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Committee on Environment
and Public Works

Subcommittee on Chemical Safety, Waste
Management, Environmental Justice
and Regulatory Oversight

Washington, D.C.

HEARING ON EXAMINING THE BENEFICIAL USE AND REGULATION OF CHEMICALS

Thursday, October 23, 2025

United States Senate

Committee on Environment and Public Works

Subcommittee on Chemical Safety, Waste Management,

Environmental Justice and Regulatory Oversight

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The subcommittee met, pursuant to notice, at 10:30 a.m. in room 562, Dirksen Senate Office Building, the Honorable John R. Curtis [chairman of the subcommittee] presiding.

Present: Senators Curtis, Capito, Merkley, Wicker, Boozman, Husted.

STATEMENT OF THE HONORABLE JOHN R. CURTIS, A UNITED STATES SENATOR FROM THE STATE OF UTAH

Senator Curtis. Good morning and welcome to our subcommittee hearing this morning.

I would like to begin by thanking our three witnesses. We will talk a little bit more about you in a minute.

My thanks to the Ranking Member. I am not sure if you have followed the news, but it is kind of a big deal he is here today. He was a little bit busy yesterday, and we are going to test his voice after speaking for almost 24 hours. So, Ranking Member, thanks for being with us this morning.

Our hearing this morning impacts the regulation on environment for new and existing chemicals, a subject that lies at the intersection of innovation, safety, and U.S. competitiveness.

Today we will hear from both sides of a chemical equation, from the Huntsman Corporation, represented by their chief executive officer, Mr. Peter Huntsman, and Boeing represented by Dr. Gwen Gross, Senior Technical Fellow in Compositions and Chemical Technology and Chief Chemist, and Dr. Tracey J. Woodruff, Ph.D., MPH, UCSF, Professor and Director of Programs on Reproductive Health and the Environment, and Member of the National Academy of Medicine.

I will allow our Ranking Member perhaps to introduce her

just a little bit more in the remarks. But I will just say a few minutes myself about our other two witnesses.

Mr. Huntsman and Dr. Gross bring critical perspective. Mr. Huntsman leads a company whose core business is the development of new chemicals, that enables the development of safer, more efficient and more effective products in the United States.

Dr. Gross represents a major customer of those materials, an aerospace manufacturer whose ability to incorporate new chemistries into aircraft is essential to maximizing the safety and performance of aircraft and maintaining American competitiveness.

Together, their perspectives embody the essential relationship between chemical manufacturers and their customers, those who depend on chemical innovation to drive American industry forward. Every day, American chemical manufacturers like Huntsman invest billions of dollars in research and development to produce new materials that can reduce emissions, improve safety, and maintain U.S. industrial competitiveness. These new chemicals enable lighter, stronger, and more efficient products to reach the market, from cars to aircraft to medical devices.

However, regulatory delays and ambiguities in the chemical approval process can stifle that innovation, forcing companies to move research overseas or abandon promising materials

altogether. That is not good for our workers, our consumers, or the environment.

On the other end of the supply chain are manufacturers like Boeing, companies that rely on those new chemicals to build world-class products that meet our highest safety standards. Dr. Gross and her team work every day to integrate next-generation replacement materials into aircraft, a lengthy approval process, including in this example, EPA, in addition to FAA and Department of Defense.

When the regulations guiding chemical approvals change faster than the relevant agencies can deliver the chemical approvals or certifications, companies like Boeing are caught in a difficult position, hamstrung by a process that may actually prevent safer or more effective replacement chemicals from ever reaching the final products. Those regulatory bottlenecks can ripple across the entire aerospace supply chain, impacting thousands of suppliers and hundreds of thousands of workers.

Our challenge, therefore, is not whether to regulate chemicals. Of course, we must regulate. But how do we do so in a way that protects public health and the environment without stifling American innovation? We must ensure that our regulatory system keeps pace with modern science, supports collaboration between EPA and other relevant agencies, and gives both chemical manufacturers and their customers the certainty

that they need to invest, produce, and compete globally.

America cannot lead in advanced manufacturing if our innovators do not have a chemical approval process that works.

Thank you for joining us today, and I look forward to hearing from all three of our witnesses. I will yield to the Ranking Member.

[The prepared statement of Senator Curtis follows:]

STATEMENT OF THE HONORABLE JEFF MERKLEY, A UNITED STATES SENATOR FROM THE STATE OF OREGON

Senator Merkley. Thank you very much, Mr. Chairman, and congratulations on this first hearing of the subcommittee. You are in your first term, so this is your first holding that gavel.

[Sound of gavel; laughter.]

Senator Merkley. There we go, all right. It is a pleasure to work with you.

Senator Curtis. Thank you.

Senator Merkley. Today, we are here to discuss how we regulate toxic substances and chemical safety. As public servants, we have a responsibility to ensure that while we work to create good-paying jobs for working families, our highest priority must be protecting public health.

Americans need to be able to trust that the air they breathe, the water they drink and the products they use in their homes or workplaces, their communities, are safe for themselves and their families, and that their long-term health and safety takes priority over short-term profits.

Pollution isn't partisan, and addressing it is our shared responsibility. That trust is placed here with this subcommittee and with the agency we oversee, the Environmental Protection Agency. In 2016, I worked with members of this

committee to pass 1976 Toxic Substance Control Act, which we know as TSCA. That legislation required the EPA to develop a new framework to evaluate the risks of new and existing chemicals and to regulate chemicals that present an unreasonable risk to human or environmental health. That process was implemented during the first Trump administration.

But during that time, an industry-friendly EPA undermined science, delayed action on chemicals like PFAS, missed statutory deadlines for existing and new chemicals, according to the EPA's own inspector general, and prioritized deregulation over public health.

Now, the second Trump administration is picking up where the first left off. It had been stating that it was planning to reconsider a Biden-era ban on chrysotile asbestos. I was struck by this, because basically every developed country in the world has banned asbestos. We banned it, I believe initially in 1988, overturned by a court in 1991 and it really wasn't until just recently we finally managed to say the effects of asbestos and black lung disease should not exist in the United States.

So I was very pleased that there was a public outcry, saying, really? This makes no sense at all. And in July, the Trump administration reversed course and said they were not going to try to undo that ban. The ban actually is implemented over many years, so it is not in place yet.

But I have argued for a long time that if the rest of the world can do without asbestos, I think we can figure it out as well. America should be a leader, not a follower in protecting its workers and the environment.

I have been concerned over plans of the administration to dismiss the rules that regulate four of the PFAS chemicals under the Safe Drinking Water Act. And I am concerned about the restructuring of the Office of Chemical Safety and Pollution Prevention. It is being filled with lobbyists from chemical corporations. And there are plants to dismantle the Office of Research and Development, which in my mind would be a big mistake, things that our subcommittee should pay attention to.

But at the same time that all that is going on, the Trump administration has released two health reports, the Make American Healthy Again, or MAHA, report, released in May, and the Make Our Children Health Again report, released in September. And these reports lay out the risks associated with plastics and PFAS and pesticide and other proprietary chemicals.

The MAHA report said, "The concentration of microplastics found in America's brain tissue has increased 50 percent between 2016 and 2024." That is something that I have raised before. We held a series of six hearings last year on plastics, the only six hearings that have ever been held on plastics in Congress.

One of the reports that had come forward was based on

studying the brains of deceased individuals and finding that information. I was pleased that it was repeated in the MAHA report because what we know about plastics is that they carry endocrine disrupting chemicals that interfere, and I am quoting from the report again, "endocrine disrupting chemicals that interfere with hormonal development and potentially trigger early puberty, especially in girls, and heighten the risk of obesity, infertility, and hormone related cancers."

These reports note that studies from chemical companies are often biased compared to independent studies, and that chemical corporations have often captured our Federal agencies. We have chemicals that do amazing things. But we need to be honest with the American public when they affect human health.

TSCA is the best tool our government has to address these chemical risks. And yet interestingly, it is not mentioned in the MAHA report or its follow-on for children.

TSCA is not perfect. It can be improved. So let's work honestly about how we can maximize the good, minimize the harm, and I don't quote President Trump often, but I will today. On May 22nd, he said we need to "protect our children, very importantly, keep the dangerous chemicals out of our food supplies, get toxic substances out of our environment, and deliver the American people the facts." I agree completely.

This is not the time to loosen oversight or lower

standards. It is time to recommit ourselves to protecting the health of the American public. I look forward to today's discussion.

[The prepared statement of Senator Merkley follows:]

Senator Merkley. And at what point would you like to me to follow on comments to introduce?

Senator Curtis. Let's do that. We will start with Dr. Woodruff, who is our first witness.

Senator Merkley. Okay. As Chair Curtis mentioned, Dr. Tracey Woodruff currently serves as Director and Professor for the University of California at San Francisco's Program on Reproductive Health and the Environment. She is also a member of the National Academy of Medicine.

Dr. Woodruff is an expert in chemical and regulatory policy as well as a leading scientist investigating how toxic chemicals can impact public health, with an emphasis on pregnant women and childhood development

We look forward to hearing from Dr. Woodruff today about the critical role the Federal Government can play to protect our children, to protect our adults, protect our communities from toxic chemicals.

Senator Curtis. Dr. Woodruff, just before you jump in, let me just say, we will roll from Dr. Woodruff to Mr. Huntsman and then Dr. Gross. You each have five minutes, and we look forward to each of your testimonies.

STATEMENT OF TRACEY J. WOODRUFF, P.HD., MPH, UCSF PROFESSOR AND DIRECTOR, PROGRAM ON REPRODUCTIVE HEALTH AND THE ENVIRONMENT AND MEMBER OF THE NATIONAL ACADEMY OF MEDICINE

Ms. Woodruff. Thank you. Subcommittee Chairman Curtis, Ranking Member Merkley and members of the Subcommittee, thank you for the opportunity to testify. I am Dr. Tracey Woodruff, a professor from the University of California, San Francisco, and director of the Program on Reproductive Health and the Environment, and a member of the National Academy of Medicine.

We conduct research to understand how industrial chemicals and pollutants in the environment impact people's health.

Toxic chemicals take a measurable toll on people's health. Toxic chemicals are widespread in our air, water, food, homes, and workplaces, and consequently, human exposures begin before birth and continue throughout life.

We know these exposures take a measurable toll on the health of children and adults and can increase the risk of cancer, infertility, neurological and cardiovascular disease, low birth weight, birth defects, autism, and ADHD. These conditions are increasing in the U.S. as documented in the recent Make America Healthy Again Report.

Environmental regulations came about from necessity and evidence shows they are enormously effective at improving health, reducing health care costs, increasing life expectancy

and productivity. Research finds that reducing air pollution during pregnancy and early childhood leads to higher earnings, improved education, and better health later in life.

OMB documents that annual benefits to the American public from major EPA rules ranged from $194 billion to $687 billion per year; and EPA regulations yield the highest annual benefits for Americans compared to any other Federal agency.

Protecting people from harmful chemicals is something Americans agree on. In a recent nationwide survey, over 90 percent of voters, including Republicans, Democrats and Independents, agreed the government should require they be proven safe before companies are allowed to put them on the market. And 88 percent of voters support the goals of TSCA to protect people from harmful chemicals.

As mentioned in TSCA's first 40 years, EPA struggled to ban harmful chemicals, including asbestos, a known human carcinogen causing hundreds of thousands of deaths. TSCA's failure led Congress to update it in 2016 to ensure EPA could better protect people from harmful chemicals.

One of the goals of TSCA amendments was to provide stronger protections for highly exposed and susceptible populations like pregnant women, children, workers, and people who live in areas where polluting facilities have been sited. However, with the chemical lobby pouring millions of dollars into influencing the

regulatory process, we have seen troubling patterns of EPA brushing aside rigorous science showing health risks, ignoring dangerous exposures to half of the exposed population and weakening the rules for scientific assessments.

It is no secret that the chemical industry wants to reduce the public health protections promised by TSCA in exchange for less regulations and more profits. One of their criticisms is that EPA is not approving new chemicals fast enough, yet TSCA requires EPA to assess the safety of new chemicals and prevent potential risks before these chemicals are allowed on the market.

Congress was clear that EPA should not cut corners on the thoroughness of reviews to serve industry demands for rush approvals. Despite this, EPA has granted low-volume exemptions for over 600 PFAS, a class of over 16,000 chemicals so persistent they have been detected in nearly everyone tested.

A new report from NYU estimates the annual health care of PFAS harms in the U.S. from $1 billion to over $60 billion, and they also say the cost of destroying one year's worth of PFAS releases exceeds annual global GDP.

Under the guise of supporting innovation, EPA also approved a new chemical for use in jet and boat fuel that has caused cancer risks so high nearly every person who is exposed to this chemical through foreseeable uses is expected to develop cancer.

That is unacceptable.

So while industry says faster, faster, and uses buzz words like progress and innovation, it is essential that policy makers understand the repercussions of unleashing new toxic chemicals on the population. Once they are out, you can't take them back, and the result is that people can get sick and die.

Instead, we need a stronger TSCA that creates incentives for the industry to develop new chemicals that will not harm health or the environment.

The chemical lobby is also attaching EPA's Office of Research and Development because they don't like science that finds that their chemicals and products are toxic. They are attacking the TSCA risk assessment rule, because they don't want EPA to consider all real-world chemical uses and exposures or the full extent of human health hazards and risks for lethal chemicals, like methylene chloride. And they don't want EPA to address cumulative impacts to fence line community residents where rates of cancer and other chronic diseases are exceeding the general population.

As you consider the next steps for TSCA, you should also consider how polluting industries have lied about the harms of their products to you, the public, even to their own employees. Internal industry documents from PFAS manufacturers show the industry knew about PFAS health harms decades before the public.

EPA was established to protect the health of the public and the environment, not to increase corporate profits. I urge you to act in the best interests of the American people, and preserve and strengthen TSCA's mission to protect the public's health.

Thank you.

[The prepared statement of Ms. Woodruff follows:]

Senator Curtis. Mr. Huntsman?

STATEMENT OF PETER HUNTSMAN, PRESIDENT AND CEO, HUNTSMAN CORPORATION

Mr. Huntsman. Chairman Curtis, Ranking Member Merkley, and members of the Subcommittee, it is an honor for me to be here. I am Peter Huntsman, Chief Executive Officer and Chairman of Huntsman Corporation.

American prosperity, security, and power are entirely dependent on a strong, thriving and properly regulated chemical sector. Without it, modern life is not possible. That is not hyperbole. It is a physical, immutable reality.

In the chemical industry, we take atoms and molecules, break them apart, put them back together to create the building blocks of nearly everything in modern society, automobiles and airplanes, batteries and semiconductors, solar panels and wind turbines, clean drinking water, pharmaceuticals and much more.

Innovation in chemistry drives solutions that improve modern life. Realizing these benefits depends on a regulatory system that is efficient, science-based, predictable, and that encourages investment in innovation instead of creating unnecessary delays and uncertainty.

If today we create a chemical that could eliminate greenhouse gas emissions tomorrow, there is no guarantee how long it would take to get approved, even though it would be a breakthrough for the environment and the world. This regulatory

uncertainty and delay hold back innovation, make it difficult to invest in technologies we desperately need.

Fifteen to 20 years ago, the vast majority of new chemistry science came from the United States and Europe. Today, we see China, India, Southeast Asian countries and the Middle East region investing billions to not just match our innovation, but to exceed our capabilities. I want to be clear: we do not need to be cutting corners. But we do need to have better focus, speed, transparency and reliable standards in order to compete.

If we do not get this right, I fear we will be here in five or ten years from now in the same situation we find ourselves with critical minerals: dependent on others.

As a chief executive officer I am responsible for making long-term investment decisions that impact thousands of employees, billions in capital, and our ability to compete globally. When regulations like the Toxic Substance Control Act, TSCA, are applied unpredictably and without regard to real world risk, it becomes nearly impossible to plan with confidence when EPA's review process for new chemicals routinely exceeds the 90 day timeline required by law, creating unnecessary delays and uncertainty.

Without a clear sense of when or if a product will be approved, innovation is put on hold, and companies are often forced to consider moving research and development outside the

United States just to remain competitive. That is not just a regulatory inefficiency, it is a strategic disadvantage to our Country.

America should be leading the world in developing next generation chemistries that drive economic growth and economic well-being. That kind of leadership depends on a regulatory system that is science-based, timely, and focused on real-world exposures, not hypothetical hazards. Until we fix it, it is simply impossible for any board of directors to approve building new manufacturing facilities on a product that is unapproved.

We do not need to look far to see the damaging impact of bad policy around natural resources, energy and chemicals and material innovation. The ongoing deindustrialization of Europe is a clear example of what is happening when regulatory burdens, high energy costs and supply constraints drive investment and production elsewhere.

Congress has an opportunity to ensure that does not happen here by improving TSCA with a durable policy solution that won't seesaw depending on who is in office. This type of certainty will not only help manufacturers make investment decisions, but will benefit the general public by encouraging innovation and will bring safer and more sustainable chemistry to the market.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Huntsman follows:]

Senator Curtis. Thank you.

Dr. Gross?

STATEMENT OF GWEN GROSS, PH.D., SENIOR TECHNICAL FELLOW, THE BOEING COMPANY

Ms. Gross. Good morning, Chairman Curtis, Ranking Member Merkley, and members of the subcommittee. Thank you for the opportunity to testify.

I am Dr. Gwen Gross, a Senior Technical Fellow at Boeing for Composites and Chemical Technology. Boeing proudly develops, manufactures, and services commercial airplanes, defense products, and space systems.

Safety and quality are at the core of everything we do. Boeing is committed to complying with environmental laws and regulations, and creating economic opportunities and driving industry innovation.

I serve as a chief chemist within Boeing's Advanced Research and Development organization. I am an expert in the formulation and production of critical aerospace materials. I have worked the complete life cycle of materials integration from idea to implementation, and I act as an intermediary between Boeing and our suppliers.

Boeing is a downstream user of chemicals. We do not manufacture the chemical formulations that we use. Instead, as we develop new and innovative aerospace products, we rely on our chemical suppliers to develop those new chemicals that meet our stringent performance requirements.

Suppliers are responsible for obtaining those regulatory approvals for new chemicals or new uses. Any delays that they experience in obtaining approvals delays the aerospace innovations that Boeing is working to advance.

Boeing uses chemical materials in a variety of ways in its products, including composites, sealants, adhesives and coatings. The aerospace industry faces unique challenges when it comes to chemical material use and replacement due to complex FAA certification requirements and military specifications that govern our products and services.

To produce and sell a commercial aircraft, Boeing must obtain type certification from the FAA by demonstrating that the aircraft design, including all of its component parts, meets all applicable FAA regulations. It can take 10 years or more to design, build, test and receive type certification for an aircraft model or new replacement parts.

This certification process, which is integral to aviation safety, includes consideration of the performance of the chemicals used in that design. Boeing must show that materials are suitable and durable.

In practice, that means polymeric material, like the carbon fiber composite used for wings, needs to be able to cycle from a sweltering Phoenix runway in July to subzero temperatures at 30,000 feet just minutes later. It must maintain structural

performance while doing this multiple times a day, potentially for decades.

If regulatory changes impacting chemical material use or replacement, or changes in the marketplace happen too fast, aerospace companies may not have sufficient time to find viable alternatives and to demonstrate that they satisfy those regulatory requirements. For example, finding a replacement for a chemical used in the formulation of a polymer composite system can be a challenging and lengthy process.

I began working on a new candidate for a next generation carbon fiber composite material when my daughter was two years old. Boeing is just now finishing the qualification of that material, and my daughter is now 18.

Aerospace manufacturers are also impacted by delays in new chemical reviews and new chemical restrictions. One example is the replacement of the fire suppression chemicals used on board aircraft. Boeing devoted 20 years and considerable resources to developing alternatives to the industry standard agent halon. It is an ozone-depleting substance that is widely used on aircraft due to its unique performance attributes, and it has proven difficult to replace.

Working with our suppliers, a replacement was approved approximately eight years ago by the EPA and FAA for use in handheld fire extinguishers onboard aircraft. Boeing is

considering it for cargo compartment use but regulatory uncertainty remains.

Boeing has also seen challenges when evaluating new chemicals under TSCA research and development exemptions. It is not uncommon for a new promising formulation to be removed from consideration early in our technology development process due to uncertainty about when and if an R&D chemical would be approved by the EPA.

If there is a risk that the decision will not be made in time to meet our internal milestones for certification, our researchers may choose an existing chemical instead. Unfortunately, this could limit new technologies that may provide significant performance improvements, such as new lightweight materials. Regulatory changes to reduce this uncertainty would be helpful.

In closing, thank you again for the opportunity to speak with you today. I look forward to your questions.

[The prepared statement of Ms. Gross follows:]

Senator Curtis. Thank you, to all three.

I will begin with questions for the first few minutes. I would like to start with you, Mr. Huntsman. Dr. Woodruff appropriately pointed out that if we move too quickly with reviews, that is not good. Yet you and I both know that during the last administration, EPA met their statutory responsibility exactly zero percent of the time for chemical approvals.

So I am curious, from your perspective, if we had a better process, if we had a process that yielded the right result, how do you feel like that could better impact public health, innovation, and at the same time rein in our bad actors?

Mr. Huntsman. Thank you very much. I appreciate the comments made by both of the other witnesses that are before us here today.

I am not sure that there is a whole lot of disagreement here. We do need to have a well-regulated environment. And the vast majority of new chemistry development is developing to replace past formulations and past applications to make things lighter and stronger.

The reason why Boeing is able to make planes that can fly nearly half way around the world non-stop is because they are lighter, they are more fuel efficient, they are safer, better built, lower maintenance than they were just 15 or 20 years ago. This is all about innovation and about speed.

And as we see this around the world, I don't mean to pick on Boeing, I think they are a great company, but I imagine one of their biggest competition next generation is going to be Comac, the Chinese manufacturer. Now, we do not need to be cutting corners to become like the Chinese in this area, but we do need to be aware that we need to be able to compete on a playing field where we can create the chemistry, we can go through the regulatory process and make sure that it is thorough in order to compete on a global basis.

The United States has the highest standards in chemical manufacturing, not chemical approval. We need to keep this. And we need to keep innovating with that. As we do that, we will continue to provide the jobs and the economic well-being and the environmental stewardship that we all want.

Senator Curtis. Excellent. Along those lines, you do business internationally, so you are familiar with the regulations in Europe. What missteps has Europe taken that might stifle innovation here in the United States if we are not careful?

Mr. Huntsman. Well, I think about 70 percent, 65 percent of our sales are international. So we meet not only U.S. standards but we meet standards all over the world.

A lot of this has to do with what I am seeing more and more, particularly in Europe more so than in the U.S., is a lot

of these environmental standards are politically driven. They are not science driven. You will see particular companies that will retaliate against a particular company or against a particular application, seemingly purely for political purposes because a facility was to shut down or vacate that country.

So I think the worst of all worlds is when we start to see politics interfere with sound science.

Senator Curtis. I am going to paraphrase your words, and you tell me if I am wrong. As far as the U.S. regulatory environment that makes sure that you are protecting public health and not cutting corners, you are okay with bring it on.

But can it be a bit more predictable and produce an outcome quicker? Is that fair?

Mr. Huntsman. I think that is very fair.

Senator Curtis. Thank you.

Dr. Gross, thank you for being with us. Could you share how those transitions that -- well, let me go back. You have had a front-row seat to the shifting regulatory landscape through your work both at the EPA and FAA across multiple administrations. Could you share how those transitions impacted your work at Boeing, particularly in relation to chemical approvals?

Ms. Gross. Thank you for the question, Senator.

Boeing uses a standardized development process with

internal milestones, very similar to what NASA uses in terms of technology readiness levels. That duration of development that we have very often spans multiple administrations, multiple regulatory changes.

In each of those steps that we go through, through that gated process, we take an assessment of the current regulatory landscape. So whatever it happens to be, as that matures, we have to address it at the time.

So the challenge that a company like Boeing has where we have these very long development timelines is that at the beginning of a project and at the middle of a project we may see those changes come up from the regulatory environment, from the changes in administration.

It is not something I can give an example of particularly for a current issue. But it is something that we account for and deal with in our day-to-day operations.

Senator Curtis. How did the approach to reviewing new chemicals evolve over time? What lessons should we draw from those shifts to create a more durable, consistent regulatory framework?

Ms. Gross. Thank you for the question, Senator. Part of the challenge, like I mentioned in my testimony, for companies like Boeing, is that we don't hold the responsibility for the application for a new chemical or for the extended use. We rely

on our supply base.

So it almost becomes this game of telephone. And so sometimes the visibility of where a chemical is in the process or if there is a bottleneck or a hangup, it is not always visible to us in our own development cycle. So that mismatch between what is going on from a regulatory standpoint and our development cycle is where we end up making those hard decisions about not to move forward, say, with a new innovative chemical.

So that is where that increased visibility or increased understanding of the process would definitely help downstream users like Boeing.

Senator Curtis. Thank you very much.

I yield to the Ranking Member for five minutes for his questions.

Senator Merkley. Thank you very much, Mr. Chairman.

Dr. Woodruff, in your testimony you note that there is a new chemical for jet and boat fuel that has a cancer risk so high that nearly every person who is exposed to the chemical for foreseeable uses is expected to develop cancer. That is a pretty powerful statement.

Can you, in very quick summary, because I have several questions, how did such a chemical, if it has that kind of risk, get approved?

Ms. Woodruff. Sometimes it gets through the process

because EPA has had some type of political interference, which was documented in the previous administration.

Senator Merkley. Because it has some kind of -- ?

Ms. Woodruff. Political interference. It is not clear who detected the people who are making the decisions.

Senator Merkley. And my colleague accurately noted that it is very rare to meet the timelines that we have in TSCA. But my understanding is, there are two main reasons for that. One is vast understaffing for the number of chemicals to be reviewed. I just want to make that point because to the degree that we can properly staff EPA, it would help address that issue.

The second main reason is because the studies that are submitted are often incomplete and it has to go back to the industry to say, well, you can't approve it until you actually get the study before us.

Do I have a correct understanding of that, or is there other reasons that are more significant?

Ms. Woodruff. Yes, that is correct. Submitters, meaning manufacturers, are responsible for most of the length of the review of the new chemical. For example, there were 230 valid cases submitted between October 2022 and October 2023. Half, 85 of these cases, as of February 2025, over half of them are still waiting for more data from the submitter, or to sign the TSCA Section 5 order.

Some of them are actually toxic, so they are actually negotiating with the EPA and then 29 of the cases, they are disagreeing with what EPA is finding.

So generally, and I also want to say that a lot of chemicals are getting through the process and are being approved. EPA has approved thousands of new chemicals under amended TSCA, 3,600 over the last eight years.

So what we are seeing is both, we need more people in there, submitters need to submit all the information, and the EPA is doing its job when it has the resources and information.

Senator Merkley. I do have a lot of concerns about many of the EPA employees that have either been fired or put on furlough. We may be losing a huge, vast brain trust to be able to evaluate chemicals. The problem could get worse if we don't get this addressed.

I wanted to turn to the plastics. We know that plastics have incredible qualities. They are used in everything everywhere. But we also now have a better understanding of how they break down to micro and nano plastics and end up in our bodies. They have a series of impacts.

Can you just share some highlights of your research on the risks involved, of the plastics themselves or the additives that are put in to make the plastics suitable for different purposes?

Ms. Woodruff. Right. Our research using high quality, the

best quality evidence reviews, has found that microplastics are suspected to increase the risk of effects on the gut, respiratory effects and also effects on reproductive health, particularly affecting sperm quality, and could be increasing the risk of colon and lung cancer.

So that is just from microplastics. What we know about many of the additives that are in plastics and microplastics, that is phthalates, bisphenols, PFAS, flame retardants, there are like 16,000 chemicals that are used in plastics. We have good information on less than 5 percent of them.

But let's just talk about phthalates. Phthalates can increase the risk of adverse effects on male reproductive health, like lower testosterone and sperm count, which can lead to infertility, can increase the risk of pre-term birth, metabolic disorders like diabetes. And this is according to the best available science, including high quality systematic reviews conducted by both EPA's Office of Research and Development and the National Academy of Sciences.

We also know similarly that bisphenols can affect female reproductive toxicity as well as it can increase the risk of neurodevelopmental toxicity. That is just for those few chemicals. And there are many more that are in plastics.

Senator Merkley. I think this is an area where we have to spend a lot more attention, because it has received relatively

little. Since the 1950s, plastics started being used as a coating on our cups for hot liquids. We have a huge exposure through that and through plastic bottles.

And I was stunned by our plastics testimony in the last cycle of the amount of plastic that the average American now has the equivalent, I think it was described as equal to a plastic spoon in your brain, which is shocking.

I did want to ask you about the Office of Research and Development. There are efforts to dissolve that. Is ORD important to keep? And if so, why?

Ms. Woodruff. ORD, the work that the scientists in ORD do affects and really protects every person who lives in the United States. ORD does the essential research that allows us to understand what the toxicity of chemicals are.

But they also are there when there is a spill or a terrorist event. For example, when there was anthrax here in the Capitol, ORD scientists were the ones who figured out how to clean it up. They also were there on the ground in East Palestine. They also identified the toxicity of many of these toxic substances that we now know are affecting people's health.

They also developed the methods by which we figure out whether there are toxic chemicals in the environment. For example, ORD scientists were the ones who figured out that a facility was dumping a PFAS chemical into the drinking water

supply of a residence in North Carolina. Once they measured that and identified it and worked with the State, they were able to stop that.

To dismantle that allows both less best available science or less high quality science, less unbiased science as well as les ability to respond to the many different types of environmental needs that arise, consistently or episodically, in the United States.

Senator Merkley. Thank you so much.

Senator Curtis. Thank you, Ranking Member.

I note the arrival of our Chair of the full committee, and she has deferred to our other members to let them go first. So Senator Wicker, I yield five minutes to you.

Senator Wicker. I really do appreciate that.

Dr. Woodruff, my colleague and friend, Senator Merkley, thinks I shouldn't be drinking water out of a plastic bottle. I note that I am drinking water today out of a glass pitcher but regrettably, Senator Boozman, his water is out of plastic.

[Laughter.]

Senator Wicker. Should I quit drinking water out of a plastic bottle?

Ms. Woodruff. Well, I don't think you should quit drinking water.

Senator Wicker. Out of a plastic bottle?

Ms. Woodruff. Out of a plastic bottle; well, first of all, there are plastic chemicals and microplastics in a water bottle. Currently, I mean, it is your choice, but I have my own reusable water bottle. So it is up to you.

But if you want to lower your levels of plastics and microplastics, that is one source that you could stop.

Senator Wicker. Thank you for that testimony.

Mr. Chairman, I would ask unanimous consent at this point to add into the record a document entitled Chemistry Creates, America Competes, concerning some of the great benefits of chemicals.

Senator Curtis. Without objection, so ordered.

[The referenced information follows:]

Senator Wicker. Thank you very much.

Now, Mr. Huntsman, you have said there is much agreement in the panel here. Is it fair to say that your position is that without a regime that allows the reasonable manufacture of chemicals, such as the ones you have, we would not be able to defend our Country militarily? And also, we would not be able to produce certain items and certain products that actually take us off of using more dangerous products that Americans and humans have used earlier.

Is that part of your position? Is that a good restatement of your position?

Mr. Huntsman. I think that is absolutely correct. Again, I think the vast majority of what is said here, we would agree. The esteemed Dr. Woodruff here with her drinking container, I notice you have a plastic cap that goes on the top of that. So without that plastic, I am not sure that you would be able to have the lightweight flexibility and so forth.

So look, it is a balance in so many of these areas and so many of these things that we do. But when it comes to defense, when it comes to mechanization, computerization, aerospace, automobile movement, any source of armor, it simply wouldn't exist without petrochemicals, none of it.

Senator Wicker. I spend a lot more of my committee time in another building, on the Armed Services Committee. We know what

a dangerous world we are in. Actually, I have been saying all year this is the most dangerous period we have had since World War II. And it is not just Iran with their nukes, it is China, it is Russia and this crazy guy that runs North Korea.

When there are delays and the statutory deadlines are missed for approval of certain of your applications, that harms national defense, does it not?

Mr. Huntsman. Absolutely, it does. We are working on some applications, for example, that will be going into some of the surface, some of the technology that has come from the aerospace industry on hypersonic missiles, for example. Delays in those will obviously build a hypersonic missile without the skin, without the coating on those missiles and without the components to be able to withstand the heat and friction and so forth, and the weight that is needed on those applications.

So absolutely, it all is intertwined with the supply chain.

Senator Wicker. By the same token, when there is an invention by your company of something that actually takes us away from a more harmful substance, and that is delayed by a statutory deadline being missed, the public is harmed by that, is it not?

Mr. Huntsman. I am a father of eight children, I have got 20 grandchildren. I don’t want to see any chemicals in anybody’s drinking water any more than anybody else does. I

care a great deal. I have worked in chemical plants in my career. Nobody wants to be exposed to any of these products.

So yes, as I said earlier, the vast majority of new chemistries that we produce are to replace older chemistries or to advance science or to advance the environmental stewardship and so forth. It is good business, aside from just being on a humanitarian front.

Senator Wicker. Mr. Huntsman, I was just presented with my ninth grandchild, and people have remarked about that. But I must say, your testimony takes my breath away.

[Laughter.]

Mr. Huntsman. Takes my wife's away as well.

[Laughter.]

Senator Wicker. Congratulations.

Senator Curtis. Thank you.

I would like to now yield to the Chairman of the Ag Committee, and I will note, just to show the importance of this hearing, to my right are three chairs of different committees. It shows the importance of this committee. Thank you for joining us.

I yield to the Senator from Arkansas.

Senator Boozman. Thank you very much. This has been tough on the committee today; I got here and I couldn't get my seat back. I think you did that on purpose to shame me. And then

Senator Wicker humiliated me for my plastic cup.

[Laughter.]

Senator Boozman. Rightfully so. Thank you all for being here. This is important. I guess the crux is delays. And are the delays that we have had in the past, where we are not meeting any of the statutory guidelines, that is concerning.

Mr. Huntsman, what does that do as far as the consumer, as we come out with new products and stuff that are put into other products to make things better, more efficient, however we use them, what does that have to do with the cost when you have excessive time, sometimes years and years, to develop these products?

Mr. Huntsman. Senator, there is certainly a cost. But we are seeing more and more that we are abdicating our lead in chemistry to foreign players. The United States is not the only market, nor is it the majority of the market of consumerism around the world.

When new standards are set, oftentimes not nearly as stringent as what we have here in the United States, as new standards are set and new products are going into the marketplace, that don't meet the stringent quality controls and environmental controls the United States imposes, I think that the rest of the world that should be following our lead oftentimes suffers.

And product capabilities, whether it is the plastic that is going into a drinking, bottled water and so forth, they are not under, necessarily under U.S. standards. So a lot of this is not just about U.S. delays, but it is also about U.S. innovation, U.S. standards and global standards. At one time we pretty much dominated, and we are losing that.

Senator Boozman. Dr. Woodruff, you mentioned the jet fuel. So that was approved in the last administration, is that correct?

Ms. Woodruff. Yes.

Senator Boozman. I just want to be clear that we have had these problem for years. I know you have had a great career, a very interesting career, and I guess worked in a couple of administrations.

Ms. Woodruff. Yes, and I would say that corporate influence on how EPA makes decisions has been somewhat of a theme across the administrations, as was noted in the Make America Healthy Assessment. The first report, which noted that both, there is a consistent revolving door between EPA and Federal agencies and chemical industry and their front groups as well as extensive lobbying.

So unfortunately, we do need a solution to remove that type of corporate influence and decision making in order to improve and result in the best available science and sound science that

can protect the public's health as well as drive innovation.

Senator Boozman. Well, they are not doing too good of a job on the lobbying front if none of the products are approved on time.

Ms. Woodruff. But EPA has been approving about a new chemical a week. Or are you talking about the existing chemicals program? I'm sorry.

Senator Boozman. My understanding is that the statutory component wasn't met, presently met.

Ms. Woodruff. Under the existing chemicals program? Yes. That has been delayed. And in part because, there are a couple of reasons. One is there is exceedingly pushback from the chemical industry. Two, EPA doesn't have enough resources to staff that office.

And three, I think that, and this is something that we have been on the record about, I think there are ways that they could upgrade to best available science and improve their efficiency at the same time, which we have also been making public comments about.

These are all opportunities for Congress to weigh in and make sure that EPA is doing the best available science, which the National Academy of Sciences actually provided a number of different reports to recommend how EPA could do that. That combination would really help them meet their statutory

deadlines.

Senator Boozman. My understanding is that we did give them authority to hire new people, additional people in 2022, and so far I don't think anybody has been hired.

Ms. Woodruff. Well, I can't speak to their hiring process.

Senator Boozman. Well, you were part of the system.

Ms. Woodruff. I was part of the system, but I left in 2007, just to be clear.

Senator Boozman. And there weren't any problems then?

Ms. Woodruff. Well, no, I am not saying there weren't any problems. That is why TSCA was amended in 2016.

Senator Boozman. No chemicals that have proved to be toxic or whatever weren't approve during that time?

I guess the point I am making is this has been going on for a long time. And it is something that we need to work together to fix.

It is not fair. There are bad actors, certainly. There is a lot of other stuff that is, the vast majority is good actors trying to work through the system. And when there is delay after delay after delay, it does drive the cost, and it makes it very difficult.

Ms. Woodruff. Right, it definitely drives the cost of people continuing to be exposed to toxic chemicals. I totally agree. We need faster action to protect people from exposures.

Senator Boozman. Well, and then too, if you have got a good product that is going to help the people of America, sometimes the world, then it needs to be done in a timely fashion.

Ms. Woodruff. Yes.

Senator Boozman. And right now, that is not happening.

Ms. Woodruff. And because sometimes the chemical, many times the chemical industry still needs to submit more data, or sign pieces of paper.

Senator Boozman. Thank you.

Senator Curtis. Thank you.

The Chair recognizes the Chair of the full committee, the great Senator from West Virginia.

Senator Capito. Thank you, Senator Curtis. Thank you for having this hearing.

Mr. Huntsman, I am going to start with you. Kind of along the lines that we actually were on when the confirmation hearing for the Assistant Administrator of the EPA Chemical Office, I raised concern both about the pace but also the predictability of a new chemicals process. I think speed, you know, we have talked about speed, that clearly matters. But predictability matters as well, especially when you are making large investments or trying to move science forward.

So when the EPA consistently imposes restrictions that go

well beyond what is required in other nations, it can raise some questions. So we are seeing innovative chemicals approved in countries, and you mentioned this, with robust safety programs like the European Union or Japan, but they face burdensome restrictions here. And so it can't be commercialized in the United States.

So from your perspective as a global manufacturer, when the U.S. imposes more restrictive conditions than Europe or other major markets, it takes longer to do it, how does that affect where you choose to invest and to make your new chemical developments?

Mr. Huntsman. Well, today, we have some 450, to the best of my knowledge, about 450 products that are in the pipeline waiting approval right now under TSCA. About 10 percent of those are expected to be approved within the 90 day time period.

About 40 percent of those will go longer than one year. Some of those will go sometimes up to two to three years. You take some of these same formulations and downstream applications and so forth to a country like China, and they will put a high priority, well, they will get it done within a 90 day time period, the government will give you incentives to build, innovate, and to invest locally.

And literally, the time that you can get approved in the United States, you can be up and manufacturing that product in

another country. And again, I mentioned earlier, therein lies the new standards of that finished application. And whether it is in aerospace, or whether it is drinking water bottles and so forth, that, it is an international race that we are in right now, a competition that is real.

Senator Capito. But to clarify, it is not an international race to the bottom in terms of safety and innovation. It is really the opposite, innovation can, and many times I think the goal is more safety in developing new chemicals. Would you agree with that?

Mr. Huntsman. Absolutely. The scrutiny that we are under today in new chemical development, forget for just a second about the issues around government approvals, but the trial attorneys and the multi-hundred billion dollar industry that exists on suing the chemical industry when it gets it wrong is such an enormous incentive.

When we come up with new products today, I believe that in my 40 years in this industry versus where we were 10 years, 20 years, 30 years, it is like everything else in our economy. It is cleaner, it is more innovative, it is better, it is more thorough. Our scientific data and analysis is better today than it has ever been.

So no, it is not a race to the bottom. But it is a race on speed, and it is a race on how quickly you can innovate and get

to the next phase.

Senator Capito. I think that is part of what Senator Boozman was referring to. Several years ago we did make it certain so that the Chemicals Office could hire more people, could go off scale, could do it quicker than the normal bureaucratic malaise of trying to get people hired into the EPA.

So it hasn't been successful, but that was part of the goal that we had because they felt like they were understaffed.

Dr. Gross, let me ask you a question on obsolescence of new chemicals. Have you ever seen where innovation moved so fast but materials developed, maybe outdated in five years, have you ever seen instances where the chemical approval process took so long that a new beneficial chemical effectively became obsolete before it could be used in the United States?

Ms. Gross. Thank you for the question, Senator. I am actually going to take that and maybe turn on it a little bit. Our experience is actually a little bit different. When you talk material obsolescence, one of our biggest challenges is, and I will use an example, for flame retardants. We have had regulations that we need to comply with against flame retardants where we have had to go in, reformulate material systems, requalify them, go through that whole certification process to get to the end and have new regulations pop up where we have to repeat that again, because the substitute flame retardant we

picked is now newly regulated. And we just go in and we iterate.

Being in that iterative process is sometimes -- it takes up a lot of our resources that we could instead be using to look at more innovative, newer chemicals instead. So it is not necessarily that time frame, but it is so fast in terms of new changes, that is where we struggle, obsolescence versus new choices.

So it is a little different than your question, but that is where we have experienced it.

Senator Capito. Thank you.

I will have to say, as Chair of the full committee, and with our subcommittee chair here, I have over the years expressed and had great concerns over PFAS in our drinking water. It is something that we try to reach an agreement on. I did with former Chair Carper last year, tried to get a bipartisan bill to help with this issue. My State has been affected by this.

And so just for all of you, it can be very helpful to helping us get a bipartisan agreement here, because this problem is not going away. It hasn't been addressed, I don't think, as aggressively as I think that we can and should.

So I am publicly pledging, as I have many times in the past, to work to make sure that your 20 grandchildren and my 9

grandchildren can have that safe drinking water that they deserve. Thank you.

Senator Curtis. Thank you, Chair.

Senator Capito. How many do you have?

Senator Curtis. I have 18.

[Laughter.]

Senator Capito. Yes.

Senator Curtis. So it is in the water.

[Laughter.]

Senator Curtis. I would like to yield to my colleague from Ohio, Senator Husted.

Senator Husted. Mr. Chairman, thanks for helping with the demographic challenges of our Nation. Appreciate that.

Senator Merkley, you look more well rested than I saw you the other night. Good to see you this morning.

Thanks for all of you for coming today. I know that when you are in business, time is money. The longer it takes to get something approved, the less likely you are to do it. As a matter of fact, if you can't rely on the American system to do it, many manufacturers might choose to develop in China or India or other places in which I think all of you would agree the environmental standards are lower than what they are in this Country.

I know that chemistry has provided us so many advances. We

tend to focus on the things that go wrong, but there are so many examples about how our lives are better, it has improved human flourishing and quality of life. And I see it in my State, in Ohio, where I know Mr. Huntsman has some companies that are also working on it.

But I will give you an example, tires. Akron, Ohio, is the rubber capital of the world. Over the years, tire manufacturers have tried to make tires more durable, as we have cars that are heavier due to batteries and things like that, how do you build tires that are more durable, but also you build those chemical bonds so strong to make them more durable then how do you break them down? How do you recycle them? Because then you have these dual goals sometimes.

And innovation is, it is an incredibly important thing to get those approvals so that you can try new ways of accomplishing things, but do it in a manner which allows you to do it in a time frame that will be viable for you as a business.

And so, Mr. Huntsman, I just want you to reflect on the time is money concept, how speed to market is important, how doing it in an environmentally responsible fashion is important, and how do you think that, have you seen, experienced circumstances in which people do things in other countries because it is easier to do it there than it is in America, and that is to the detriment of the American economy and the

American consumer?

Mr. Huntsman. Yes. I mean, all of that is true. I think that it is a question, when I see what is going on, in the last month, I have had the opportunity to visit many of our facilities and leaders throughout Europea and also in China. It is really not a question of speed, though that is very important. It is question of priority.

The EPA has a budget of what, $11 billion, $12 billion? How much of that is about innovation? Do we prioritize our latest chemistries to replace yesterday's problems? Do we prioritize those things around national defense and so forth?

The standards around TSCA were set 10 years ago almost. Yet it probably was negotiated 15 years ago, many of these processes. This ought to be a live piece of legislation that continuously is bringing on new standards, better standards, quicker standards, better prioritization, because I tell you, the world is not sitting still on these sorts of things. They want what we have. They are innovating, they are getting cleaner. The world, from a CO2 emitting basis, is getting more innovative and cleaner.

And it is up to you, you are the ones that fund it and direct it and so forth, to be able to see that we have a piece of legislation here that continues to innovate, move and progress as quickly as industry does.

Senator Husted. Dr. Woodruff, what Mr. Huntsman said seems pretty reasonable, that the EPA should focus on, their resources, on trying to improve, set priorities to improve the way that we are approving approvals for chemicals, other things. Is what he said unreasonable?

Ms. Woodruff. I think that regulation is an innovation driver. And I agree that we need the best available science and that EPA should be well resourced in order to help create the regulations that set the bar. EPA shouldn't be deciding what the innovations are. They should set the bar and then the industry innovates, because that is the right set of rules. Because EPA is not a manufacturer.

But I just want to say, look at methylene chloride. Methylene chloride, the industry is still fighting to implement the rules around methylene chloride, which we know kills people, and there is a substitute, a substitute that is less toxic.

So I feel like EPA is hamstrung by the industry saying yes, we want innovation but don't get rid of these toxic chemicals that we are already using. So I agree with you and I think that if the industry is acting fairly, we can create innovation, like in the Clean Air Act, where we had the catalytic converter, cleaner air, no lead in gasoline. The Clean Air Act is a model for TSCA.

Senator Husted. Yes. Mr. Chairman, in conclusion, America

does innovation in an environmentally responsible way better than any country that we compete with, particularly the ones where these things happen, in India and China. And a prioritization toward progress on the speed in which we get these things accomplished is very, very important.

Thank you.

Senator Curtis. Thank you, Senator.

With the Ranking Member's blessing, I would like to extend a second round to both of us just for a couple more questions. I would like to start, Mr. Huntsman, I could tell from your action you wanted to respond to that comment. Do you want to make any reaction?

Mr. Huntsman. No, I don't. We don't produce methylene chloride, nor do we handle it.

I think that we can't let the instances of problems, and there have been in this industry, they need to be cleaned up, they need to be focused on, and so forth. We need to be able to work together. We need to be able to move things along and it is just -- I mean, I have heard about asbestos. I don't know anybody out here other than maybe a few people in this administration that are advocating that we keep -- nobody uses asbestos anymore in chemical applications. I am not even sure where that comes from.

We need to stay focused and we need to stay focused on the

vast, vast majority of what we produce, what we do, how we innovate and how we apply things to society.

Senator Curtis. Good.

I might circle back here, but I would like to go to Dr. Gross just really quickly. In your opening testimony, you talked about this conundrum of being able to use a suppressant, if I used the right word, in the cabin of an airplane where passengers are, but that same suppressant is not approved for the luggage department. Did I catch that right?

Ms. Gross. Yes, Senator, you caught that correctly. We worked very hard to develop this new chemical with one of our suppliers. We got it approved for use in handheld fire suppressants and would like to extend that into the cargo hold area. But for whatever reason, that approval hasn't come, the extended use approval hasn't come through yet.

Senator Curtis. Yes, and to be clear, it is not an FAA restriction holding you back, it is an EPA restriction holding you back?

Ms. Gross. My understanding is that, but I am not an expert in that area. I can have someone follow up.

Senator Curtis. So since this is beat up on EPA day, we will go with that assumption.

[Laughter.]

Senator Curtis. Again, I will reiterate that is one of

those where I mentioned the clarity of where things fall in the process to consumers like Boeing, this would be a great example of where that would have benefited us.

Senator Curtis. Yes. I would also like to just address something that has been brought up several times, it should be a super-bipartisan issue, and that is just resources within EPA. This has been something I have been tracking from my time in the House, I will go back to the previous administration when I would challenge them on this zero approval, which is within statutory time frames. The previous administrator would point to staffing as well.

I kind of tend to think, this points to the priority issue, because the money was appropriated for staff, they weren't hired. And it just feels to me like we need to, and I told Administrator Zeldin I will be as tough on him as I was on his predecessor, in making this a priority. It feels to me a little bit of a false choice that we have to choose between safety, that we have to choose between public health and innovation and speed.

So to my colleague to my left, who I also believe to be very, very genuine on this issue, I would love to two of us dig into this, you heard the Chair's commitment from herself, and see if we can prioritize and move away from the false narrative that this is one or the other.

I will just say, Dr. Woodruff, I don't know you well, but I will say, I love your passion. And this world moves well on people who have a passion. Mr. Huntsman, I actually know you fairly well, and I do truly know you to be somebody that wants to leave this earth as a better place for those 20 grandkids. And Dr. Gross, I believe you feel the same way.

So I think we have had a lot of cross sections in this hearing, and if not careful, it kind of breaks down into good guys, bad guys. So I will just end my remarks with say, look, let's move forward with this commitment to protect the public, to inform the public, to get our best product out there, to certainly not let other countries allow chemicals that we wouldn't approve to come to the marketplace to beat us.

I will continue to remind the EPA that this needs to be a priority and that we have to put the resources in place to make this happen.

With that, I will yield to the Ranking Member.

Senator Merkley. Thank you, Mr. Chair.

I want to turn to PFAS. I find it frustrating that PFAS comes up so often. It is such an extensive family of chemicals. And we keep hearing how it has significant impacts on human health but it is kind of everywhere.

I think about simple things like, does a frying pan with that non-stick surface have PFAS, and should I still be using

it? I do not recommend this, but nightly microwaving of frozen dinners, is the container they are in sprayed with PFAS, and should I be eating that?

So I wanted to ask, Dr. Woodruff, and I want to note that the MAHA report calls out the fact that "the PFAS industry focused on suppressing unfavorable research and to starting public discourse, delaying public awareness of its dangers."

Is this something we should be able to tackle, at least for people to know where it is? And if it is having that much impact on human health, how we can eliminate it from things that have that direct contact with humans through our food and our packaging and so forth?

Ms. Woodruff. You are right, PFAS, they are everywhere. They are persistent chemicals. They are measured in everyone around the globe. And we know that they can increase the risk of numerous health impacts, including cardiovascular impacts, certain cancers, increased low birthweight, which can increase the risk of infant mortality, make it that you are less responsive to vaccines.

And so your point is very well taken. We are not talking, that there are a lot of uses of PFAS that we don't need to have PFAS in. The most effective and efficient solution is to look toward removing or banning the whole class of PFAS and to move toward substitutes that are not persistent.

The report from NYU for the Institute for Policy Integrity noted that narrowly targeting regulations encourages substitutions of banned PFAS with structurally similar but unregulated compounds, meaning that you can get replacements. So it is best to address the whole class.

And then I think your point about what we have found from internal industry documents is that the industry knew that PFAS was toxic in the 1970s, decades before the public knew that, including their own employees who were exposed to PFAS and gave birth to babies who had structural birth defects, that they already knew were observed in animal studies.

So I think the solution to this particular issue is to ensure that, of course, we don't want anyone to lie or mislead the public. So there are some steps that can be taken to ensure that we have the highest quality scienced that is free from bias, including some recommendations that we have made about removing corporate influence on the science process, making sure that studies that are going to be done for the new chemicals program could be, those studies could be preregistered so we know what the industry is going to do and can evaluate and make sure that everything is compliant with that. And then removing financial conflicts of interest from the review bodies.

This is also recommended in the Gold Standard Science Executive Order to remove conflicts of interest and in the Make

America Health reports.

Senator Merkley. When someone installs new carpeting and it is the stain-resistant carpeting, is that treated with PFAS?

Ms. Woodruff. Some of them, yes.

Senator Merkley. So then, if I had a grandchild, which I don't --

Ms. Woodruff. Me either.

[Laughter.]

Senator Merkley. If my children, when they were small or crawling around before they were walking and their little noses were right on the carpet, are they consuming PFAS through the fibers like almost from the start of life?

Ms. Woodruff. Yes, unfortunately, this is an area that we really need EPA to do a better job on, which is accounting for the fact that when kids are, like you have these little toddlers, they are so cute, they are crawling around, but they are also collecting, they are also lower to the ground and then putting their hands in their mouth, to feel things out.

If there are toxic chemicals like PFAS in the carpet or a lot of toxic chemicals love to hang out in dust, they are getting higher exposures to those chemicals that are in the carpet, in the materials, in the dust. It has been well documented that that is true. We see this with flame retardant chemicals.

In California, they did a study where little toddlers had the same levels of PBDE flame retardant chemicals as people who worked in occupational settings. So EPA can account for this in their risk evaluations. That doesn't always happen.

Senator Merkley. Thank you.

Mr. Chairman, this area, the products where humans have the most exposure, would be an area I would love to work with you on.

Senator Curtis. Thank you. I will take you up on that. From my days in the House, I remember this kind of, I will say argument, and I would like to also acknowledge that some of our heart valves use PFAS, for which there is no substitute, which makes it difficult if you say, we are just going to attack all of PFAS.

It seems to me that somehow we have to get a little bit more granular with this conversation, and throw in, and I don't know, but there is probably some element of safety from fires and children whose lives are not lost because of the chemicals as well and somehow factoring that in as well to these decisions.

But I will meet you on that. We will have that conversation.

I am going to volunteer Mr. Huntsman to come meet with us as well, and Dr. Woodruff, we will invite you and Dr. Gross. We

will bore down into some of these topics.

Mr. Huntsman. I will even loan a couple of grandchildren to Senator Merkley.

Senator Curtis. I was actually going to try to beat you to that, because those of us with 18 or 20 know there is one or two that we will send over there.

[Laughter.]

Senator Merkley. Send them right over.

Senator Curtis. Thank you all very much.

With no further questions, I would like to thank the witnesses and all my colleagues for your participation in today's hearing, especially my colleague, the Ranking Member. It is actually no small thing that he is with us today.

Senators who wish to submit written questions for the record will have until 5:00 p.m., Thursday, November 6th to do so. The witnesses' responses to those questions are due back to the committee no later than 5:00 p.m. on Thursday, November 20th, and will be submitted for the record.

With that, this hearing is adjourned.

[Whereupon, at 11:47 a.m., the hearing was adjourned.]