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**UNITED STATES DISTRICT COURT
DISTRICT OF OREGON
DIVISION 6: EUGENE**

**CLIMATE PROTECTION AND
RESTORATION INITIATIVE, DONN J.
VIVIANI, JAMES E. HANSEN, JOHN
BIRKS, RICHARD HEEDE, LISE VAN
SUSTEREN, CLIMATE SCIENCE,
AWARENESS AND SOLUTIONS,**
Plaintiffs,

Case No.: 6:22-cv-1772

v.

**COMPLAINT FOR DECLARATORY
AND INJUNCTIVE RELIEF**

MICHAEL S. REGAN, Administrator of the
United States Environmental Protection
Agency, and the **UNITED STATES
ENVIRONMENTAL PROTECTION
AGENCY**

Defendants

Plaintiffs Climate Protection and Restoration Initiative (“CPR Initiative”), Donn J. Viviani, James E. Hansen, John Birks, Richard Heede, Lise Van Susteren, and Climate Science Awareness and Solutions (“CSAS”), allege as follows against Defendants Michael S. Regan, as Administrator of the Environmental Protection Agency (“EPA”), and the EPA:

INTRODUCTORY STATEMENT

1. Plaintiffs are nonprofit organizations and scientific, medical and policy experts committed to the protection and restoration of the climate system. Their suit seeks to compel Administrator Regan and EPA to initiate rulemaking under Section 6(a) of the Toxic Substances Control Act (“TSCA”) to phase out the production and importation and, as warranted, the processing, distribution, use or atmospheric disposal of certain chemical substances and mixtures within reach of US law, as required to secure the phase out of greenhouse gas (“GHG”) pollution and to compel removal of residual and legacy GHG emissions. These actions, or a subset of them, are necessary — even if not sufficient in themselves — to eliminate the unreasonable risk of injury that GHGs present to health or the environment. Plaintiffs petitioned EPA to undertake this rulemaking under Section 21 of TSCA on June 16, 2022. *Petition to Phase Out GHG Pollution to Restore a Stable and Healthy Climate* (“Petition”). EPA denied the Petition on September 14, 2022. Had the Agency properly determined that GHGs present such an unreasonable risk, it would have been required, pursuant to TSCA Section 6(a), to undertake the requested GHG and/or fossil fuel rulemaking in order to eliminate the unreasonable risk of injury to human health and the environment that these chemicals present. Petitioners therefore meet the standard for judicial review under Section 21(b)(4)(ii).

JURISDICTION AND VENUE

2. This action is brought under Section 21(b)(4)(A) of TSCA, 15 U.S.C. § 2620(b)-(4)(A), which provides that, upon the denial of a petition under Section 21(a), a petitioner “may commence a civil action in a district court of the United States to compel the Administrator to initiate a rulemaking proceeding as requested in the petition. Any such action shall be filed within 60 days after the Administrator’s denial of the petition.”

3. Defendants denied Plaintiffs’ Section 6(a) rulemaking petition on September 14, 2022.

4. This Complaint is filed fewer than 60 days from Defendants’ September 14, 2022 denial of their rulemaking petition. Accordingly, this action is timely filed.

5. This Court has jurisdiction pursuant to 28 U.S.C. § 1331 and 15 U.S.C. § 2620(b)(4).

6. This Court has the authority to grant the requested declaratory and injunctive relief under 28 U.S.C. §§ 2201-2202 and 15 U.S.C. § 2620(b)(4).

7. Venue is proper in the District of Oregon pursuant to 28 U. S.C. § 1391(e)(1)(C) and 15 U.S.C. § 2620(b)(4) because plaintiff CPR Initiative and Member of its Board of Directors and executive director Dan Gapern reside in Eugene, Oregon.

PARTIES

8. Climate Protection and Restoration Initiative (“CPR Initiative”) is a public interest non-profit organization with headquarters in Eugene, Oregon. The group’s mission is to restore and protect a viable climate system required alike by our children, their progeny, and the natural world. The organization undertakes educational and advocacy work aimed towards that end by its work nationally and internationally with leading scientists, policy advocates, government officials, the media, and the concerned public. The group has sponsored several webinars and, at this filing, one public hearing; launched a petition drive calling for imposition of a rising carbon fee within the US pursuant to existing federal law; and maintains a free public website, providing a wealth of information with respect to climate policy and its climate efforts. CPR Initiative was co-founded in 2020 by undersigned counsel Dan Galpern, who also serves as its

executive director. CPR Initiative was among the group that submitted the underlying Petition to EPA.

9. In pursuing its mission to protect and restore a viable climate system, CPR Initiative has expended considerable time and resources in crafting and advocating for the Petition, including the below-described preconsultation efforts with the agency. Defendants' denial of the Petition directly undermines the organization's goals and mission. The denial of the petition has also caused CPR Initiative to divert its resources toward other advocacy efforts, such as developing, co-sponsoring (at its expense) and co-chairing a public hearing on November 1, 2022, in Boulder, Colorado at which a number of key subject matter experts addressed a central contention in the Agency's rejection of Plaintiffs' underlying Petition here: Whether the United States is Doing Enough on Climate?

10. CPR Initiative actions are guided by and in furtherance of the interests of its Board of Directors, its Board of Advisors, its staff, and its supporters, many of whom have direct injuries from climate change – including Plaintiffs Viviani, Birks, and Van Susteren, who serve on CPR Initiative's Board; and Plaintiffs Hansen and Heede, who serve on CPR Initiative's Advisory Board.

11. The organization's headquarters, principal staff, and many of its supporters reside in Eugene -- a city within the Willamette Valley region of Oregon. Lower-to-ground air within the Willamette Valley is often stabilized by inversion layers. Recurrently, over the last several years, the airshed of Eugene has been adversely affected by smoke incursions stemming from wildfires in the region that are more likely, more intense and more widespread due to climate change that, in turn, is primarily a function of pollutants created and emitted by fossil fuel production and use. These acrid smoke intrusions last often for a week or longer and are often the

subject of air advisories and alerts from the Lane Regional Air Pollution Authority (“LRAPA”), which authority maintains eight “regulatory-grade air monitoring stations and over 90 commercial-grade particulate matter sensors throughout Lane County.”¹ Parts of the county experienced “37 days of air quality at or above ‘Unhealthy for sensitive groups’” designations in the period Sept. 1 to Oct. 24, 2022.

12. In addition to the injuries to CPR Initiative’s Board and Advisory Board members, CPR Initiative staff, family members, and donors and supporters in the region are required, on pain of further damaging their health, to cut back on outdoor activities, including even walking, during such smoke intrusions that regularly accompany increasing severe wildfire seasons. The connection to increasing regional warming stemming from climate change, and associated desiccation of ladder fuels, is well established. Many of them have also needed to expend personal resources to purchase in-room air filters capable to removing fine particulates. They are prepared to aver their reasonable concern that such air quality deterioration in the airshed encompassing Eugene may further markedly degrade absent the sort of rational rulemaking sought in this case.

13. Plaintiff Donn J. Viviani, PhD, is a retired U.S. Environmental Protection Agency scientist. He was the Director of EPA’s Climate Policy Assessment Division in the Office of Policy, Economics and Innovation; served as Chairman of the Great Lakes Water Quality Board’s Toxic Substances Committee; and served as a member of the Science Coordinating Committee for the International Joint Commission for the Great Lakes. Dr. Viviani also serves as Board President of the Climate Protection and Restoration Initiative. He was among the petitioners that

¹ LRAPA, Wildfire Season Ends, Smoke Clears, and Outdoor Burning season begins in Lane County (Oct. 14, 2022) at <https://www.lrapa.org/air-quality-protection/public-calendar/publications-reports-and-fact-sheets/>.

submitted to the EPA the June 2022 Petition to Phase Out GHG Pollution to Restore a Stable and Healthy Climate. Dr. Viviani lives in Kailua, Oahu, Hawaii.

14. Dr. Viviani is an avid swimmer, normally daily, and an successful age group Aquathlete (swimming and running), having won three national age group championships and two world podium finishes representing the United States in the past five years. Training in the ocean is key to his successful participation in his event.

15. Ongoing greenhouse gas emissions are injuring Dr. Viviani in multiple ways. GHG emissions are forcing a warming of the climate, including warmer air and ocean temperatures, which in turn is causing deoxygenation of the ocean.

16. Warmer ocean temperatures and ocean deoxygenation favor proliferation of stinging jellyfish and closely related animals, and the Portuguese Man o' War (*Physalia physalis*) is now increasingly found in the waters where Viviani swims. Plaintiff Viviani's encounters with the Portuguese Man o' War have increased in recent years and he has been stung in several places on his body several times a month and has thus needed to forego swimming as often as 10 days a month because of heavy Man o' War concentrations.

17. Viviani also enjoys taking his family into the water at Kalama beach but cannot do so when *Physalia physalis* are present due to the risk to their health.

18. Accordingly, the inability to regularly and safely swim in the ocean due to warming seas has interfered with Viviani's ocean training and his family's ability to join him in the coastal waters near his home.

19. In addition, warmer air temperatures have hindered Viviani's running, forcing him to cut short many training runs. Further, when there are no stinging jellies Viviani enjoys diving down to look at the coral reefs and marine life. But climate change induced warmer water

and acidification has caused declines in coral cover and fish numbers on Oahu's coastal areas where Viviani swims and dives to view biota. The Intergovernmental Panel on Climate Change has concluded, at a "very high confidence" level, that "the majority (70–90%) of warm water (tropical) coral reefs that exist today will disappear even if global warming is constrained to 1.5°C," and that "99% of corals [will be] lost under warming of 2°C or more above the pre-industrial period." Plaintiff Viviani's ability to use, enjoy and derive spiritual satisfaction from these activities have thus been harmed, and will continue to be harmed.

20. Dr. Viviani has expended considerable effort to protect the natural world, and especially the ocean, from the ravages of increasingly severe climate change since retiring from EPA in 2010. Those efforts prominently include his writing and 2015 submission of a TSCA § 21 Citizens Petition that sought to protect the ocean from continued high CO₂ emissions stemming from the burning of fossil fuels within reach of US law. The Agency denied that petition on the ground, in part, that it was doing enough already to address ocean acidification, deoxygenation, and warming. More recently, Dr. Viviani worked with the other Plaintiffs on this complaint to fashion, advocate for, and file the more comprehensive underlying TSCA § 21 Petition. In addition, using his own resources, Dr. Viviani flew to Washington DC to meet with EPA officials on the occasion of the underlying Petition's filing. Further, again on his own dime and time, Dr. Viviani flew to Colorado to participate in a public hearing aimed in part at addressing the Agency's claim in its denial that it was doing enough under other law to address the climate crisis.

21. In these ways, including his diminished enjoyment and intended use of the sea, of the land, of the beaches, of his compromised ability to use and explore the same with his family, and of his expenditure of his personal time and funds over at least a seven-year period to

advocate for the specified Agency action sought herein — a rulemaking to address the harmful chemicals and substances causing dangerous climate change — Dr. Viviani has already suffered substantial loss. Further, Dr. Viviani avers that these losses will mount absent action through EPA rulemaking pursuant to TSCA that he is herein compelled to advance by the present lawsuit.

22. James E. Hansen, PhD, is the former Director of the NASA Goddard Institute of Space Studies and current Director of Climate Science, Awareness and Solutions. CSAS is a program of the Earth Institute at Columbia University in New York City. Dr. Hansen is the author of the books *STORMS OF MY GRANDCHILDREN* and the forthcoming *SOPHIE'S PLANET*, and the principal author or co-author of numerous papers on the subject of climate change and Earth's energy imbalance. He is among the group that drafted and submitted the underlying Petition to EPA.

23. Dr. Hansen is well known for his testimony before the Senate Energy and Natural Resources Committee on 23 June 1988 that helped raise broad awareness of the global warming issue. Dr. Hansen's recent research establishes that fossil fuel GHG emissions have already raised Earth's temperature well beyond the Holocene range (approximately the last 12,000 years), potentially imposing an increasingly untenable burden on young people to undertake or pay for exceedingly expensive CO₂ extraction to limit climate change and its consequences.,”² His research also raises the prospect that continued high fossil fuel emissions will melt the planet's major ice sheets at a non-linear rate.³ On the other hand, Dr. Hansen's work has helped

² These include Hansen, *et al.*, *Young people's burden: requirement of negative CO₂ emissions*, *Earth Syst. Dynam.*, 8, 577–616, 2017, available at <https://esd.copernicus.org/articles/8/577/2017/>.

³ These include Hansen, *et al.*, *Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2 C global warming could be*

specify the magnitude and rate of decarbonization required to preserve a habitable climate, and he has highlighted the potential utility of select methods and policies for deep decarbonization and large-scale CO₂ removal with lasting co-benefits.⁴ He has helped establish Earth's energy imbalance as the most important metric for understanding the state and fate of our planet.⁵ Dr. Hansen also maintains a monthly blog providing information, analysis, and prediction concerning global and regional temperature change, and relevant factors including the growth of greenhouse gases, reduction in human-caused aerosols, the El Nino/ La Nina cycle, and the solar irradiance cycle, along with relevant policy considerations.⁶ Dr. Hansen consistently calls for US leadership and global cooperation as are necessary to restore earth's energy balance, stop the warming of the southern ocean, preserve coastal cities in the US and beyond and nature as we have come to know it, and protect and restore a habitable climate required alike by present young people and future generations.⁷

dangerous, Atmos. Chem. Phys., 16, 3761-3812, 2016, available at <https://acp.copernicus.org/articles/16/3761/2016/acp-16-3761-2016.pdf>.

⁴ These include Hansen, *et al.*, *Assessing "Dangerous Climate Change": Required Reduction of Carbon Emissions to Protect Young People, Future Generations and Nature*, December 3, 2013, available at <https://doi.org/10.1371/journal.pone.0081648>.

⁵ See, Hansen et al., *Earth's Energy Imbalance: Confirmation and Implications*, Science (June 3, 2005) at <https://www.science.org/doi/10.1126/science.1110252>; Hansen *et al.*, *Earth's energy imbalance and implications*, Atmos. Chem. Phys (Dec. 22, 2011) at <https://acp.copernicus.org/articles/11/13421/2011/>; Karina von Schuckmann *et al.*, *Heat stored in the Earth system: where does the energy go?* Earth Syst. Sci. Data (Sept. 7, 2020) at <https://doi.org/10.5194/essd-12-2013-2020>.

⁶ See <https://csas.earth.columbia.edu/blog/temperature-update> and <https://csas.earth.columbia.edu/blog/communications>.

⁷ Dr. Hansen anticipates that publication of his forthcoming work titled, tentatively, *Global Warming in the Pipeline*, will make the urgency of these tasks more clear.

24. Defendants' rejection of the Petition by Dr. Hansen and colleagues adds significantly to his long-time and continuing concern about the mounting impact of climate change on the future of young people, especially his own grandchildren but also young people in general. Those concerns arise in part from specific instances of young people near and dear to Dr. Hansen who, over the years, he has learned have been immediately impacted by their sense that grownups in general, and the government in particular, to date have neither assumed a full measure of responsibility for the current situation nor acted strongly to actually fix the problem. And yet, as Dr. Hansen is prepared to aver in the course of this proceeding, the problem is quite solvable.

25. Further, Dr. Hansen and his family have suffered damage and loss due to climate change, including from Sandy, the powerful 2012 storm that maintained hurricane-force winds along the East Coast of the United States up to New York because of exceptionally warm ocean waters, a function of global warming and the resulting slowdown of oceanic transport of heat into the Arctic. The tall cedar trees that shaded the northwest side of his house were uprooted, and his family's favorite giant mulberry tree was split by the winds, losing one of its trunks. Dr. Hansen also suffered damage to his house during that hurricane, as the railings on the flat roof were blown off with a thunderous roar while he and his family were huddled below without power. (The electricity remained off for a week.) Dr. Hansen will aver in these proceedings that the house was capable of repair, but not the trees. Dr. Hansen believes, based on the relevant evidence, that such extreme events as these will grow in severity with the increasing concentration of atmospheric CO₂, a circumstance that he is prepared to aver is virtually certain to occur unless stronger action is taken by the major emitting nations, including by the US, consistent with those he and other Plaintiffs herein sought in their underlying Petition.

26. Plaintiff John Birks, PhD, is the Chief Scientist at 2B Technologies, a company he co-founded in 1998 that develops and manufactures new products for air quality measurements. He is Professor Emeritus of the University of Colorado where he and his graduate students carried out research in atmospheric chemistry for 25 years. He is best known for his work in quantifying the rates of chemical reactions that cause the Antarctic Ozone Hole, his co-development of the “nuclear winter” theory with Paul Crutzen in 1982, and development of miniaturized instruments for air pollution measurements. His current research is focused on the use of low-cost sensors for mobile monitoring of air pollutants in cities, an outgrowth of the AQTreks educational outreach programs his company implemented in several hundred schools around the US. Dr. Birks also serves on the CPR Initiative Board of Directors. He was among the group that submitted the underlying Petition to EPA.

27. Plaintiff Richard Heede leads the Climate Accountability Institute (“CAI”) and serves as the principal investigator for its widely cited “Carbon Majors” project which traces historical CO₂ and methane emissions to oil, natural gas, and coal companies based on the fossil fuel produced by each company in each year, including both operational emissions and emissions attributable to consumption of their marketed carbon fuels. He has authored and co-authored several papers on the climate responsibilities of fossil fuel producers. Mr. Heede co-founded CAI in 2011 to provide the scientific basis for leveraging climate stewardship by carbon producers. Mr. Heede published his thesis, *A GEOGRAPHY OF CARBON*, with the National Center for Atmospheric Research in Boulder, Colorado, in 1984. He worked on energy and climate solutions with the Rocky Mountain Institute 1984-2002, and founded Climate Mitigation Services in 2003. In his individual capacity, Mr. Heede was among the group that submitted the underlying Petition to EPA.

28. Plaintiff Lise Van Susteren, MD, is a practicing general and forensic psychiatrist in Washington, DC, and an expert on the physical and mental health effects of climate disruption. Dr. Van Susteren is a co-founder of the Climate Psychiatry Alliance and has served on the Advisory Board of the Center for Health and the Global Environment at the Harvard T. H. Chan School of Public Health. In 2006, Dr. Van Susteren sought the Democratic nomination for the U.S. Senate from Maryland. She is currently on the board of Physicians for Social Responsibility and Earth Day Network. In 2011, Dr Van Susteren co-authored THE PSYCHOLOGICAL EFFECTS OF CLIMATE WARMING ON THE U.S.: AND WHY THE US MENTAL HEALTH SYSTEM IS NOT PREPARED. Her book, EMOTIONAL INFLAMMATION: DISCOVER YOUR TRIGGERS AND RECLAIM YOUR EQUILIBRIUM DURING ANXIOUS TIMES, co-authored with science writer Stacy Colino, was released in April 2020. Dr. Van Susteren also serves on the CPR Initiative Board of Directors. She was among the group that submitted the underlying Petition to EPA.

29. Climate Science, Awareness and Solutions (“CSAS”) is a public interest non-profit organization with headquarters in New York, NY. It undertakes research at the forefront of climate science, including with respect to climate variability and change, global climate forcings and planetary energy balance, Earth’s climate history and climate sensitivity, climate dynamics, and the climate implications of shifting energy choices (and relevant policy options). The group advocates a near-universal, rising carbon fee as a key step towards halting the global march to climate catastrophe. CSAS was founded in 2013 by Plaintiff James Hansen, who also serves as its executive director. CSAS was among the group that submitted the underlying Petition to EPA.

30. Defendant Michael Regan, named in his official capacity as Administrator of EPA, has authority for the implementation of TSCA and is responsible for assuring that the Agency exercises its responsibilities under TSCA in compliance with the law.

31. Defendant EPA is an agency of the United States Executive Branch and, under the direction of Administrator Regan, is charged with implementing the provisions of TSCA, including by responding to rulemaking petitions under Section 21.

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STATUTORY CONTEXT

32. In 1976, Congress enacted the Toxic Substances Control Act (“TSCA”) in recognition that certain chemical substances and mixtures impose serious risks to health or the environment, but are not “single media” problems and so require a holistic approach to mitigation and control.⁸ In particular, Congress aimed to ensure that the Environmental Protection Agency retained “adequate authority to regulate chemical substances and mixtures which present an unreasonable risk of injury to health or the environment.” TSCA § 2; 15 U.S.C. § 2601(b)(2).

33. TSCA requires Defendants to pursue restrictions by rule where it determines that “the manufacture, processing, distribution in commerce, use or disposal of a chemical substance or mixture, *or any combination of such activities*, present “an unreasonable risk of injury to health or the environment.” TSCA § 6, 15 U.S.C. § 2605 (emphasis added). Further, where such substances and mixtures present an “imminent and unreasonable risk of serious or widespread injury to health or the environment,” the Agency may and, in the view of Petitioners, should take legal action to contain and eliminate the risk. TSCA § 7, 15 U.S.C. § 2606.

34. In 2016, amendments to TSCA, according to the Agency, radically transformed the statute, with clear requirements and a mandate move strongly against unreasonable risks. For

⁸ David Markell, An Overview of TSCA, Its History and Key Underlying Assumptions, and Its Place in Environmental Regulation, 32 WASH. U. J. L. & POL’Y 333 (2010), at https://openscholarship.wustl.edu/law_journal_law_policy/vol32/iss1/11/.

instance, prior to 2016 EPA was authorized to impose requirements only “to the extent necessary to protect adequately against such risk using the least burdensome requirements.” *Former* 15 U.S.C. § 2605 (2015). Courts interpreted TSCA pre-2016 to require the Agency, “[i]n evaluating what is ‘unreasonable’ . . . to consider the costs of any proposed actions” as well as “the environmental, economic, and social impact of any action.”⁹ In sharp contrast, with the 2016 amendments, now require EPA to render its unreasonable risk determination “without consideration of costs or other nonrisk factors.” 15 U.S.C. §§ 2605(a) and 2605(b)(4)(A).

35. Pursuant to TSCA § 21, 15 U.S.C. § 2620, “[a]ny person may petition the [EPA] to initiate a proceeding for the issuance, amendment, or repeal of a rule” under several substantive sections of the statute, including TSCA § 6, 15 U.S.C. § 2605. Petitioners are obliged only to “set forth the facts which it is claimed establish that it is necessary to issue, amend, or repeal a rule.” TSCA § 21(b)(1), 15 U.S.C. § 2020(b)(1). The Agency then has 90 days to either grant or deny the petition, TSCA § 21, 15 U.S.C. § 2620(b)(3), during which time Congress specified that the Agency “may hold a public hearing or [] conduct such investigation or proceeding as the Administrator deems appropriate in order to determine whether or not such petition should be granted.” 15 U.S.C. § 2620(b)(2).

36. Upon EPA’s grant of a petition, the Agency is to “promptly commence an appropriate proceeding in accordance with,” the relevant substantive TSCA section. 15 U.S.C. § 2620(b)(3). The Agency is to undertake a risk evaluation “without consideration of costs or other nonrisk factors,” 15 U.S.C. § 2605(b)(4)(a), and then, upon its determination that “a chemical substance presents an unreasonable risk of injury to health or the environment,” *id.*, publish “a

⁹ *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201, 1222 (5th Cir. 1991) (quoting prior version of 15 U.S.C. § 2605(c)(1)).

notice of proposed rulemaking” along with a proposed rule, 15 U.S.C. § 2605(c)(3)(A)-(B). Thereafter, it is to publish a final rule that, pursuant to TSCA § 6(a), 15 U.S.C. § 2605(a) that must (“*shall* by rule,” 15 U.S.C. 2605(a) (emphasis added)) control to the point of prohibition, the “manufacture, processing, distribution in commerce, use, or disposal” of such chemical substances or mixtures, in order to ensure that “the chemical substance[s] or mixture[s] no longer present[] such risk.” The statute also expressly conveys authority to the Agency to impose requirements “prohibiting or otherwise regulating any manner or method of disposal of such substance or mixture, or of any article containing such substance or mixture, by its manufacturer or processor or by any other person who uses, or disposes of, it for commercial purposes.” TSCA § 6(a)(6)(A), 15 U.S.C. § 2605(a)(6)(A).

37. In order to ensure expedited action against chemicals that are “likely to result in an unreasonable risk of serious or widespread injury to health or the environment,” TSCA also authorizes the Agency to “declare a proposed rule . . . to be effective, and compliance with the proposed requirements to be mandatory, upon publication in the Federal Register.” 15 U.S.C. § 2605(d)(3)(A).

PLAINTIFFS’ RULEMAKING PETITION

I. HISTORICAL BACKGROUND

38. Soon after its 1976 enactment, EPA utilized TSCA to impose a general ban on use of chlorofluorocarbons in aerosols on the basis both that such chemicals deplete the ozone layer and due to anticipated “adverse effects because of an increase in the Earth’s temperature (“greenhouse effect”) and changes in climate.” EPA stated then that while “[t]he health and

environmental consequences of these and other changes” were “not well understood . . . there [was] considerable concern that these consequences will produce significant adverse effects.”

39. In enacting its 1978 final rule, the Agency rejected “the idea of requiring warning labels on chlorofluorocarbon products as an alternative to [that] rule. EPA believe[d] that a labeling requirement would be insufficient to reduce the unreasonable risk from chlorofluorocarbon aerosol emissions. In addition, the Agency believe[d] that the continued use of chlorofluorocarbons by some consumers will result in the involuntary exposure of the entire public to hazards created by the user population.” According, with certain specified exemptions, EPA commenced a ban on “the manufacturing, processing, and distribution in commerce” of CFCs (though it did not, at first, impose a ban on articles containing CFCs).

40. Since 1978, a firm scientific consensus has been established that greenhouse pollutants beyond CFCs, including the rise in the ambient concentration of carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF₆), is imposing a planetary energy imbalance, increasing Earth’s ambient temperature, ensuring, *inter alia*, wider and more severe wildfire and extreme weather events, persistent drought and agricultural losses in numerous regions, accelerating sea level rise and associated flooding of many coastal communities, and a warmer and increasingly acidified and deoxygenated ocean with associated risks to the food web.

41. On April 22, 2021, President Biden characterized the mounting warming as an “existential threat.” Similarly, on November 7, 2022, during the opening of the 27th Conference of the Parties to the United Nations Framework Convention on Climate Change, UN General Secretary Antonio Guterres observed: “We are in the fight of our lives. And we are losing. Greenhouse gas emissions keep growing. Global temperatures keep rising. And our planet is fast

approaching tipping points that will make climate chaos irreversible. We are on a highway to climate hell, with our foot still on the accelerator.”

42. In 2015, Plaintiff Viviani and the Center for Biological Diversity filed a TSCA § 21 petition with EPA that also sought an unreasonable risk finding specifically with respect to CO₂. Though similar in some ways, the 2015 Petition requested that EPA render a TSCA § 6 unreasonable risk finding principally with respect to injury to the oceans, *i.e.*, ocean acidification and warming caused by CO₂ emissions. The Agency rejected the 2015 petition on the ground, among others, that it was doing enough already to handle the ocean warming and acidification problem. The 2015 petitioners elected to monitor the Agency’s contention that it was already adequately addressing the problem, rather than to file a lawsuit challenging its denial.

43. In considering petitioning EPA for rulemaking under TSCA § 21, Plaintiffs herein understood that, pursuant a relevant 1985 guidance document,¹⁰ the Agency encouraged prospective petitioners “to consult with the Agency prior to filing a petition formally [to] enable petitioners to determine what information the Agency already has on the problem, what action it has taken or is taking, what particular information the Agency may need to make its decision, and what alternatives to Federal regulation may exist. Such “preconsultation,” as the EPA Guidance put it, was expected to result “not only in strengthening the support documentation for petitions but, in some cases, in immediate resolution of petitioners’ concerns.”

44. Accordingly, before filing their 2022 Petition, Plaintiffs provided the Agency with a draft of it and met with over a dozen EPA personnel. None of them, however, provided any indication that the Agency deemed itself to already be taking sufficient action, under other

¹⁰ Guidance for Petitioning the Environmental Protection Agency Under Section 21 of the Toxic Substances Control Act, 50 FR 46825 (November 13, 1985).

authority, to eliminate the unreasonable risk of injury to health and the environment posed by ongoing and legacy GHG emissions, nor that they considered action under TSCA, as Plaintiffs contemplated, to be less efficient than EPA action under other statutes. Likewise, none of them indicated that the Agency believed it lacked adequate authority under TSCA to compel removal of legacy GHG emissions. At the close of the meeting, undersigned counsel Galpern urged EPA staff to let him know, even as Plaintiffs were putting final touches on the document, if they retained or developed any concern that Petitioners might address before filing, so as not to waste scarce organizational, individual, and other resources.

II. THE PETITION ESTABLISHED THAT GREENHOUSE GAS EMISSIONS POSE AN UNREASONABLE RISK OF INJURY TO HEALTH AND THE ENVIRONMENT

45. Plaintiffs filed their Petition with EPA on June 16, 2022, as also noted above. Plaintiffs incorporate by reference all facts alleged in that Petition, attached hereto as Exhibit 1 and made part of this Complaint.¹¹ Those facts in combination establish that GHG emissions present an unreasonable risk of injury to health and the environment, a risk that will fall even more heavily upon future generations, and that actions to date have failed to achieve an exit from the “highway to climate hell” about which the UN General Secretary recently spoke.

46. The allegations presented in the Petition establish the following facts relevant to this Complaint:

- A. **Earth’s Energy Imbalance:** Humanity’s reliance on fossil fuels has caused a global energy imbalance. Implications of this energy imbalance include that global average temperatures have now risen past the high point of the Holocene, the period marked by a relatively stable climate with moderate temperatures and stable coastlines.

¹¹ Also available at <https://cprclimate.org/about/actions-campaigns/petition-to-epa/>

- B. CO₂ Emissions:** The to-date unceasing commitment to fossil fuels, coupled with the still-small contribution of carbon-free energy to global energy supply, has ensured continually high CO₂ emissions and an increasing atmospheric concentration of CO₂. In light of the long-lived nature of atmospheric CO₂, responsibility for present and future global warming is a matter of cumulative emissions. The largest quantity of recent annual GHG emissions stem from activity in China (29%), but the United States, with the largest cumulative total (24%) (and very high per capita emissions – 7x that of China) bears highest responsibility.
- C. CH₄ and other Short-Lived Climate-Forcing Pollutants:** Other pollutants, some relatively short-lived, substantially augment the climate-forcing effect of CO₂ emissions. This is especially true of methane (CH₄), nitrous oxide (N₂O), the halocarbons, and certain aerosols including black carbon. Action to reduce these drivers of climate change is needed not merely to stem global warming, but also to improve air quality, so that these actions should markedly improve public health even in the short-term.
- D. Unreasonable Land-Based Risk:** GHG emissions deriving from fossil fuel combustion and other sources threaten injury to human health and the environment. These threats arise from global warming-induced severe heat (itself an increasing human mortality factor), drought, associated agricultural losses, and wildfire, as well as from sea-level-rise-induced risks, including coastal flooding, erosion, and salinization of water supplies. The risks of injury arise, as well, from climate-induced weather extremes, including increased frequency and intensity of heat waves, increased precipitation with resulting flooding and drought, and increased frequency and severity of tropical storms. Economic losses result, as well as loss of life and other harms to people's lives that are not readily described in financial terms.
- E. Ocean-Based Risks:** There is a clear consensus among leading national and international scientific bodies that anthropogenic CO₂ causes changes in ocean chemistry, leading to additional injuries to human health and the environment. Unabated, there will be increasingly severe and detrimental impacts on marine ecosystems, fisheries

and shell-fisheries – including along the west coast of the US, and public health. Injury to the ocean environment from acidification is compounded by ocean warming and deoxygenation, developments that are already impacting corals worldwide as well as the entire food chain, given that reproduction in certain organisms at its base is diminished with rising sea temperature.

- F. **Air Quality:** Air pollution produced by fossil fuel combustion includes PM2.5 that causes severe injury to human health, contributing to more than 10 million premature deaths annually, including an estimated 483,000 premature deaths in North America for people over the age of 14. Replacing fossil fuel combustion with clean energy sources will materially advance human health and survival.

- G. **Risk Reduction Methods:** To eliminate the unreasonable risk of injury to the environment and human health, we must timely phase out our present reliance on fossil fuels and establish an effective and lasting program to remove and sequester CO₂ and other GHGs at scale.

- H. **Persistent market failure and associated catastrophic effects:** A widely-recognized two-fold market failure impedes progress at present, in that (1) the environmental cost arising from GHGs are not included in the price of fossil fuel energy and (2) the removal and sequestration of carbon is little valued because it is not compelled. Agency action to address these market failures should take account of the likelihood of catastrophic effects of continued emissions, including amplified climate change stemming from positive feedbacks in physical and chemical processes, including decreased arctic ice albedo, more rapid than average warming in the arctic and other northern regions, release of soil carbon as frozen soil warms and new lakes form causing methane releases from decaying matter, potential collapse of the marine food web, changes in cloud albedo, alterations in ocean circulations, more rapid than expected sea-level rise driven by accelerated melting of Greenland and West Antarctic Ice Sheet collapse, shifts in weather patterns like the Indian Summer Monsoon or the

West African Monsoon, ecological regime shifts in the Amazon or the Sahel, and the potential for massive release of carbon from seafloor methane hydrates.

- I. **Risk Reduction Costs and Benefits:** Plaintiffs’ Petition provides a preliminary analysis of the cost and benefits of GHG reduction, and emissions removal and sequestration, including with excerpts from the US Fourth National Climate Assessment which delineated “the human welfare, societal, and environmental elements of climate change and variability for 10 regions and 18 national topics, with particular attention paid to observed and projected risks, impacts, consideration of risk reduction, and implications under different mitigation pathways.” Plaintiffs note here that a draft of the Fifth National Climate Assessment was published on November 8, 2022. CPR Initiative has already agreed to provide comments to the 13 federal agencies who authored that draft. Publication is set for late-2023 and, as warranted in the circumstances and in light of the posture of this case at that time, Plaintiffs will advise the court if in their view the Fifth Assessment contains additional critical material relevant to the question whether the subject chemicals and mixtures here present an unreasonable risk of injury to health or the environment.

DEFENDANTS’ DENIAL OF PLAINTIFFS’ PETITION

- I. **DEFENDANTS DID NOT DISPUTE PLAINTIFFS’ FACTUAL ALLEGATIONS REGARDING THE RISK OF GREENHOUSE GAS EMISSIONS.**

47. In its September 14, 2022 letter of denial, attached hereto as Exhibit 2,¹² EPA stated that “that the information and science provided in the petition is generally consistent with what the Agency used to make the 2009 ‘Endangerment Finding’ that elevated atmospheric concentrations of six key well-mixed GHGs taken in combination may reasonably be anticipated to endanger the public health and welfare of current and future generations.” 87 FR at 57667. The

¹² Also at EPA, Toxic Substances Control Act (TSCA), Section 21 Petition for Rulemaking Under TSCA Section 6; Reasons for Agency Response; Denial of Requested Rulemaking, 87 FR 57665-57674 (September 21, 2022).

Agency further stated that it “shares the petitioners’ concerns regarding the threat posed by climate change,” and agreed that “the climate crisis is an undeniable and urgent threat to human health and the environment,” observing that “it is already affecting human health and well-being, wildlife, and the natural environment.” *Id.* at 57667-68. EPA supported those observations by citing to analysis in 6th Assessment Report of the Intergovernmental Panel on Climate Change and the 4th National Climate Assessment. The Agency also cited to its own 2009 Endangerment Finding, pursuant to Section 202 of the Clean Air Act regarding tailpipe GHG emissions, and to its “similar findings” in 2016 with respect to Section 231 of the Clean Air Act concerning aircraft emissions, to “highlight[] a few instances where EPA has recognized the significant concerns related to climate change.” *Id.* at 57669. The Agency thus “acknowledge[d] both the urgency and uniqueness of the threat presented by climate change.” *Id.* Further, EPA acknowledged that “undeniably has authority under TSCA to regulate chemical substances and mixtures . . . including those that may be implicated by the petition.” 87 FR at 57660.

48. Notwithstanding their statements of agreement with the facts underlying Plaintiffs’ Petition, Defendants denied the Petition on September 14, 2022.

49. In their Petition denial, Defendants asserted that the Petition was insufficiently specific “especially in comparison to the magnitude of the request [and] the sprawling nature of the climate problem and its solutions, and the number of federal government activities already ongoing to address the problem.” 87 FR 67670. But it was not Plaintiffs’ burden to provide a detailed draft rule, and the fact that the federal government has a number of activities “already ongoing to address the problem” says nothing about whether they have or will eliminate the unreasonable risk that is the statute’s operative standard.

50. Additionally, Defendants claimed that the Petition failed to prove that a rulemaking pursuant to TSCA was needed, arguing that the Biden Administration’s “ambitious targets” of “50–52% below 2005 levels by 2030, and net zero emissions by no later than 2050,” will “be achieved through benefits from actions already implemented, as well as future anticipated mitigation efforts.” 87 FR 67670.

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II. THE GOVERNMENT’S “SUBSTANTIAL EFFORTS TO REDUCE FUTURE DOMESTIC EMISSIONS” ARE LEGALLY INSUFFICIENT.

51. Defendants’ denial asserts that “the U.S. Government has made and will continue to make substantial efforts to reduce future domestic emissions.” But TSCA mandates that EPA regulate to eliminate the risk of injury to health and the environment posed by greenhouse gas emissions, either directly under TSCA or through use of other appropriate authorities. Defendants’ denial does not establish that this risk will be eliminated through the various governmental actions cited – and it will not.

52. The Government’s current efforts are geared toward emissions reduction targets intended to achieve a 50-52% reduction in emissions, compared to 2005 levels, by 2030, and “net zero” emissions by 2050. This, in turn, is intended to meet the Paris Agreement’s target of keeping global warming below an average of 1.5° C.

53. But the current commitments under the Paris Agreement – including the U.S. commitments – are widely recognized as insufficient to meet the 1.5° C warming target. In fact, meeting current commitments would put the world on track for a truly terrifying 2.5° C of global warming, according to a UN report issued in late October.

54. Even assuming that currently commitments would put the U.S. on track to meet a goal of 1.5° C in warming, that level of warming will still have catastrophic impacts and will still pose an unreasonable risk of injury to health and the environment. To take but one example, as was also noted above, an estimated 70-90% of *all* corals will be lost at that level of warming. Moreover, climate change is *already* causing injuries to Plaintiffs and others – including through heatwaves, wildfires, droughts, floods, and changes in ocean chemistry and marine life, among many others.

55. In their denial of the Petition, however, Defendants did not assert that current actions will be sufficient to meet even these insufficient targets. They state that they will meet these targets through a combination of “actions already implemented” as well as “future *anticipated* mitigation efforts.” But they do not even specify the contours of these magical future efforts.

56. With respect to the numeric reduction targets that Defendants did cite, Defendants provided virtually no quantitative support for their claims that their current actions will be sufficient to meet these targets, other than to state that “[t]he recently-enacted [Inflation Reduction Act, or IRA] is expected to *help reduce* GHG emissions to 40% below 2005 levels by 2030, and “get the U.S. *a significant way* towards our overall 2030 climate goals, *positioning the [United States]* to reach 50–52% GHG emission reductions below 2005 levels in 2030 with continued executive branch, *state, local, and private sector actions.*” *Id.* (emphasis added).¹³ But Defendants do not control state, local, and private sector action, and even if recent congressional action may

¹³ In order to discover if the Agency relied on *any* relevant analysis or spreadsheet indicating that emissions reductions from EPA’s current and announced rules could add up to 100% of present or otherwise anticipated emissions, Plaintiffs on November 7, 2022 filed a Freedom of Information Act (FOIA) request with the Agency.

be thought capable of helping get the nation “a significant way” towards the Biden Administration’s 2030 goal, that says nothing about 2050 and, in any event, such discussion is entirely irrelevant to the operative statutory question — whether the chemicals and mixtures at issue present an unreasonable risk of injury to health or the environment. Defendants thus rely on entirely erroneous standards and contentions and, even so, patently fail to show that their actions will meet their postulated low and inadequate standard.

57. Moreover, EPA argued that “[e]ven if EPA were to initiate a rulemaking proceeding under TSCA Section 6(a) to address an unreasonable risk associated with prospective GHG emissions and/or fossil fuels, any final rule under TSCA would be unlikely to achieve emissions reductions more expeditiously or efficiently than those that are already anticipated to be achieved through the IRA and other recent, ongoing, or planned federal actions.” 87 FR 57671. That conclusory assertion is not credible. A final rule complying with TSCA’s standards would likely compel a phase out of all GHG emissions, which would certainly more expeditiously eliminate the risk posed by GHG emissions than other governmental actions currently underway. Moreover, any expeditiousness and efficiency comparison would depend on the details of the draft rule that has yet to be devised; the Agency’s exercise, *vel non*, of its statutory authority to provide a reasonable phase-in period for critical but recalcitrant to decarbonize sectors; and accommodations as warranted to guard against any significant disruption to the national economy, national security, or critical infrastructure, *see* 15 U.S.C. 2605(g). Further, Defendants’ implication that Agency rulemaking pursuant to TSCA §21 must replace or otherwise compromise Defendants’ implementation of its other legal mandates and plans is simply false.

58. Moreover, the Agency controls formulation of the draft rule and, as already noted, the Agency is expressly authorized under TSCA to make that draft rule immediately effective

upon publication in the Federal Register, 15 U.S.C. 2605(d)(3)(A), so long as it “as expeditiously as possible, give[s] interested persons prompt notice of such action.” 15 U.S.C. 2605(d)(3)(B).

59. Without regulation under TSCA, the U.S. Government will not eliminate the unreasonable risk to health and the environment posed by greenhouse gas emissions.

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CLAIM FOR RELIEF

TSCA: Failure to Initiate Rulemaking

60. Plaintiffs re-allege and incorporate all preceding paragraphs herein by reference.

61. TSCA provides that a party that petitions EPA under 15 U.S.C. § 2620, whose petition has been denied by the Agency, is entitled to a *de novo* proceeding.

62. If the Petitioners demonstrate to the court by a preponderance of evidence that “the chemical substance or mixture to be subject to the proposed rule presents an unreasonable risk of injury to health or the environment, without consideration of costs or other nonrisk factors, including an unreasonable risk to a potentially exposed or susceptible subpopulation, under the conditions of use,” “the court shall order the Administrator to initiate the action requested by the petitioner.” 15 U.S.C. § 2620(4)(B).

63. As discussed above, on June 16, 2022, Plaintiffs submitted a Petition to EPA, documenting each of the allegations contained in paragraphs above.

64. EPA denied Plaintiff’s Petition on September 14, 2022, based on a legally, factually, and logically erroneous, assessment.

65. Plaintiffs are therefore entitled to a *de novo* judicial review of the Petition. Their unreasonable risk of injury claim, having been established in the Petition and that will be established before the court, the court should order the Plaintiffs' petitioned rulemaking.

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PRAYER FOR DECLARATORY AND INJUNCTIVE RELIEF

WHEREFORE, Plaintiffs respectfully request that this Court enter judgment in their favor and issue the following relief:

1. Compel rulemaking pursuant to Plaintiffs' Petition and as established at *de novo* trial that the subject chemical substances and mixtures present an unreasonable risk of injury to health or the environment, and
2. Award Plaintiffs their reasonable fees, costs, expenses, and disbursements, including reasonable attorneys' fees associated with this litigation pursuant to the TSCA, or other applicable legal authority; and
3. Grant Plaintiff such additional relief as the Court deems just and proper.

Dated: November 12, 2022.

s/ Daniel M. Galpern

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On Complaint
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