

No. 26-1575

United States Court of Appeals for the Federal Circuit

MEGAN JACKLER AND BRANDON JAROCH,
Petitioners,

v.

DEPARTMENT OF JUSTICE AND DIRECTOR OF THE OFFICE OF
PERSONNEL MANAGEMENT,

Respondents.

*On Petition for Review from the Merit Systems Protection Board
MSPB Docket No. CF-0752-26-0069-I-1*

**BRIEF OF *AMICI CURIAE* UNION OF CONCERNED
SCIENTISTS, CENTER FOR OPEN SCIENCE, AND
ENVIRONMENTAL PROTECTION NETWORK IN SUPPORT OF
PETITIONERS AND REVERSAL**

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CERTIFICATE OF INTEREST

Counsel for Amici certify as follows:

1. The full name of every party represented by us is:
**Union of Concerned Scientists
Center for Open Science
Environmental Protection Network**
2. The name of the real party in interest represented by us is:
Same.
3. All parent corporations and publicly held companies that own 10% or more of stock in the parties represented by us are:
None.
4. The names of all law firms and the partners or associates that appeared for the party or amicus now represented by me in the trial court or agency or are expected to appear in this Court (and who have not or will not enter an appearance in this case) are:
None.
5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this Court's decision in the pending appeal:
None.
6. The names and information of any organizational victims in a criminal case under Fed. R. App. P. 26.1(b) and the names and information of any bankruptcy case debtors and trustees under Fed. R. App. P. 26.1(c):
Not applicable.

Dated: June 8, 2026

Respectfully submitted,

/s/ James D. Jenkins
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INTEREST OF *AMICI CURIAE*¹

The Union of Concerned Scientists (“UCS”), an organization of more than a half-million citizens and scientists, including current and former federal agency workers, is the leading non-profit group in the United States dedicated to putting rigorous, independent science into action for a healthier planet and a safer world. For its 57-year history, UCS has worked to promote and uphold scientific integrity in public policymaking, and it engages in all aspects of the regulatory process to further this goal.

UCS promotes the essential role of science in government decision-making by submitting comments on proposed agency rulemaking, testifying before Congress on issues relating to science and good governance, publishing articles on the need for science-based evidence in rulemaking, and participating in litigation in cases implicating the impact of science on government decisions and the public good. UCS’s work has demonstrated that preserving the independence of federal scientists from political interference is a requirement for the President to take care that the laws are faithfully executed.

¹ In accordance with Federal Rule of Appellate Procedure 29, all parties have consented to the filing of this amicus brief. *See* Fed. R. App. P. 29(a)(2). No party’s counsel authored this brief in whole or in part; no party or party’s counsel contributed money that was intended to fund preparing or submitting the brief; and no person contributed money that was intended to fund preparing or submitting the brief. *See* Fed. R. App. P. 29(a)(4)(E).

The Center for Open Science (“COS”) is a non-profit organization with a mission to increase the openness, integrity, and trustworthiness of research. Founded in 2013, COS has worked to promote open research practices to enhance accountability to research integrity, facilitate the self-corrective process of science, expand transparency and sharing of all research content, and improve research rigor and reproducibility.

COS is committed to ensuring that the most rigorous and credible scientific evidence can inform policy, drive innovation and discovery, and serve the public good. This includes advocating for protections that allow federal scientists to conduct their work without inappropriate interference, upholding research and scientific integrity. COS advances this commitment by submitting public comment to federal agencies on open science policies, testifying before Congress on transparency, reproducibility, and the use of the best available evidence in federal policymaking, and publishing on the credibility and reliability of research findings.

The Environmental Protection Network (“EPN”), an organization of over 750 former EPA career staff and political appointees, harnesses the vast experience of former federal regulators by sharing their institutional knowledge and subject matter expertise for the benefit of the public.

EPN is focused on building and defending the capacity of environmental agencies and the communities they serve. EPN does this by promoting policies,

budgets, and institutional changes to address environmental injustices and other pressing public health needs; safeguarding data and the scientific record; providing pro bono support to civil servants; and educating Congress and serving as a critical resource for facts, objective analysis and scientific rigor.

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SUMMARY OF ARGUMENT

The Merit Systems Protection Board (“MSPB”) ruled that Petitioners Jackler and Jaroch could be summarily removed from their positions as Immigration Judges by the Department of Justice because the Civil Service Reform Act (“CSRA”), which otherwise would have afforded them procedural and substantive protections from firing, was unconstitutional. The MSPB reasoned that the ability to fire without cause federal employees with policymaking or administrative responsibility is necessary for the President to faithfully execute the laws. This is exactly backwards.

Amici organizations, who represent and support federal scientists and evidence-based federal policymaking, submit this brief to inform the Court of the dangerous implications, far beyond adjudicating immigration proceedings, of this potentially sweeping and erroneous finding. However the Court decides to rule in this case, it must clearly and explicitly reject the MSPB’s finding, which would threaten to undermine protections for other federal employees, including scientists.

As this brief demonstrates, the current Trump Administration has led coordinated attacks on science and scientists in numerous different arenas. There is no question that the Administration would also seek to exploit any ruling in this case that appears to embrace the MSPB’s reasoning, by widening its unjustified and illegal assault on the individuals who ensure federal agencies make policy decisions based on the best available science, as Congress requires in multiple federal statutes.

For these reasons, *amici* respectfully urge the Court to ensure any ruling in this case fully preserves the CSRA’s protections for all federal employees, including those conducting science that is essential to the core competency of federal agencies to comply with federal law and has led to innumerable benefits for the American public.

ARGUMENT

I. If Upheld, the MSPB Decision Could Further the Administration’s Coordinated Attacks on High-Quality, Independent Science.

The Merit Systems Protection Board (“MSPB”) held that the Civil Service Reform Act, 5 U.S.C. § 7511 *et seq.* (“CSRA”) was unconstitutional as to Petitioners because it interfered with the President’s Article II ability to “faithfully execute the laws.” (Board Decision at ¶¶ 25-30.) Although the MSPB reasoned that this case is an “as-applied” constitutional challenge to the MSPB’s enabling statute, *id.* at ¶¶ 12, 13, the MSPB’s erroneous and blanket finding could have the sweeping effect of eliminating CSRA protections for countless civil servants if not clearly rejected by the Court. By the terms of its Opinion and Order, the Board held that any federal employee with policymaking or administrative authority can be fired at will. (Board Decision at ¶¶ 25,28.) A decision upholding this aspect of the MSRP’s ruling could be used by the Trump Administration to argue that it is allowed to fire federal scientists solely because the President does not agree with their scientific methods,

analyses, conclusions, or even research area. The Administration could seek to eviscerate civil service protections for scientists, leaders of science teams, and science workers employed across a multitude of federal agencies whose missions are to protect the health and safety of the American public.

This fear is not speculative. The DOJ's position in this case is part of a coordinated attack on the integrity of federal employees, including unprecedented attacks on independent, high-quality science. These actions expand assaults on science in government policymaking that began during the first Trump administration, which even at that time went beyond the political interference of any modern presidential administration.²

The attacks include staff cuts at science agencies, reduction of federal grant funding for scientific research, disruptions and terminations of federal scientific advisory committees, and removal of scientific information from government webpages.³ The Administration has stopped government scientists from publishing

² Emily Berman & Jacob Carter, *Policy Analysis: Scientific Integrity in Federal Policymaking Under Past and Present Administrations*, 13 J. Sci. Pol'y & Governance 1 (2018), https://www.sciencepolicyjournal.org/uploads/5/4/3/4/5434385/berman_emily_carter_jacob.pdf.

³ Darya Minovi, Jules Barbati-Dajches, Rachel Cleetus & Kristie Ellickson, *Science and Democracy Under Siege: Documenting Six Months of the Trump Administration's Destructive Actions*, Union of Concerned Scientists (July 21, 2025), <https://www.ucs.org/resources/science-and-democracy-under-siege>.

in peer-reviewed journals, and it has delayed routine scientific publications used by hospitals and doctors.⁴

A terrifying cornerstone of the Administration's strategy is the creation of a hostile environment for federal employees who conduct or support scientific research and analysis by unjustly firing, transferring, or demoting scientific staff.⁵ The Administration has fired scientists, threatened scientists, and – for the first time in its history – nominated a non-scientist to lead the National Science Foundation.⁶ And it has fired members of various science advisory bodies because they would not

⁴ *CDC Orders Retraction or Pause in Publication of Research Manuscripts*, Sabin Ctr. for Climate Change Law, Columbia L. Sch. (Jan. 31, 2025), <https://climate.law.columbia.edu/content/cdc-orders-retraction-or-pause-publication-research-manuscripts>; Gretchen Goldman, *We Need Sound Policy Informed by Science. The Trump Administration Is Undermining It*, The Equation, Union of Concerned Scientists (June 26, 2025), <https://blog.ucs.org/gretchen-goldman/we-need-sound-policy-informed-by-science-the-trump-administration-is-undermining-it/>; Darya Minovi, *Who Benefits from Dismantling EPA Science?*, The Equation, Union of Concerned Scientists (Mar. 26, 2025), <https://blog.ucs.org/dminovi/who-benefits-from-dismantling-epa-science/>. (detailing the effort to eliminate EPA's ORD and IRIS and pointing to ethylene oxide as an example)

⁵ Berman & Carter, *supra*.

⁶ Gretchen Goldman, *Cutting Science Out: Trump Administration Fires National Science Board Members*, The Equation, Union of Concerned Scientists (Apr. 26, 2026), <https://blog.ucs.org/gretchen-goldman/cutting-science-out-trump-administration-fires-national-science-board-members/>; Julian Reyes, *Trump's Nominee to Run NSF Is Unqualified, Conflicted, and a Threat to Science*, The Equation, Union of Concerned Scientists (Mar. 17, 2026), <https://blog.ucs.org/julian-reyes/trumps-nominee-to-run-nsf-is-unqualified-conflicted-and-a-threat-to-science/>.

toe the political line.⁷ Any holding by this Court that opens the door to the Trump Administration overriding CSRA protections for federal scientists could allow the Administration to amplify these attacks.

II. The President Cannot “take care that the Laws be faithfully executed” Without Highly Qualified, Independent Scientists.

The current Administration’s attacks on the independence of federal scientific work is a direct assault on congressional statutory mandates. Congress has required, over and over, that federal policies be based on the best available evidence and scientific information. Perhaps first and foremost, the APA requires courts to “hold unlawful and set aside agency action, findings, and conclusions found to be . . . **unsupported by substantial evidence.**” 5 U.S.C. § 706(2)(E) (emphasis added).

In specific program areas, federal statutes aimed at protecting the health and safety of the American public similarly require federal agencies to base their work on the best available objective science. *See, e.g.*, Clean Air Act, 42 U.S.C. § 7408(a)(2) (mandating the use of “**the latest scientific knowledge**” in setting air quality criteria for pollutants); Endangered Species Act, 16 U.S.C. § 1533(b)(1)(A) (Secretary of the Interior or Commerce is required to make species listing and delisting determinations “solely on the basis of the **best scientific and commercial**

⁷ Goldman, *We Need Sound Policy*, *supra*; Minovi, Dismantling EPA Science, *supra* (detailing the effort to eliminate EPA’s ORD and IRIS and pointing to ethylene oxide as an example).

data available”) and 16 U.S.C. § 1536(a)(2) (“In fulfilling the requirements of this paragraph each agency shall use the **best scientific and commercial data available**”); Clean Water Act, 33 U.S.C. § 1314(a)(1) (requiring EPA to develop and publish criteria for water quality “**accurately reflecting the latest scientific knowledge**”); National Environmental Policy Act, 42 U.S.C. § 4332 (requiring all federal agencies to “utilize a systematic, interdisciplinary approach which will **ensure the integrated use of the natural and social sciences** and the environmental design arts in planning and in decisionmaking which may have an impact” on the environment); OSH Act, 29 U.S.C. § 655(b)(5) (toxic materials and harmful physical agents standards must use the “**best available evidence**”); Food Drug and Cosmetic Act, 21 U.S.C. § 355(d) (mandating use of “**evidence consisting of adequate and well-controlled investigations, including clinical investigations, by experts qualified by scientific training and experience**”) (emphasis added in all citations).

In enacting these laws, Congress recognized that the federal government plays a unique and critical role in science-based policymaking because of its national reach and ability to address long-term health, safety, and environmental issues that cut across state lines and require a coordinated approach. Congress has made abundantly clear that federal science is intentionally and explicitly non-partisan and supports the constitutional separation of powers by providing objective information on which policymaking can be based. Federal science is strong because it follows the scientific

norms, practices, and conventions of science in general, across the world, including as to peer review and data transparency.⁸

Career civil servants produce independent science that Congress has required agencies to use in their deliberations in furtherance of policymaking. By definition, the best available science is objective and free from political interference.⁹ Firing scientists for political reasons paves the way for manipulation of scientific findings, with the result that “the best available science is absent from decision making.”¹⁰ Decision-making without reliable science conflicts with congressional mandates and endangers the public by “stall[ing] progress on urgent issues, and prioritiz[ing] political or economic agendas over the public good.”¹¹

III. The CSRA Protections for Federal Scientists Are Essential to Preserving the Availability of High-Quality Science to Federal Agencies.

Science is not partisan, and it is axiomatic that good science is independent science. Over the last several decades, there has been a concerted and largely

⁸ Jules Barbati-Dajches, *Science at the Table: The Importance of Federal Advisory Committees in Policymaking*, The Equation, Union of Concerned Scientists (Feb. 6, 2025), <https://blog.ucs.org/jules-barbati-dajches/science-at-the-table-the-importance-of-federal-advisory-committees-in-policymaking/>.

⁹ Carly Phillips, *What Does “Best Available Science” Mean?*, The Equation, Union of Concerned Scientists (Jan. 15, 2025), <https://blog.ucs.org/carly-phillips/what-does-best-available-science-mean/>.

¹⁰ *Id.*

¹¹ *Id.*

apolitical effort to ensure scientific integrity and independence in federal agencies.¹² As documented by the Congressional Research Service, “[f]ollowing the guidance of a 2010 memorandum issued by the Office of Science and Technology Policy (OSTP), more than 20 federal departments and agencies have developed and implemented scientific integrity policies.”¹³ Among their core protections, these integrity policies ensure that “[w]hen scientific or technological information is considered in policy decisions, the information should be subject to well established scientific processes, including peer review where appropriate.” In addition, the policies require agencies to adopt protections, “including any appropriate whistleblower protections, as are necessary to ensure the integrity of scientific and technological information and processes on which the agency relies”. *Id.*

Current federal agency Integrity Policies express the crucial importance of these safeguards and protections. For example, the EPA Scientific Integrity Policy mandates that “EPA’s policymakers involve science experts on scientific issues” and that “scientific information and processes relied upon in policymaking manifest scientific integrity, quality, rigor, and objectivity.”¹⁴ Crucially EPA’s policy

¹² See Berman & Carter, *supra* (discussing political influences over federal scientific efforts from 1953 to 2018); Marcy E. Gallo, Cong. Rsch. Serv., R46614, Federal Scientific Integrity Policies: A Primer (2020), <https://www.congress.gov/crs-product/R46614> (“CRS Scientific Integrity Primer”).

¹³ *Id.*

¹⁴ U.S. Env’t Prot. Agency, Scientific Integrity Policy (2012),

prohibits “managers and other Agency leadership from intimidating or coercing scientists to alter scientific data, findings, or professional opinions or inappropriately influencing scientific advisory boards.”¹⁵

Similarly, the HHS Policy states that “[s]cientific integrity plays a vital role in the mission of HHS,” which is “to enhance the health and well-being of all Americans, by providing for effective health and human services and by fostering sound, sustained advances in the sciences underlying medicine, public health, and social services.”¹⁶ The HHS policy expressly prohibits “interference or other inappropriate influence in the design, proposal, conduct, review, management, evaluation, communication about, and use of scientific activities and scientific information” and requires that Agency leadership and management ensure scientists “can conduct their work objectively, free from interference or other inappropriate influence, and free from retaliation.” *Id.* These protections have been developed over decades by both Democratic and Republican administrations.

<https://perma.cc/JYC6-TBZC>.

¹⁵ *Id.*

¹⁶ U.S. Dep’t of Health & Hum. Servs., Scientific Integrity Policy (2024), <https://perma.cc/W3ZZ-H5UT>; U.S. Dep’t of Health & Hum. Servs., About HHS, <https://perma.cc/668K-6E67>.

The Trump Administration already has issued an Executive Order to weaken the scientific integrity policies at federal agencies.¹⁷ Likewise, the Administration would undoubtedly embrace the MSPB's flawed and unnecessarily expansive reasoning to undermine CSRA protections to allow at-will firing of scientists with policymaking and administrative responsibilities, which could destroy remaining scientific independence in one fell swoop. More scientists could be fired, and even for those who remain employed, their research, analysis, and judgment will be chilled by a fear of unfettered retaliatory termination. "The stifling of scientific work because it is viewed as politically contentious may demoralize scientific staff, make them feel ineffective, or result in self-censorship of their own work."¹⁸ Indeed, scientists surveyed at Centers for Disease Control, Food and Drug Administration, Environmental Protection Agency, National Oceanic and Atmospheric Administration, and Fish and Wildlife Service reported that "influence of political appointees" and "absence of leadership with needed scientific expertise" were

¹⁷ See Jules Barbati-Dajches, *A Not So Happy Anniversary: A Year of Deceptive Science "Standards"*, The Equation, Union of Concerned Scientists (May 26, 2026), <https://blog.ucs.org/jules-barbati-dajches/a-not-so-happy-anniversary-a-year-of-deceptive-science-standards/>; Gretchen Goldman & Jules Barbati-Dajches, *The US Executive Order Establishing "Gold Standard Science" Does Anything But*, 389 BMJ r1173 (2025), <https://doi.org/10.1136/bmj.r1173>.

¹⁸ Gretchen T. Goldman, Jacob M. Carter, Yun Wang & Janice M. Larson, *Perceived Losses of Scientific Integrity Under the Trump Administration: A Survey of Federal Scientists*, 15 PLOS ONE e0231929 (2020), <https://doi.org/10.1371/journal.pone.0231929>.

“major barriers to science-based decisions made at their agency.”¹⁹ The loss of employees in science-focused agencies is not speculative: “[a]s of February 2025, 14,417 HHS [Health and Human Services] employees—15.6% of the department’s September 2024 workforce—had been removed or left the agency since the beginning of Trump’s term.”²⁰

IV. When Federal Scientists Lose Protection from Political Interference, the Health and Safety of the American People Suffers.

Government scientists collect and share data critical for the nation, speak out when scientific information is misused and ignored for public harm or private gain, counter disinformation from political leaders, and ensure scientific truth reaches the public. But those functions only happen when the independence of federal science is preserved, widely held scientific practices are followed and government scientists feel empowered to do their jobs freely.²¹ Career protections allow scientists to do their jobs and feel empowered and protected to speak up for the public on matters of health, safety, and security. Without these protections, scientists may not feel safe enough to sound the alarm about a disease outbreak, an unsafe product, or an

¹⁹ *Id.*

²⁰ P’ship for Pub. Serv., *Federal Public Service in Peril: A Report Card on the Trump Administration’s Management of Our Government* (2026), <https://bestplacestowork.org/>.

²¹ Goldman & Barbati-Dajches, *Gold Standard Science*, *supra*.

environmental harm.²² Independence of federal science also combats corruption, because it allows federal science and scientists to share reliable data and scientific truth, even when political actors seek to obscure. Federal scientists, in other words, keep the score.

Examples of the importance of federal scientists are not difficult to find. Similarly, there are numerous examples of the Trump Administration using every possible opportunity to unjustifiably and politically interfere with federal science and scientists. To assist the Court, *amici* set out four case studies here.

A. The Clean Air Act National Ambient Air Quality Standards

The Clean Air Act (“CAA”) mandates the use of “the latest scientific knowledge” in setting air quality criteria for pollutants. 42 U.S.C. § 7408(a)(2). Based on this scientific requirement, EPA has set air quality standards for six common “criteria pollutants,” which include “particulate matter (also known as particle pollution), ozone, sulfur dioxide, nitrogen dioxide, carbon monoxide, and lead.”²³ As documented by EPA scientists, particulate pollution causes adverse

²² See Goldman et al., *Perceived Losses, supra*; Warren Cornwall, *Trump’s “Fear Factor”: Scientists Go Silent as Funding Cuts Escalate*, Science (May 12, 2025), <https://www.science.org/content/article/trump-s-fear-factor-scientists-go-silent-funding-cuts-escalate> (reporting unwillingness of federal grantees to publicly discuss scientific research for fear of retaliation).

²³ U.S. Env’t Prot. Agency, *Clean Air Act Requirements and History*, <https://perma.cc/Y8RZ-CBFZ>.

health effects, including “increased emergency room visits and hospital admissions for respiratory illnesses, and tens of thousands of deaths each year.” Particulate matter also “can aggravate asthma, cause acute respiratory symptoms such as coughing, reduce lung function resulting in shortness of breath, and cause chronic bronchitis. The elderly, children, and asthmatics are particularly susceptible to health problems caused by breathing fine particles.”²⁴

EPA scientists play a critical role in implementing the requirements of the CAA: “EPA gathers and synthesizes scientific information on air pollution effects, and serves as a clearinghouse of data on emissions, air quality, and air pollution controls. EPA scientists and technical experts conduct state-of-the-art analyses of air pollution problems and policies using a variety of technical tools.”²⁵

The result of EPA’s air pollution standards under the CAA has been a dramatic improvement in America’s air quality, leading to “to improved health, longevity, and quality of life for all Americans.”²⁶ Indeed, “between 1970 and 2024, gross domestic product increased 338 percent, vehicle miles traveled increased 195 percent, energy consumption increased 43 percent, and U.S. population grew by 66

²⁴ U.S. Env’t Prot. Agency, Particle Pollution and Your Health, <https://perma.cc/W8MX-FGTH>.

²⁵ U.S. Env’t Prot. Agency, Clean Air Act: Solving Air Pollution Problems with Science and Technology, <https://perma.cc/6GKN-ERCM>.

²⁶ U.S. Env’t Prot. Agency, Air Quality: National Summary, <https://perma.cc/7ZJQ-DF8Y>.

percent. During the same time period, total emissions of the six principal air pollutants **dropped by 79 percent.**”²⁷

It is difficult to overstate the negative impact that removing CSRA protections would have on EPA scientists responsible for producing the science that underpins the CAA. In 2005, for example, “the EPA administrator for the first time overruled a nearly unanimous recommendation from its independent Clean Air Science Advisory Committee that the National Ambient Air Quality Standards for fine particulate matter be strengthened and instead maintained an outdated standard that does not adequately protect public health.”²⁸ Because the underlying scientific analysis was available, however, there could be a public debate about the Administrator’s decision, and the Advisory Committee requested reconsideration of the proposed standard.²⁹ The debate was publicly reported.³⁰ If CSRA protections for EPA scientists with policymaking and administrative responsibilities are removed, the President will simply be able to fire, at will, any scientists who provide data with which he disagrees, with the result that objective scientific information

²⁷ *Id.* (emphasis added).

²⁸ Kathleen M. Rest & Michael H. Halpern, *Politics and the Erosion of Federal Scientific Capacity: Restoring Scientific Integrity to Public Health Science*, 97 Am. J. Pub. Health 1939 (2007), <https://perma.cc/7WL2-4GYX>.

²⁹ *Id.*

³⁰ *E.g.*, Janet Wilson, *EPA Panel Advises Agency Chief to Think Again*, L.A. Times, Feb. 4, 2006, at B1, <https://www.latimes.com/archives/la-xpm-2006-feb-04-me-epa4-story.html>.

would not be available to policymakers: the opposite of “taking care” that the Clean Air Act be “faithfully executed.”

B. Regulation of Ethylene Oxide

Ethylene oxide (EtO) is a flammable, colorless gas used to sterilize medical equipment and other plastics that are sensitive to heat or moisture. The U.S. Food and Drug Administration (“FDA”) estimates that EtO is used to sterilize about half of all medical equipment, including bandages, sutures, and stents. It is also used to make other component chemicals in products ranging from plastics to antifreeze. Its chemical properties make it especially effective for killing viruses and bacteria.³¹

However, EtO use also poses health risks: because of its chemical properties, particularly its reactivity, chronic exposure to EtO—inhaled throughout a person’s life—is associated with the development of cancers of the white blood cells, such as non-Hodgkin lymphoma, myeloma, and lymphocytic leukemia. Studies have also shown a relationship between EtO exposure and breast cancer in women. Also, because EtO is mutagenic—meaning it can change a cell’s DNA—children may be especially susceptible to its effects. Workers in facilities that produce and use EtO as well as people living near facilities that release it into the atmosphere are at risk

³¹ Genna Reed, *What Is Ethylene Oxide? Answers to Your Questions About the Cancer-Causing Chemical*, The Equation, Union of Concerned Scientists (Oct. 6, 2022), <https://blog.ucs.org/genna-reed/what-is-ethylene-oxide-answers-to-your-questions-about-the-cancer-causing-chemical/>.

of unsafe exposures even when the facilities are using the best available technologies to handle and contain it.³²

Because medical sterilizers are located in communities and in office parks nationwide, fugitive emissions that are harmful, especially to children, are a public health concern. Reacting to the high cancer risk posed to communities near EtO-emitting facilities, the EPA undertook a review of emissions requirements for two types of facilities regulated under the agency's authority from the CAA section on hazardous air pollutants: chemical facilities known as "Miscellaneous Organic Chemical Manufacturing (MON)," and commercial sterilizers.³³

The EPA's Integrated Risk Information System ("IRIS") program provided the scientific basis for development of the standards for regulating EtO. Scientists conducted independent, peer-reviewed toxicology studies, looking at cancer and reproductive harm. In 2016, after years of peer review and analysis, IRIS issued a report finding EtO to be carcinogenic and up to 60 times more harmful than previously thought. While IRIS did not have policymaking or enforcement power, the science and scientists of IRIS provided the EPA with the peer-reviewed science that EPA could apply to the rulemaking under the CAA.

³² *Id.*

³³ *Id.*

However, starting in 2025, the Trump Administration has “essentially shut down IRIS by reassigning most of the dozens of the scientists who worked in the program to other parts of the agency.”³⁴ The attacks on IRIS are political, not scientific. In an internal memo (obtained by ProPublica), David Fotouhi, the deputy administrator of the agency, directed EPA offices that have used any of the chemical assessments the program has produced to review them.³⁵ He also advised “external entities” that have used the IRIS assessments to consider undertaking similar reviews and cautioned against using them in future regulations.³⁶ Fotouhi pointed specifically to EtO, despite that the science around health risks of EtO had been well documented for more than a decade.³⁷ As explained by Maria Doa, a scientist at the Environmental Defense Fund who spent more than 20 years working on chemical regulation at the EPA, the challenges to science were political, not research-based: “This is the EPA adopting the industry’s talking points,” Doa said. “And it’s going to leave a lot of people at risk.”³⁸ EPA is now in the position that there is no

³⁴ Darya Minovi, *EPA Leadership Strip the Agency of Its Ability to Protect Us from Toxic Chemicals*, The Equation, Union of Concerned Scientists (June 2, 2026), <https://blog.ucs.org/dminovi/epa-leadership-strip-the-agency-of-its-ability-to-protect-us-from-toxic-chemicals/>.

³⁵ Sharon Lerner, “*A Huge Setback*”: *New EPA Directive Could Weaken Hundreds of Chemical Regulations*, ProPublica (May 1, 2026, 3:30 PM), <https://www.propublica.org/article/trump-epa-directive-chemical-assessments>

³⁶ *Id.*

³⁷ *Id.*

³⁸ *Id.*

independent body to provide the objective science on which to develop policy standards.

If the MSRB's underlying reasoning is not thoroughly rejected by this Court, it could make these attacks on peer-reviewed science and scientists even easier. As to the safe use of chemicals like EtO, the undermining of objective science is particularly pernicious: the chemical has beneficial uses but it also can cause slow-developing cancers. EPA is both statutorily mandated and uniquely positioned to weigh the scientific benefits and risks and to develop standards to protect the health of the U.S. population. Muzzling the scientists whose data inform this analysis is contrary to EPA's congressionally required mission and causes significant risks to public health.

C. Development of the COVID-19 Vaccine from mRNA Vaccine Technology.

Federal Government scientists play a unique role in the setting of funding priorities and evaluating scientific progress and proposals that result in life-saving breakthroughs. The federal government can stay with a scientific problem for long periods of time in circumstances where private sector industry is not incentivized. The development of mRNA-based vaccines for COVID-19 is a striking example of the importance of a baseline of federal scientific support for a technology that took decades to develop.

“In the 35 years before the covid-19 pandemic, the US government directly invested more than \$330m in research and development that made the development, testing, and rapid production of mRNA covid-19 vaccines possible.”³⁹ “The success of the mRNA-based COVID-19 vaccines relied on decades of federally supported research and development on mRNA and lipid nanoparticles, primarily through the National Institutes of Health and the Defense Advanced Research Projects Agency.”⁴⁰ Between the discovery of mRNA in 1963 and the emergency use authorization of two mRNA COVID 19 vaccines in December 2020, there were at least four “critical interventions,” that is, four documented instances in which core and critical scientific decision-making was necessary to advance the technology.⁴¹

Throughout the decade-long stages of mRNA research, federal scientists were necessary to making informed scientific decisions on whether to continue and prioritize federal funding of the technology. Had federal scientists supportive of continued funding of mRNA technology been chilled or removed by political appointees during the extended period required to advance the technology, there would have been no foundation on which to quickly develop a vaccine at the outset

³⁹ Hussain S. Lalani, et al., *US Public Investment in Development of mRNA Covid-19 Vaccines: Retrospective Cohort Study*, 380 BMJ e073747 (2023), <https://doi.org/10.1136/bmj-2022-073747>.

⁴⁰ Cong. Rsch. Serv., R47112, *mRNA Technologies: A Primer* (2022), <https://perma.cc/5ELD-3TWP>.

⁴¹ Lalani, *supra*.

of the COVID 19 pandemic. Federal scientists were crucial to moving mRNA technology forward, and without them, millions of more lives would have been lost in the pandemic. It is easy to foresee how the Trump Administration would weaponize the MSPB's sweeping finding far beyond the immigration context to interfere with this science, causing enormous harm to the public.

D. Hepatitis B Vaccines for Infants

The national recommendation of hepatitis B vaccines for newborns provides yet another example of the crucial role that impartial scientific analysis plays in ensuring the health of all Americans. Congress has mandated that HHS establish and annually update “a National Vaccine Program to achieve optimal prevention of human infectious diseases through immunization and to achieve optimal prevention against adverse reactions to vaccines.” 42 U.S.C. §§ 300aa-1, 300aa-3. Article II of the Constitution requires the President to take care that this law is faithfully executed, and achieving optimal prevention of disease with optimal prevention of adverse vaccine reactions requires the best available science.

Pursuant to its statutory mandate, the Centers for Disease Control (“CDC”) determined that the hepatitis B vaccine is a safe, highly effective immunization that

prevents hepatitis B, a serious viral infection of the liver.⁴² It is recommended for all infants at birth and for children up to 18 years. The hepatitis B vaccine is also known as the first “anti-cancer” vaccine because hepatitis B is the leading cause of liver cancer worldwide. The vaccine provides long-term, often lifetime, immunity from hepatitis B and prevents a primary cause of liver cancer.⁴³

In the public health community, there is no debate about the safety and efficacy of the vaccine. Nevertheless, as a political matter, this administration leveled attacks on vaccine science and scientists in general and the hepatitis B vaccine in particular.⁴⁴ At the Advisory Committee level, HHS Secretary Robert F. Kennedy, Jr. “dismissed all 17 members of the CDC’s Advisory Committee on Immunization Practices (the body that has guided U.S. vaccine policy since 1964) and replaced them with a group that included vaccine skeptics and anti-vaccine

⁴² See Ctrs. for Disease Control & Prevention, Hepatitis B Vaccine (Sept. 18, 2025), <https://perma.cc/77NW-9LXK>; Hepatitis B Found., Vaccine for Hepatitis B, <https://www.hepb.org/prevention-and-diagnosis/vaccination/>.

⁴³ *Id.*

⁴⁴ Jules Barbati-Dajches, *The Trump Administration’s Assault on Vaccines Endangers Us All*, The Equation, Union of Concerned Scientists (Dec. 18, 2025), <https://blog.ucs.org/jules-barbati-dajches/the-trump-administrations-assault-on-vaccines-endangers-us-all/>.

advocates, some lacking relevant expertise.”⁴⁵ This was followed by panel votes to end the hepatitis B shot recommendation for all newborns at birth.⁴⁶

Vaccine specialists employed at the CDC face the same hostility and—if this Administration were given any room to do so—federal scientists would undoubtedly be targeted for at-will firing.

Without qualified scientific employees, HHS would be unable to fulfill its statutory mandate to provide the best available scientific research to inform policy decisions on vaccination recommendations. As HHS itself has recognized, “[t]he increasing spread of mis- and disinformation and mischaracterization of science and institutions erode[s] confidence and sow hesitancy in the use of vaccines. Scientists and researchers believe that growing vaccine hesitancy and the related decline in vaccine confidence is a significant public health crisis with potentially devastating impacts.”⁴⁷ It is beyond question that political interference in scientific analysis will adversely affect public health in the United States and overseas. Any holding in this

⁴⁵ Allie Cashel, *A Scientific Method of Resisting*, The Equation, Union of Concerned Scientists (May 28, 2026), <https://blog.ucs.org/guest-commentary/a-scientific-method-of-resisting/>.

⁴⁶ PBS NewsHour, Watch Live: RFK’s CDC Panel Expected to Vote on Hepatitis B Shot for Newborns After Delaying, PBS NewsHour (Dec. 5, 2025), <https://www.pbs.org/newshour/health/watch-live-rfks-cdc-panel-expected-to-vote-on-hepatitis-b-shot-for-newborns-after-delaying>.

⁴⁷ U.S. Dep’t of Health & Hum. Servs., Vaccines National Strategic Plan 2021-2025 (2021), <https://perma.cc/6PKE-LVTU>.

case that open the door to the at-will firing of federal scientists charged with implementing the National Vaccine Program would be contrary to law and would have devastating long-term effects on the health of the U.S. population.

CONCLUSION

For the above-stated reasons, *amici* urge the Court to protect the public and fulfill congressional mandates by explicitly rejecting that portion of the Board's decision declaring the CSRA unconstitutional.

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Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I hereby certify that this brief complies with the type-volume limitation of Fed. R. App. P. 29(a)(5), Fed. R. App. P. 32(a)(7)(B), and Fed. Cir. R. 32(b)(1) because it contains 6,087 words, excluding the parts of the document exempted by Fed. R. App. P. 32(f) and Fed. Cir. R. 32(b)(2).

I further certify that this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6), because it has been prepared in a proportionally spaced typeface using Microsoft Word 14-point Times New Roman font.

Executed this 8th day of June, 2026.

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CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF system on June 8, 2026.

I certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the appellate CM/ECF system.

Executed this 8th day of June, 2026.

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