease and dysfunction. Pet. Br. 17-18; *see also* JA__, __.

The *Order* and FCC Brief failed to address this evidence.

C. FCC Failed to Address Non-Thermal Mechanisms of Harm.

1. The current rules do not address RF/EMF-triggered biological responses.

Pet. Br. 4-6, 9, 11-47, 63-72, 80 recounted the significant post-1997 evidence showing the thermal-based regulations ignore a variety of biological responses to non-thermal RF/EMF. Specific frequencies, modulation, pulsation, polarity, and long-term and peak exposures, among other phenomena, induce harmful biological responses.

In response, FCC Br. 42 reaches back to its 1997 guidelines and other outdated reports that deny these effects. Then, without confronting the evidence in *this case*, it uses extra-record material (*see supra* at 8-9) to claim the evidence

regarding these matters "has not changed." Pet. Br. 4-6, 9, 11-47, 63-72, 80 shows that is simply incorrect. Regarding pulsation and modulation specifically, the growing consensus is that pulsation and modulation may be even more important than RFR levels. Pet. Br. 19, 63-64.

FCC Br. 41, n.17 responds by observing the SAR power emissions calculation is frequency dependent. But that does not address Petitioners' point. Power limits only consider thermal heating at a given frequency and do not recognize *biological responses* to *different* frequencies. Pet. Br. 17.

2. FCC overstates and misconstrues the regulations' scope.

FCC Br. 17, 41 n.7, 43-44 contend that the regulations expressly address and protect against simultaneous exposures. But 47 C.F.R. §1.1307(b)(3) only covers power levels from "fixed transmitters by licensees at any location." It does not deal with nearby unlicensed emissions or licensed mobile transmitters. Further, the rule does not apply to *all* locations, just "accessible areas" with fixed transmitters "within a few meters" from each other. *See, e.g., Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, 12 FCC Rcd 13494, 13517-13524 (1997).

The 1997 guidelines did not anticipate the complex simultaneous emissions that exist today. As a single example, they do nothing about a residential area with multiple small cell sites on poles a hundred meters apart, a macro cell nearby, a

wireless smart meter attached to each home that may have several Wi-Fi transmitters, and the hundreds of mobile devices (each with various radio antennas) that are likely to be in close proximity. The combination of these sources, each using multiple frequencies and pulsation/modulation, creates a toxic "electrosmog." (JA__, __, __).

D. FCC Exhibits Astounding Indifference to Human Sickness and Suffering.

The evidence on Radiation Sickness may have been "controversial" twenty years ago but it is now clear. Pet. Br. 27-32, 81-83. The *Order* completely ignores the issue despite hundreds of scientific and medical references, the "human evidence" provided in comments and widespread recognition. Pet. Br. 29-32, 81-82. The FCC Brief cannot save this omission.

The record is full of compelling and heart-rending evidence of the horrendous impact Radiation Sickness has on a large and rapidly growing number of Americans. (JA__, __, __, __, __, __) . Many affected persons filed below and several are now before the Court. Pet. Br. 55, 64, 81-82. When they are exposed they get sick. If they somehow manage to avoid exposure, they get better. No amount of industry gas-lighting can explain this away. The FCC's disdain for human suffering reflects a disturbingly distorted view of the public's interest.

FCC Br. 39 engages in *post-hoc* rationalizations not contained in the *Order* and injects non-record material quoting an ICNIRP report that was published *after* the *Order*. But the FCC failed to acknowledge that ICNIRP *admitted* in 2002 that "certain individuals...have lower tolerances to RF exposure and may not be adequately protected under the guidelines." (JA__).

FCC Br. 39 quotes ICNIRP and EMF Project assertions that subjective perception provocation studies show that individuals with radiation sickness are unable to distinguish the presence or absence of an RF signals. But the FCC did not mention evidence showing numerous fundamental design flaws that render these studies invalid. (JA__, __)

A primary flaw is the illogical assumption that all people with Radiation Sickness should be able to immediately "detect" when the RF signal is on/off. But those with this illness do not always promptly "sense" radiation. They develop symptoms that take time to appear and subside and each individual is different. Those more likely to quickly develop symptoms often drop out because they get sickened by the exposures. (JA__).

Industry injects continued "controversy" by funding negative provocation studies so they can claim that Radiation Sickness is psychological or fear-induced (the "nocebo effect"). Many independent studies have invalidated this cruel effort

to re-characterize an acknowledged medical condition into a psychological aberration. (JA__).

Properly conducted studies without predetermined agenda show that some sufferers can detect the signal. Most "sensitive" subjects detected the signal in the 2003 TNO study. Concurrent objective cognitive tests revealed adverse effects in both the "sensitive" group and the control group. (JA__, __, __).

More importantly subjective provocation studies are not used to diagnose or deny any condition and are "not suitable to disprove causality." (JA__). Industry funds and focuses on them to divert attention from hundreds of credible studies that do not depend on perception and confirm the symptoms people develop, the corresponding physiological injuries and established causal mechanisms. Pet. Br. 27-32, 30 n.113. (JA__, __, __).

The *Order* did not address this substantial record evidence. The FCC Brief's assertion that "nothing has changed" and there is nothing "strong" in the record is entirely detached from the record evidence and reflects an astounding indifference to documented suffering.

E. FCC Arbitrarily Discounted Three Major RF/EMF Cancer Publications.

Pet. Br. 11-14 identifies three major studies—the National Toxicology Program ("NTP") and Ramazzini studies and the IARC Monograph. The *Order* did

not analyze the evidence supporting the validity of these studies. The FCC Brief improperly adds arguments not in the *Order*.

1. NTP and Ramazzini.

The NTP and Ramazzini studies showed clear evidence of carcinogenic effects and the NTP study found DNA damage. The FCC discounts them because they involved animal tests. *Order* n.33 (JA__). The 2006 IARC preamble, however, noted that "[e]very agent known to cause cancer in humans will also produce it in animals when adequately tested." (JA__). *See also* Italian Court of Appeals of Turin sentence no. 721/2017 (Dec. 3, 2019), p. 24.[10] [Appendix 63].

FDA routinely conducts or contracts for animal studies with the expectation they will be used to extrapolate to humans. (JA__). It has precise protocols (which NTP followed) to ensure that extrapolation is reasonable. (JA__). Follow-up analyses demonstrated the study can reasonably be extrapolated to human risks. (JA__, __). The FCC did not address this evidence and has not explained why the NTP animal study results should not be extrapolated to humans.[11]

[10] "There is no reason to believe that…RFR would affect animal tissue but not human."

[11] FCC Br. 41 quotes alleged "unusual findings" that "the exposed rats lived longer." A detailed analysis, however, indicated there was no such anomaly. (JA__).

2. IARC Monograph.

The *Order* does not consider the WHO/IARC Monograph. To overcome this lapse, FCC Br. 35 cites comments filed by industry-linked CTIA[12] and the MMF[13] contending that WHO/IARC's designation of radiofrequency radiation as a possible carcinogen only means that no one knows if it is harmful.

This argument should be disregarded since it formed no basis for the *Order*. Even assuming the Court considers this new reasoning, the case FCC Br. 35 cites (*CTIA v. City & Cnty. of San Francisco*, 827 F. Supp. 2d 1054 (N.D. Cal. 2011)) demonstrates it is flawed. As that court notes, "possible carcinogen" "is used for agents for which there is limited evidence of carcinogenicity in humans and less than sufficient evidence of carcinogenicity in experimental animals." *Id.* at 1060. The 2017-2019 NTP and Ramazzini studies now provide the "missing link" for a reclassification to "Group 1, carcinogenic to humans." (JA__, __).

F. FCC Arbitrarily and Unreasonably Refused to Analyze the Record Regarding Children's Heightened RFR Exposure Risks.

FCC Br. 38-39 acknowledge the possibility of age-related differences in children's RFR exposure but invoke the Commission's 1997 determination that such differences were already accounted for in the regulations. The *Order*,

[12] CTIA - The Wireless Association.

[13] Mobile Manufacturers Forum.

however, provided no reasoned analysis of the post-1997 evidence. *Order* ¶15 (JA__) instead defers to FDA and WHO websites with conclusory assertions and then–without analysis of *this* record–concludes that its "measurement standards" still address the issue. This is far short of reasoned decision-making.

First, the record contains a substantial body of post-1997 peer-reviewed evidence confirming the 1997 limits do not protect fetuses or children, who are uniquely vulnerable because of their developing brains, nervous systems, immune systems, and bodies. Pet. Br. 24-27; *see also* JA__, __, __, __. Yet the Order contains no analysis of these studies.

Second, FCC Br. 38-39 conflates the special vulnerabilities of children with those of people who developed Radiation Sickness. It is true children are developing radiation sickness and neurological problems. (JA__, __, __, __, __, __, __). But if the FCC had examined the record it would have seen that children have compounded vulnerability to risk factors that also affect adults. (JA__, __). For example, the chances of developing mutations that can lead to cancer are higher for children because their much higher cell division rate makes them especially susceptible to DNA damage. (JA__). Children's other physiological differences also increases their vulnerability. Record evidence includes multiple relevant peer-reviewed publications indicating that thinner skulls and smaller

brains increase radiation's penetration into brain regions responsible for cognitive functions. (JA__, __, __, __, __).

Third, *EMR Network v. FCC*, 391 F.3d 269 (D.C. Cir. 2004) has no relevance to this proceeding; it examined a now quarter-century old administrative record. No heightened deference is due. *See infra* at 9-13.

Fourth, FCC Br. 40 contends that the guidelines have a 50-fold safety margin that adequately protects children. The fallacy of this purported safety margin is discussed *supra* at 33-34.

Finally, the FCC *Order* and Brief completely fail to address the compelling record evidence relating to pre-natal developmental and reproductive effects. Pet. Br. 24-27.

G. FCC Wrongly Relied on Other Organizations' Views.

1. FCC arbitrarily and capriciously relied on the "views" of biased and unreliable organizations.

FCC Br. 27-28 nn.7-11, 39-41, 43, 63 heavily rely on ICNIRP[14] and EMF Project "views"[15] and an ICNIRP Report to justify the *Order's* failure to meaningfully deal with recent science.[16] ICNIRP's report was published *after* the

[14] ICNIRP is supported by the MMF. The FCC heavily relies on MMF case submissions. FCC Br. 28, n.9-11, 34, n.13, 35, 36, 46, n.20, 50.

[15] These "views" were discussed in comments submitted by MMF and CTIA.

[16] FCC Br. 28 mentions CTIA's reference to the National Cancer Institute but mischaracterizes NCI's position and its statement that "[n]either the literature

Order was issued. FCC Br. 46, n.20 also invokes a statement by the EMF Project. These invocations cannot be considered since the cited materials were not addressed in the *Order*.

The FCC offers no reason why the "views" of these organizations warrant the Court's attention. They constitute mere fact sheets and several rely on outdated information. Like the FDA, none of these organizations conducted an analysis of the scientific record in this proceeding.

Two Italy court decisions directly hold that ICNIRP and its members are compromised due to their industry funding and relationships and their opinions deserve little to no weight. The Italy Supreme Court concluded experts with ICNIRP affiliations "lacked credibility and authority, and as such, were essentially outside the scientific community." Italy Supreme Court sentence no. 17438/2012 (Oct. 3, 2012), p. 12 [Appendix 47] An Italian Court of Appeals decision [Appendix 63] made even stronger findings regarding ICNIRP and its members' conflicts and reliability. *Id.* at 24-25, 33-35.

This record also has compelling evidence indicating ICNIRP and its affiliates are unreliable, are not "independent" and principally operate to help

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reviews, nor the fact sheets, make safety determinations" and "are not intended to establish or evaluate standards or set or evaluate recommendations." (JA__). FCC Br. 28 mentions the Institution of Energy and Technology by way of an MMF filing that contains an isolated quote in a longer statement.

industry preserve the thermal-based hypothesis. (JA__, __, __, __, __, __, __, __, __). They assiduously work to ensure that "scientific evidence not in conformity with the thermal assumption" "is simply cut off from consideration" (JA__, __, __), just like in the *Order*. The *Order* and FCC Brief fail to acknowledge these issues.

FCC Br. 3, 16-17, 34, 45, 49 contend the "weight" of the evidence continues to support the current exposure limits and quotes MMF. FCC Br. 34 n.13 then cites to MMF comments (JA__) noting that a "weight of evidence approach requires that each study, both positive and negative, be evaluated for quality." But the *Order* failed to evaluate each submitted study. *Inquiry* ¶¶209, 215 (JA__) promised to independently evaluate the evidence and assign proper weight. The *Order* and FCC Brief never acknowledge these conflicts or explain why industry-funded analyses should receive far more weight than the independent majority's findings.

2. FCC arbitrarily and capriciously rejected independent scientific evidence from the majority of scientists.

In contrast to ICNIRP, the BioInitiative was conducted by 29 world-leading experts and is the most extensive and on-going *independent* review of non-thermal RF/EMF health effects. It reviewed thousands of studies and identified clear adverse biological responses to chronic exposure. BioInitiative urged the FCC to adopt "biologically based" guidelines.

FCC Br. 36 quotes from 2013 MMF[17] and CTIA comments asserting that the BioInitiative was "biased" and "discredited."[18] The latter argument is improper. The *Order* did not find the BioInitiative suffered these perceived defects. Finally, except for one document, the comments address the 2007 BioInitiative, not the later materials finding even stronger evidence. The *Order* and FCC Brief do not contain any specific or detailed analysis of the BioInitiative reports, 2012-2019 updates and comments. (JA__, __, __ , __, __, __). The *Order* mentions only the 2012 report in passing.

Order ¶12 n.39-40 (JA__) and FCC Br. 36-37 defend the refusal to consider the BioInitiative science because it identifies exposure levels the FCC asserts would not allow reliable service. Pet. Br. 83-88. This entirely misrepresents the BioInitiative recommendations. The levels discussed in BioInitiative are based on observable adverse effects in humans. The BioInitiative filings made clear those

[17] The main source of the MMF comments is an extra-record 2013 article (not peer-reviewed) by a telecom-funded analyst (Foster) and a telecom entrepreneur (Trottier). The FCC Brief focused on this information but entirely ignored considerable discrediting information in the record about Foster's scientific integrity, analytical acumen and industry ties. (JA__, __, __, __).

[18] BioInitiative has not been "discredited by the scientific community." The record reflects strong support for BIR and its experts. The Italian Court of Appeals followed the expert testimony of BioInitiative author Dr. Hardell. The Council of Europe and European Parliament relied on the BioInitiative in their Resolution recommending stronger thresholds. (JA__, __).

levels are "goals" not proposed regulatory standards, and they recommended a path forward. (JA__, __).

The Commission essentially claims without analysis that public health harms (that it will not examine) are "small relative to the costs of implementing more heavy-handed regulation." *Mozilla*, 940 F.3d at 63. Such "Rorschachian speculation is hardly the focused and specific study of public safety implications that the law requires." *Id*. Reasoned decision-making demands a candid analysis of all sides of a debate, an open mind to all the record evidence and a sincere effort to balance all relevant interests. That did not happen here.

3. The *Order* did not provide a rational explanation for its reliance on other agencies.

Order ¶12 (JA__) concluded no scientific evidence established a causal relationship between wireless device use and cancer or other illnesses,[19] and based this finding in significant part on documents submitted by the FDA.[20] *Order* ¶11 (JA__) maintains other federal health agencies have not issued recommendations to strengthen the FCC's safety regulations.[21] FCC Br. 34 also contends that, faced

[19] FCC Br. 3, 14, 16-17, 21.
[20] FCC Br. 14, 16, 21, 23-26.
[21] FCC Br. 30-32.

with conflicting scientific evidence, it rationally sided with the FDA and other bodies. These claims are arbitrary and capricious.

a. Reliance on FDA is arbitrary and capricious.

The FCC heavily relies on a February 2018 statement and an April 2019 letter from an FDA official.[22] However, these FDA documents do not analyze the record.[23] Indeed, the FDA documents, in conclusory statements, merely restate earlier correspondence from the FCC (Pet. Br. 68) and identify just one scientific study—the NTP. The documents offer no reasoned analysis even when discussing the NTP study. Additionally, the FDA documents focus only on cellphones and cancer without considering evidence involving other technologies and their related risks and harms.[24] Pet. Br. 22-42 listed several non-cancer related harms.

While the FCC may rely on another agency with relevant expertise, it must proffer a reasoned explanation to support any reliance.[25] In *Coalition for*

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[22] Order ¶11 nn.28, 32, 33-34; ¶10-12 n.42 (JA __).

[23] Nor do the FDA websites on which the FCC also relies. *Order* ¶¶2, 11, 12, 15. (JA__).

[24] The FCC briefly claims it addressed new technologies like 5G in an unchallenged part of the *Order*. FCC Br. 17. Presumably, the Commission is referring to the *Second Report and Order*. That section necessarily assumes the RF/EMF standards are still safe in a new wireless environment, precisely what Petitioners challenge here.

[25] FCC Br. 25 defends FDA's limited input by seriously misquoting this Court's decision in *EMR*. The FCC Brief claims the opinion designated FDA as the "agency with primacy" in evaluating RF/EMF impacts. This Court said no such

Responsible Regulation v. EPA, 684 F.3d 102, 120 (D.C. Cir. 2012), EPA relied on peer-reviewed assessments of thousands of individual studies prepared by other organizations. But, in so doing, EPA closely analyzed the assessments, permitted comments thereon, and made the assessments part of the record on which it based its decision. *Id.* There is no evidence the FDA or the Commission conducted a review of the thousands of peer-reviewed scientific studies in this case, most of which cast doubt on the *Order*.[26]

FCC Br. n.4 also introduces additional extra-record evidence from the FDA that was released in 2020, *after* the *Order* was issued. The Court cannot consider this evidence. Even if it did, it is of limited relevance, as the literature review focuses only on cancer, not other RF/EMF impacts.

b. The *Order* irrationally claims credit for other agencies' inaction.

Order ¶11 (JA__) concludes that the failure of EPA and other federal health and safety agencies to recommend strengthening the regulations supports the

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thing; rather, this Court considered EPA as the primary expert agency. Indeed, FDA could not be the "primary expert agency" as it only provides comments on devices like cell phones.

[26] *See also Cellular Phone Taskforce v. FCC,* 205 F.3d 82 (2d Cir. 2000), upholding the FCC's reliance on EPA for the 1996 safety standards after the EPA participated in the hearings and comments leading to their promulgation. By contrast, EPA did not participate in the FCC's proceeding below.

decision to terminate the *Inquiry*. The FCC had no rational basis for this conclusion. Silence does not mean support.

Congress prohibited EPA activities related to radiofrequency radiation in 1996.[27] Notwithstanding EPA's non-involvement, FCC Br. 9 defends the safety standards by citing to EPA comments from 1993 and two EPA letters from 1996 and 1997. The EPA filings formed no basis for the *Order*. The 1997 and 1998 letters are not in the record, but the 1993 letter and some 2002 comments are and they do not support reliance. The EPA's 1993 comments said the thermal-only approach is not "protective of all mechanisms of interaction." (JA__). The EPA also noted even then that "certain subgroups of the population" may be more at risk. The EPA's 2002 made the same points. (JA __).

OSHA was not silent. It stated it had not completed a thorough analysis of radiofrequency hazards and advised the FCC to contact the NTP. (JA__). There is no evidence the FCC did so.

[27] Sen. Report 104-140, Department of Veterans Affairs and Housing and Urban Development, and Independent Agencies Appropriations Bill, 1996 (Sept. 13, 1995) at 91 [Appendix 9].

H. The *Order* Irrationally Ignored Substantial Evidence Demonstrating that Thermal-Based Testing Procedures are Inadequate.

Order ¶¶14-15 (JA__) declined to revisit RFR testing procedures which can result in violations of current exposure limits when phones are touching the body. FCC admits these tests: (1) do not address developmental and physiological differences or those who are medically compromised; (2) use a separation distance that does not reflect the way people actually use wireless devices, *e.g.* against the body; and (3) test only for thermal impacts.

Contrary to FCC Br. 48-49 argument that phones rarely operate at maximum power, record evidence shows phones reach higher power in real world situations (JA__). FCC argues "many devices" are tested at separation distances under 2.5 centimeters yet record evidence documents phones tested at 5 millimeters can still violate limits at 0 millimeter separation. (JA__).

As explained *infra* at 14-17 the scientific consensus today rejects the regulations' thermal-only construct; FCC's testing protocol must simulate the "real world" non-thermal biological effects of RFR/EMF.

Reasoned decision-making does not support the FCC's refusal to address the record which demonstrates the flaws and inaccuracy of FCC's testing procedures.

See, Pet. Br. n.172, 181-186 (citing extensive scientific evidence). FCC Br. 51-53 cites four studies[28] in response, none of which are considered in the *Order*.

The FCC's failure to test phones as they are typically used is contrary to the policy stated in FCC Knowledge Database ("KDB") Publication 447498 [Appendix 12].[29]

The FCC Br. 17 n.3 assertion there is little danger because of a "fifty fold" safety margin, *citing Order* ¶14 (JA__) has no factual basis given that it applies only for whole body exposure limits, *not* for the localized limits used for cell phones and other consumer devices. Pet. Br. 47 n. 187. Comments detail how the SAR threshold was arbitrarily reduced to 1.6 W/kg in 1992 and rests on documented errors in interpretation and importantly only considers thermal effects (JA__, __, __). The *Order* addressed none of this information.

I. FCC Waived Its NEPA Defense and Did Not Satisfy Its NEPA Obligations.

The *Order's* rationale for closing the *Inquiry* never mentions NEPA. It does not explain either why NEPA does not apply or, in the alternative, how the

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[28] FCC Br. n.24 refers to J. Keshvari, et al. FCC Br. n.25 refers to Foster and Chou. FCC Br. 51 refers to Drossos, et al.

[29] https://apps.fcc.gov/kdb/GetAttachment.html?id=f8IQgJxTTL5y0oRi0cpAuA%3D%3D&desc=447498%20D01%20General%20RF%20Exposure%20Guidance%20v06&tracking_number=20676#page=5. *Order* ¶19 (JA__) affirms the use of these guidance documents and the Knowledge Database.

Commission met its NEPA obligations, nor does it address significant comments arguing the *Inquiry* required NEPA compliance. Pet. Br. at 49-50. The FCC waived its entire NEPA-related response. *See infra* at 8-9.

FCC Br. 54-61 now argues that: (i) the *Order* is not a "major federal action" that "significantly affects the quality of the human environment"; (ii) the Commission "functionally" satisfied NEPA's procedural requirements through the *Inquiry*; (iii) there is no on-going "major federal action" requiring a supplemental environmental impact statement ("EIS"); and (iv) the FCC reasonably concluded a supplemental EIS was not warranted as new information did not paint a "seriously different picture of the environmental landscape" or raise a "controversial" issue requiring further review. FCC Br. at 54-60. None of these arguments appear in the *Order*, and the FCC does not contend otherwise. These arguments are plainly *post-hoc* rationalization and cannot be entertained by the Court.

Even if this Court considers the FCC's response, the Commission misstates the appropriate standard of review to the extent it maintains NEPA is inapplicable here. In the D.C. Circuit, an agency's determination that NEPA does not apply–*i.e.*, when the agency does not prepare either an Environmental Assessment ("EA") or EIS–is subject to *de novo* review. *Citizens Against Rails-To-Trails v. Surface Transp. Bd.*, 267 F.3d 1144, 1150-51 (D.C. Cir. 2001); Pet. Br. at 53. In response, the FCC ignores this precedent and instead cites to *DOT. v. Public Citizen*, 541

U.S. 752 (2004), to push for more deferential APA treatment. FCC Br. at 55. That decision is inapposite.

In that case, the agency had completed an EA and issued a Finding of No Significant Impact ("FONSI"). The question was not whether NEPA applied in the first instance; rather, it was whether the adoption of two rules would proximately cause alleged environmental impacts which had not been considered in the EA. *Id.* at 763-64, 767-72. But here, where the FCC contends it was not legally required to perform a NEPA analysis at all, no deference is warranted.

The FCC's primary defense is that Petitioners purportedly argued the Commission was required under the Council on Environmental Quality's ("CEQ") regulations to conduct a supplemental EIS. The FCC then maintains the provisions governing supplemental EISs were not triggered because there was no "on-going" major federal action. FCC Br. at 55-58. This completely misrepresents Petitioners' principal Brief. Nowhere do Petitioners maintain a supplemental EIS is required or cite to CEQ's regulations. Rather, Petitioners clearly maintained the *Order* represents an entirely new "major federal action" that triggered NEPA's obligations. Pet. Br. at 77-79.

As discussed *infra* at 9-13, the *Order* was more than a mere decision not to initiate rulemaking proceedings. By the FCC's own admission, the *Inquiry* was explicitly intended to make a substantive decision as to whether the 1997 RF/EMF

regulations could be safely applied to an entirely different wireless world. The *Inquiry* sought to determine "the efficacy, currency, and adequacy of the exposure limits." It noted the intervening "advancements in technology," the "increase in numbers and usage of fixed transmitters and portable and mobile devices," and the "consequent [RF/EMF] exposure patterns." The record is filled with discussions of new technologies and riskier RF/EMF exposures. Pet. Br. at 34-42.

The *Inquiry* deemed it necessary to decide whether those standards were "still appropriately drawn" and the *Order* did just that. *Order* ¶10 (JA__). The FCC concluded the "record does not demonstrate that the science underpinning the current exposure limits is outdated or insufficient to protect human safety." *Order* ¶11 (JA__). In this respect, the FCC's affirmative decision standing alone constitutes a "major federal action" under NEPA. The FCC decided what RFR exposures levels are protective of human health and the environment in 2019 (not 1997). Just because the Commission happened to decide the 1997 limits are those that are safe today does not mean the *Order* was not a wholly new decision.[30]

Accordingly, the FCC's heavy reliance on *EMR* is misplaced. FCC Br. at 55. There, the petitioner challenged FCC's denial of a rulemaking petition after it

[30] *See Fox Television*, 280 F.3d at 1037-38 (FCC decision not to modify a rule after closing an *NOI* constitutes "final agency action" where "rights or obligations have been determined by the action or legal consequences will flow from it") (citation and internal quotations omitted).

submitted a letter and several academic studies showing the 1997 rule failed to consider non-thermal impacts of RF/EMF. 391 F.3d at 271. The petitioner specifically argued the Commission was required to complete a supplemental EIS. In stark contrast to the instant case, there was no allegation the FCC had taken an independent action. There was no claim that intervening years had brought about wholesale changes in technology and the RF/EMF exposures that now constantly surround us. And, of course, the additional *EMR* materials pale in comparison to the thousands of peer-reviewed studies and information filed in response to the Commission's voluntary decision to update its understanding and make an affirmative finding as to safety.[31]

Finally, despite FCC protestations to the contrary, it did not "functionally" satisfy NEPA's requirements in this proceeding. FCC Br. at 55. As Petitioners have clearly demonstrated, the Commission did not receive substantive comments from key agencies (*e.g.*, EPA, OSHA) or take the requisite "hard look" at the extensive record showing the current RFR regulations cannot be applied safely or without undue impacts in today's wireless environment. Pet. Br. 51, 62, 65, 79-80; *contra Cellular Taskforce*, 205 F.3d at 94-95.[32]

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[31] Likewise, the other decisions cited by the FCC are off-point. They consider requests for supplemental EISs and/or do not involve new "major federal actions."

[32] Pet. Br. 35, 47-49 identified substantial evidence in the record discussing negative impacts of RF/EMF on the natural environment, including animals and

J. ADA/FHA, Individual/Constitutional Issues and Related Preemption Question Were Material, Substantial and Preserved Below.

FCC Br. 61-70 assert that Petitioners' arguments relating to ADA/FHA and individual and constitutional rights issues were not preserved below and the Commission had no duty to address them. The Commission denigrates the public's comments and argues they have no rights that deserve its attention.

1. ADA/FHA and individual/constitutional issues were material and substantial.

The ADA/FHA and individual/constitutional issues are significant to the individuals involved, squarely fall within mandatory consideration factors,[33] and responsive to the *Inquiry's* listed comment topics. *Inquiry* ¶6 (JA__) asked about individual and susceptible or sub-groups, ¶209 (JA__) inquired about "costs and benefits," ¶210 (JA__) recognized the "public's interest," and ¶232 (JA__) acknowledged that exposure is nonconsensual and long-term. Preemption was covered in two parts of the document that included the *Inquiry* (JA__, __) and

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plants. The *Order* ignored this evidence and, in fact, was completely silent as to environmental effects. FCC Br. n.20, however, presents new argument relying on MMF Comments to the effect that ICNRP's guidelines protect the environment; the FCC's safety standards are similar to ICNRP's guidelines; and, therefore, the FCC's safety standards do not result in environmental harm. This argument should be disallowed because it formed no part of the reasoning in the *Order*. *See infra* at 8-9.

[33] Pet. Br. 6-7.

Order n.5 (JA__). Many commenters or their treating physicians specifically objected to exposure, asserted they suffer undue personal costs and burdens, and asked for accommodation or other relief. (JA__). These serious issues and arguments challenge the fundamental premise that current limits are safe. The Commission was legally obliged to provide a reasoned response and decision.

FCC Br. 5, 18, 64 contend that individual citizens' concerns are "tangential" and "collateral." The FCC may not want to deal with the public, but its statutory charge is to serve the public's interest and that obviously includes both individual and collective health and safety. Individuals' costs and burdens are important too. The FCC has the statutory duty to redress individual injuries on matters within its jurisdiction.

2. ADA/FHA and individual/constitutional issues were preserved below.

The public's assertion of rights and requests for relief were presented to the Commission with sufficient clarity.[34] Boston and Philadelphia (JA__) contended "[t]he FCC and its sister regulatory agencies share responsibility for adherence to the ADA" and urged "serious attention to a serious medical problem." Kopald contended the "FCC should not…make it more difficult to enforce the ADA."

[34] Many of the commenters wrote *pro se*, so their filings must be liberally construed. *Carlson v. Postal Regulatory Comm'n*, 938 F.3d 337, 343 (D.C. Cir. 2019).

(JA__). Mottus asked the Commission to "recognize the need to…accommodate people with sensitivity." (JA__). Many others expressly invoked the ADA and/or requested accommodations. A collection of representative comments is in JA__. Similarly, commenters specifically objected to involuntary exposure and asserted personal, property and/or constitutional rights. Pet. Br. 80.

3. FCC Brief *post-hoc* rationalizations fail.

Order ¶¶2, 10, 11, 13 (JA__) claim the Commission pays great heed to its expert sister agencies' recommendations and findings, but ignored the Access Board's legal holding that Radiation Sickness is an ADA disability[35] and the CDC's recognition of the disease and cause. Pet. Br. 29, 88. The Commission does not defer to expert "sister agencies" findings if they contradict the FCC's agenda. Instead it attacks or ignores[36] them.

The Commission uses *post-hoc* rationalization and extra-record speculation to impermissibly collaterally attack the Access Board's legal finding by asserting it was based on "individual comments, not science." FCC Br. 32 and 39 deny reality regarding the Access Board and CDC. The CDC website information cited on FCC

[35] The FCC has no answer regarding the NIBS report and accommodation recommendations. Pet. Br. 31.

[36] For example, FCC does not acknowledge that the National Institute for Occupational Safety and Health contends "there is sufficient evidence of such effects to cause concern about human exposures." (JA__).

Br. 32 is not in the record, and the *Order* did not rely on it. The assertion CDC does not recognize Radiation Sickness is also flatly incorrect. Pet. Br. 29 provided the relevant CDC-approved disease classification and cause codes (T-66 and W-90) using information from the agency record. CDC's recognition is consistent with a host of other authorities' findings that Radiation Sickness is a disability that can devastate people's lives. Pet. Br. 27-32, 64, 81-82.[37]

U.S. courts have expressly recognized Radiation Sickness as a disabling medical condition under the ADA, social security disability, and workers' compensation. *Firstenberg v. City of Santa Fe, N.M.*, 782 F. Supp. 2d 1262, 1266 (D.N.M. 2011), *vacated,* 696 F.3d 1018 (10th Cir. 2012), accepted that proposition but held that the Communications Act is preemptive. The Tenth Circuit accepted that Radiation Sickness is a legitimate condition. 696 F.3d at 1019–20. Other courts agree. *Metallo v. Orlando Utils. Comm'n*, 2015 U.S. Dist. LEXIS 116269 *1-3, 5-8 (M.D. Fla. Sep. 1, 2015); *Atkinson v. Comm'r of Soc. Sec.*, 2018 U.S. Dist. LEXIS 207939, *25-30 (N.D. Ohio Dec. 10, 2018). FCC has no response to these authorities.

FCC Br. 65 defends the *Order's* omission of federal rights in its preemption discussion. This was major error. Several commenters' efforts to invoke federal

[37] The FCC "does not claim expertise as a *de facto* health agency," *Inquiry* ¶215 (JA__), so it lacks capacity to deny any person has Radiation Sickness.

rights in other venues were thwarted by a preemption defense. They were told to seek relief from the Commission, did so and were then ignored. (JA__). People like the Petitioners (JA__) must be allowed a disposition of their statutory and individual rights by the venue that is said to have exclusive jurisdiction. The Commission cannot close all other doors and then refuse to open its own.

4. ADA/FHA, individual/constitutional issues and related preemption question must first be resolved at the Commission.

FCC Br. 67-70 are counsel's *post-hoc* rationalizations about the merits of the individual rights/constitutional issues. Petitioners will merely note that the real message in most RF-related cases is that *the Commission is the proper venue for initial resolution*. We do not know how the FCC itself will deal with these issues when it is finally required to confront them.

CONCLUSION

Obstinacy and willful blindness are not reasoned decision-making. Ignoring facts does not change them. Talismanic repetition does not transmute a false assumption into reality. The "picture," "consensus," "majority opinion" and "weight of the evidence" have all changed since 1997. Current regulations are built on an incomplete assessment of the risks posed by RF/EMF. The evidence is compelling. People are being horribly injured today, and it is going to get far worse. The Court must require the Commission to honestly evaluate the record and

fully explain in rational terms why its regulations continue to serve the public's interest and health.

The Court must vacate the *Order* closing the *Inquiry* and remand for proper disposition.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I hereby certify that this brief complies with requirements of Federal Rule of Appellate Procedure 32(g)(1) and this Court's *Per Curiam* Order dated July 2, 2020 because it contains 7,946 words according to the count of Microsoft Word.

/s/ *W. Scott McCollough*
W. Scott McCollough

CERTIFICATE OF SERVICE

I hereby certify that, on October 19, 2020, I filed the foregoing in the United States Court of Appeals for the District of Columbia Circuit via the CM/ECF system. I further certify that all parties are registered CM/ECF users, and that service will be accomplished via electronic filing.

/s/ *W. Scott McCollough*
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