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U.S. Senate Date: Thursday, June 9, 2022

Committee on Environment
and Public Works

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

Washington, D.C.

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A LEGISLATIVE HEARING ON S. 4244, LEGISLATION TO PROHIBIT THE
MANUFACTURE, PROCESSING, AND DISTRIBUTION IN COMMERCE OF
ASBESTOS

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Environmental Justice, and Regulatory Oversight

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The committee, met, pursuant to notice, at 10:01 a.m. in
room 406, Dirksen Senate Office Building, the Honorable Jeff
Merkley [chairman of the subcommittee] presiding.

Present: Senators Merkley, Wicker, Carper, Markey, Kelly,
Ernst.

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

Senator Merkley. The hearing will come to order. Welcome.

Today's meeting is a hearing of the Subcommittee on Chemical Safety, Waste Management, Environmental Justice, and Regulatory Oversight. It is intended to enable members to hear and consider testimony from stakeholders in regard to Senate Bill 4244, the Alan Reinstein Ban Asbestos Now Act. I want to welcome the committee members who will hopefully be trickling in, but particularly our witnesses who are here to share their insights, knowledge and experiences.

I particularly want to recognize and welcome Linda Reinstein, whose husband, Alan Reinstein, the bill is named after.

As my colleagues are aware, this is a bill which I have authored with Congresswoman Suzanne Bonamici to amend the Toxic Substances Control Act, or TSCA, to prohibit the manufacture, processing, and importation of asbestos. For generations, we have known the harmful and lethal effects of asbestos and the grave threat it poses to public health, from lung cancer to mesothelioma, to ovarian cancer, larynx cancer and chronic asbestosis.

Any expert will convey that there is no level of exposure to asbestos that is safe for the human body. That is why all

the major countries of the developed world, over 60 nations, have acted to protect their citizens by banning the commercial use of asbestos.

Here in the United States, however, we have failed to do the same. Because we have failed to do so, too many of our fellow Americans are forced to sit at a loved one's bedside, watching as they become another victim of these deadly fibers. It is estimated that in 2019 alone, over 40,000 Americans were lost due to their exposure to this carcinogen. They are fire fighters who have been exposed while trying to save families from burning buildings, construction workers exposed on the job site, ordinary Americans who just happened to be in the wrong place breathing the wrong air at the wrong time.

Make no mistake: this situation is completely preventable. Yet instead of protecting our citizens from this deadly substance here in the United States, we are actually importing more of it. According to the U.S. International Trade Commission, 114 metric tons of raw chrysotile asbestos was imported into the United States over the first three months of this year. That exceeds the 100 metric ton total that was brought in throughout all 12 months of 2021.

That raw asbestos is coming into ports like New Orleans and Houston, where the majority of the population is Black or Hispanic, and are at significant risk to exposure as it moves

from port to processing. On top of that, a considerable amount of waste generated from the processing of raw materials is either managed onsite at the manufacturing plant or at a disposal facility, which are more often than not found near low income and minority communities.

I believe it is far past time that we follow the lead of the rest of the developed world and protect our citizens from this deadly toxic substance. Right now, the EPA is considering a rule banning the use, manufacture, and importation of one type of asbestos fiber here in the United States. This would be the first time since 1989 the Federal Government has worked to restrict this toxic chemical.

But restricting one fiber is not enough. We need to ban all the forms of asbestos. That is precisely what the Alan Reinstein Ban Asbestos Now Act of 2022 will do. I want to make it clear that I really appreciate that we are having this hearing to expand the conversation among my colleagues who may have insights and ideas that may contribute to the work on this bill as we go forward. I am certainly interested in working with everyone who wants to help improve the health of Americans and protect them from this deadly carcinogen.

The threat posed by asbestos affects all Americans the same. It doesn't matter what party they belong to, and the solution should likewise protect all Americans.

I am pleased to welcome our four witnesses. Before they are introduced, let me turn to Ranking Member Wicker for his opening remarks.

[The prepared statement of Senator Merkley follows:]

STATEMENT OF THE HONORABLE ROGER WICKER, A UNITED STATES SENATOR
FROM THE STATE OF MISSISSIPPI

Senator Wicker. Thank you very much, Chairman Merkley. I am glad to be here and welcome the witnesses today.

Certainly around the Nation and especially in the State of Mississippi, we have been faced with mesothelioma and asbestosis among industrial workers. It is a major problem and a real health care concern.

The questions today should center around, is the legislation the way to proceed, or should we continue to rely on the scientists at the Environmental Protection Agency and OSHA to have the flexibility to handle asbestos. With regard to providing safe drinking water, is asbestos harmful to the public when it is used in asbestos diaphragms to produce the chlorine that makes safe drinking water available. Those I think are the questions we are all wanting to get to the same place.

Asbestos is a mineral fiber that was used for decades. It was discovered that inhaling asbestos can cause negative health effects, including lung disease. So as I said, the EPA has taken several actions to limit the materials use and even proposed two new asbestos-related regulations just this year. So thank you, Chairman Merkley, for your work on this. I think it is well-intended.

We should consider the impact this bill would have on water

treatment capacity for Americans. This bill would require chlor-alkali facilities to stop using asbestos within two years. Approximately one-third of chlor-alkali manufacturing plants in America use chrysotile asbestos to produce chlorine. The question is, is that dangerous, or can we separate that out and continue the benefits that we are getting from that. I am told there are nine domestic chlor-alkali facilities that use asbestos diaphragms to produce chlorine. According to the American Water Works Association, approximately 98 percent of public drinking water facilities use some form of chlorine based disinfectant.

During this time of runaway inflation and supply chain challenges, any effort that would limit the supply of chlorine would be harmful for water utilities and their ratepayers who would ultimately absorb huge price increases. In communities in Mississippi and other States, this would threaten public health and the ability of low-income and disadvantaged communities to continue accessing safe drinking water. We should keep this in mind when considering proposals such as this.

Second, we should examine the impacts this legislation would have on chlorine used in other industries. Chlorine is essential for the production of pharmaceuticals, medical devices. It is also a critical component of certain crop protection tools which ensure that we have an abundant food

supply here in the United States. Additionally, chlorine is used in the production of solar panels, wind turbines, and plastic foam insulation, although these are just a few uses of chlorine. It is clear that any impacts on chlor-alkali production would be far-reaching, and we need to look into that.

It is important to note that the use of asbestos to produce chlorine is heavily regulated by the Occupational Safety and Health Administration. Chlor-alkali facilities that use asbestos are required to have engineering controls in place, and any individuals that come into contact with asbestos must use personal protective equipment and receive appropriate training.

Further, OSHA requires companies to monitor the health of their employees who have been exposed to asbestos. With these regulations and standards in place, there have not been any OSHA violations in the chlor-alkali industry since 1972.

Finally, we should keep in mind that EPA already has the authority to regulate the use of asbestos under the Toxic Substances Control Act. In fact, EPA issued a pair of proposed regulations in April that seek to address some of the continued uses of asbestos in the United States.

Although I have concerns about EPA's proposed two-year phase-out, Congress should refrain from adding even more reporting requirements and phase-down schedules that do not consider the adverse effect on American consumers and the

agencies' ongoing efforts.

These are just some considerations that I think we should keep in mind, Mr. Chairman. Thank you so much.

[The prepared statement of Senator Wicker follows:]

Senator Merkley. Thank you so much, Senator.

Now I would like to introduce our first witness, Ms. Linda Reinstein. Linda became a public health advocate after her husband, Alan, was diagnosed with mesothelioma in 2003. She now serves as the President and Chief Executive Officer of the Asbestos Disease Awareness Organization, ADAO.

Ms. Reinstein, thank you for joining us today.

STATEMENT OF LINDA REINSTEIN, PRESIDENT/CEO AND CO-FOUNDER,
ASBESTOS DISEASE AWARENESS ORGANIZATION

Ms. Reinstein. Good morning. It is an honor to testify today in support of S. 4244, the Alan Reinstein Ban Asbestos Now Act of 2022, ARBAN, introduced by you, Senator Merkley. I want to thank all the members and their hardworking staff for making this important hearing possible.

To be clear, I am neither a lobbyist nor an attorney. I am a mesothelioma widow and a co-founder of the Asbestos Disease Awareness Organization, ADAO. We are an independent non-profit, dedicated to preventing asbestos exposure to eliminate all asbestos-caused diseases.

Today I represent not only ADAO, but over 1 million Americans whose voices have been silenced prematurely by asbestos since 1991, when the EPA's asbestos ban was overturned in the courts. With your help, we can take an overdue step forward.

Exposure to asbestos, including chrysotile, causes cancer of the lungs, larynx, ovaries, mesothelioma, asthma, asbestosis, and other pleural diseases. The current ARBAN bill builds on the bipartisan legislation, H.R. 1603, which was approved by the House Energy and Commerce Committee by a 47 to 1 vote in 2019. This bill, S. 4244, would ban commercial asbestos imports and use of all deadly asbestos fibers, the Libby Amphibole asbestos,

establishes a right to know where imports and use occur, and create an educational outreach program.

There are three irrefutable facts that provide a compelling case for this comprehensive legislation. All forms of asbestos, including chrysotile, are a human carcinogen. There is no safe level of asbestos exposure, and no, there is no controlled use. EPA's proposed risk management rule for asbestos, while a landmark step, is not a complete asbestos ban as it only prohibits chrysotile asbestos and six conditions of use.

Since the EPA tried to ban asbestos in 1989, we have implemented over 400,000 metric tons of raw asbestos. Currently imports come from Brazil, Russia, and China. As you can see in this chart with the blue bars on the far right, the chlor-alkali producers have emerged as the only importer of raw asbestos as the construction, automotive and other industries have embraced alternatives.

Presently, there are only three companies, Olin, Occidental Chemical, and Westlake Chemical Corporation using asbestos diaphragms, at a mere eight plants. In this chart, you can see the dramatic reduction of asbestos diaphragm as the industries transition to membrane technology. In fact, globally 83 percent of the plants producing chlor-alkali use the membrane technology.

You are going to hear from industry that transitioning to

non-asbestos technology could place the safety of drinking water at risk. This is an exaggeration and a distraction. According to the excellent EPA economic analysis, drinking water treatment is a minor use of chlorine. In this slide, you can see that larger quantities of chlor-alkali output are used in profitable manufacturing of PVC, vinyl, plastics, and other end uses. Olin and Occidental have in the last year announced the reduction and/or closures of asbestos diaphragm units, decreasing the production of over 800 tons of chlor-alkali chemicals, citing economic considerations. We strongly encourage bipartisan dialogue to develop a phase-out schedule that is expeditious, one that protects public health and meets the practical needs of all stakeholders.

Americans need and deserve legislation that bans asbestos to protect public health. With ARBAN, we can avoid time-consuming, unproductive litigation and finally end our reliance on this deadly chemical.

On a personal note, I am honored that this lifesaving legislation is named after my late husband. My daughter, Emily, was just 10 when Alan was diagnosed with mesothelioma. He opted for a radical procedure to remove his left rib, resect his left lung, strip off his pericardium and surgically replace his diaphragm in hopes for more time with us. Alan fought a hard three-year battle.

But mesothelioma patients rarely win. Alan died three short years later with Emily and me by his side.

This bill represents the hundreds of thousands of Alans who have lost their lives to preventable diseases. We urge you to pass ARBAN and start protecting public health and saving lives right away. So many organizations have stepped in on the early announcement of your bill like APHA, PERC, IAFF, NRDC, CEH, and so many others.

I want to thank you for your time today. I look forward to answering your questions. My 19-page written testimony is online and has details and citations.

Thank you.

[The prepared statement of Ms. Reinstein follows:]

Senator Merkley. Thank you very much. With your permission, we will submit the entire testimony for the record. Thank you.

I would now like to introduce our second witness, Dr. Danny Whu. Dr. Whu is the Chief Medical Officer of the International Association of Fire Fighters.

You are now recognized for your opening statement.

STATEMENT OF DANNY WHU, M.D., M.P.H. CHIEF MEDICAL OFFICER,
INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

Dr. Whu. Good morning, Chairman Merkley, Ranking Member Wick, and members of the committee. I am Dr. Whu, Chief Medical Officer of the International Association of Fire Fighters, IAFF.

Once, I had a plan, to become a firefighter-paramedic and gain some experience and then go to medical school as soon as possible. However, I fell in love with the fire fighters' mission of service to mankind and stayed for the next 30 years, becoming a division chief at a major fire department. I also became a member of FEMA Search and Rescue.

My dream of becoming a doctor never left me, though. So I kept studying and eventually received my medical doctorate and a master's in public health. Presently, I have the distinct honor to serve my brother and sister fire fighters at the IAFF, which represents more than 328,000 fire fighters and EMS personnel in all 50 States, protecting more than 80 percent of the U.S. population. We are our Nation's protectors against all hazards, 24 hours a day, 7 days a week.

IAFF President Edward Kelly sends his regards and regrets being unable to be here. Preventing cancer is one of his cornerstones, thus he sincerely appreciates your commitment to protecting fire fighters from asbestos.

Alarminglly, cancer is now a fire fighter epidemic and the

leading cause of line of duty deaths. In 2019, 75 percent of such deaths were due to cancer. Numerous studies show that fire fighters have a significantly cancer incidence than the general population. Many have shown asbestos to be the cause. Asbestos is a proven carcinogen.

At any emergency where asbestos is present, its fibers will become airborne to be inhaled by fire fighters, or these fibers will settle on their skin, uniforms, gear, equipment, and apparatus. When fire fighters return to the fire house, they will unknowingly bring this killer back with them and be silently and continuously re-exposed.

As a fire chief, I know that any emergency of any magnitude that disturbs structures in any way is a potential asbestos exposure. As a FEMA search and rescue doctor, I have experience this on a massive scale at 9/11, the largest asbestos job in the world. While the Towers stood, there asbestos was, allegedly safe. But then the attack happened, and just like that, 100,000 plus rescuers, including me, and over a half a million New Yorkers, including children, were exposed to hundreds of thousands of tons of pulverized and aerosolized asbestos. Everyone within a one and a half mile radius was exposed.

Because OSHA's safe level of asbestos exposure is zero, every single exposure makes fire fighters more likely to develop lethal asbestos-induced disease. Knowing that, it is deeply

troubling that asbestos continues to be used in the U.S.

Thank you, Chairman Merkley, for supporting the Alan Reinstein Ban Asbestos Now Act, which is rooted in medical evidence that establishes causation between asbestos and cancer. Over 70 nations have banned asbestos. Sadly, the U.S. is not one of them, costing more than 40,000 Americans their lives every year. Passing this Act will right that wrong. That is why the IAFF wholeheartedly supports it.

As for legacy asbestos, currently the EPA focuses only on asbestos' present uses. However, it must also address legacy asbestos as it is required to do by law. We thank you again, Chairman Merkley, for working with us to address this danger.

In closing, given what we know today, asbestos is public enemy number one and must be banned now. If you have ever seen someone die from asbestos-induced mesothelioma, like me, you would have banned this poison years ago.

Asbestos proponents argue that the application of asbestos is safe. Yet they will never say that the asbestos itself is safe. Why? Because asbestos is not a possible or a probable carcinogen; it is a known carcinogen. My fellow fire fighters and I who answered the call to help on 9/11 are the poster children for exposure to allegedly safe turned certainly unsafe asbestos.

Again, OSHA says zero exposure. That latency period will

bring us an asbestos-induced cancer epidemic in the future. We cannot change the past. But all of you can prevent similar can prevent similar future tragedies simply by banning asbestos today.

Oftentimes doing the right thing is unclear. Fortunately, that is not the case today. With asbestos, just listen to your heart. The answer is already there.

I close with a verse, "For there is no greater love than to lay your life down for a friend." Fire fighters are willing and often do lay their lives down not for friends, but for total strangers. We owe it to them and their families to ban their killers like asbestos now.

Thank you. May God bless America and all the fire fighters who protect her.

[The prepared statement of Dr. Whu follows:]

Senator Merkley. Thank you very much for your testimony, Dr. Whu, and for your service, and the service of all our fire fighters.

Now we will turn to Mr. David Boone, who is the general manager of the Copiah Water Association in Copiah County, Mississippi. We are now ready for your opening statement.

STATEMENT OF DAVID LEE BOONE, GENERAL MANAGER, COPIAH WATER
ASSOCIATION

Mr. Boone. Good morning, Chairman Merkley, Ranking Member Wicker, and members of the subcommittee. It is an honor to testify before the subcommittee regarding one of the most significant public health concerns affecting every person in the Country, the public's drinking water safety.

I am David Boone, the general manager of Copiah Water Association in rural Mississippi, a non-profit and locally governed organization that provides public drinking water to our 2,400 customers and an industrial park. I have 34 years of experience in the water industry and I am here also representing the Mississippi Rural Water Association which has a membership of 1,050 communities with public drinking water systems, and the National Rural Water Association, which has a membership of approximately 31,000 communities with public drinking water systems across the Country.

Our member communities and drinking water utilities have the very important public responsibility of supplying the public with safe drinking water and sanitation at home, work, and public spaces every second of every day, all the while complying with all applicable U.S. Environmental Protection Agency regulations. On behalf of every small and rural community in Mississippi, I want to take this opportunity to personally thank

you, Senator Wicker, for all your help and support for passing a number of bills to provide us with technical assistance that helps us comply with all federal water regulations, to help us secure funding for the numerous water infrastructure projects throughout the State, and supporting the training and employment of new water opportunities in the water workforce. Thank you, Senator Wicker.

I am here before you today because my public drinking water supply in Copiah County, Mississippi, like nearly all other 49,680 community drinking water systems in the Country, depends on chlorine-based disinfection to ensure that our drinking water is safe for the public to drink.

The killing or deactivation of potentially deadly pathogens, viruses, bacteria, and other microbes by chlorine-based disinfection is the most fundamental and essential part of public drinking water treatment. There is no alternative disinfection treatment that is as effective, safe or affordable as chlorine.

We purchase approximately 10 150-pound canisters of chlorine gas each month to meet the demand. Unfortunately, when I put the order in two months ago, our local chlorin distributor informed us that they were out of chlorine. This problem caused a bit of a local panic, as many of my neighboring drinking water suppliers were facing the same lack of supply. We could not

find another chlorine distributor in the State. If we did not find an alternative source of chlorine, we all would have been forced to issue boil water notices to the public, resulting in a public health crisis for our affected communities.

After an aggressive search, we found a chlorine supplier in Tennessee. However, this solution came at a high cost to our community. Our monthly supply of chlorin gas has almost tripled in price. It is now over \$4,000 compared to less than \$1,500 just two years ago.

We have been forced to pass on the increased costs to our local customers in the form of rate increases. In a rural community with such a high percentage of people living at or near poverty level, any rate increase is unaffordable for many residents. We managed to limit the most recent rate increase to 14 percent for now.

However, even with this relatively small rate increase, we are seeing adverse public health impacts. For the last two months, we have witnessed approximately double the number of households that can no longer afford to pay their water bills. Our already financially strapped water utility has been forced to develop alternative payment plans for an increasing number of distressed customers.

We often hear about many low and fixed income households choosing to pay their water bill using funds that would have

been previously used for food, medicine, or other necessities. The adverse consequences of rate increase on our low and fixed income neighbors is the most pressing concern for our locally elected volunteer board of directors. These public servants have the very challenging responsibility of keeping a safe water supply operating, and at the same time, keeping the water service affordable for the most vulnerable households. Moreover, we are facing more unplanned expenditures and likely rate increases resulting from the current lack of a stable chlorine supply.

Chlorine costs and supply are becoming a major factor in the sustainability of the Copenh Water Association and many thousands of drinking water utilities across the Country. So you can understand our concern when we hear circumstances that may have the potential to decrease supply and increase the price of chlorine. During the pandemic, water and wastewater utilities were designated as essential emergency personnel by the Federal Government. We could not have protected the public health and provided safe drinking water without an adequate chlorine supply.

In closing, Mr. Chairman, I would like to thank you again for allowing the voice of small and rural drinking water utilities which make up about 90 percent of the Country's just over 49,000 community drinking water systems to participate in

this hearing. I am very happy to answer any questions.

[The prepared statement of Mr. Boone follows:]

Senator Merkley. Thank you very much, Mr. Boone, for bringing that perspective to bear.

Now we will turn to Mr. Robert Simon, who serves as the American Chemistry Council's Vice President of Chemical Products and Technology Division. We are ready for your statement.

STATEMENT OF ROBERT J. SIMON, VICE PRESIDENT FOR CHEMICAL
PRODUCTS AND TECHNOLOGY DIVISION, AMERICAN CHEMISTRY COUNCIL

Mr. Simon. Thank you, Chairman Merkley, Ranking Member Wicker, and members of the subcommittee. My name is Robert Simon, and I am testifying today on behalf of the American Chemistry Council. I am here to reinforce our industry's commitment to the safe management of chemicals and also to share information about the use of chrysotile asbestos in the manufacturer of chlorine and caustic soda.

I want to be very clear: our industry supports the effective regulation of asbestos. One of the things that is worth noting here is that under the Toxic Substances Control Act, EPA, the Environmental Protection Agency, has banned the vast majority of uses of asbestos. This was included in 2019 under the newly modernized Toxic Substances Control Act, significant new use rules for an additional 19 categories. So we are making some progress and some of those restrictions help address the issues that the panel here today has raised.

As part of EPA's ongoing review of all uses of asbestos now underneath the new Toxic Substances Control Act, it is worth noting that they have identified that there are only a very few remaining uses. One of those is the use of asbestos diaphragms in chlor-alkali production. As an industry, we support the responsible use of chrysotile asbestos for chlor-alkali

manufacturing. Chlorine and its coproduct are produced through a chemical process using salt, electricity and water. One of the processes used to help safely process these chemicals is asbestos diaphragms. Think of that as a filter that filters out the various molecules as you are processing the chemical. Today, as you have heard, nearly one-third of chlor-alkali manufacturing relies on asbestos diaphragm technology.

The use of chrysotile asbestos in chlor-alkali manufacturing is highly regulated, as you have heard earlier today. It has been safely and narrowly used in this application for decades. Human exposure is prevented by federal standards, including required use of personal protective equipment as well as appropriate engineering controls, training, and other regulations. This includes two specific regulations by both EPA for emissions standards as well as OSHA for workplace standards. This also includes end of life issues, so there are strict regulations for how you dispose of asbestos diaphragms at the end of their life.

Finally, the modernized Toxic Substances Control Act is very relevant here. Just several years ago, Congress in a bipartisan fashion enacted the new Toxic Substances Control Act. This significantly enhanced the chemical management laws for our system in the U.S. That law is not being implemented.

Underneath that new law, EPA is currently evaluating

asbestos right now. They have completed a risk evaluation; they have a proposed risk management approach that is out for stakeholder comment and review. So the regulatory process is currently already looking at this issue.

I am going to close with some of the socioeconomic considerations that we think are important for this legislation and consideration of any regulation of chlor-alkali manufacturing. Our written testimony provides additional details here. But chlorine and its coproduct, caustic soda, are used for hundreds of critical applications that are essential to modern life. This includes, as you have heard today, the support for clean drinking water.

But it is not just that. In addition to not only supplying 98 percent of public drinking water facilities, chlorine chemistry is essential to the manufacture of 88 percent of the top selling pharmaceuticals, both over the counter and prescription drugs. It is responsible for over 89 percent of the top selling crop production products that are essential for food production.

So it is a critical feedstock chemistry that is used in a lot of important applications, including things that are important for our climate and sustainability objectives.

As I noted earlier, and some of you have observed, nearly one-third of chlorine manufactured in the U.S. is produced using

asbestos diaphragms. According to the latest market data, U.S. demand for chlorine vastly exceeds the currently supply.

With that in mind, the timeline that is set out in this legislation of two years is completely unworkable. As a result of the proposed legislation, you will have placed 33 percent of the total U.S. chlor-alkali production at risk with implications for public health as it relates to drinking water, some of the other applications that I mentioned, and also increasing prices and supply factors for other parts of the economy. This is particularly relevant for where we are today. We are all familiar with some of the supply chain and inflation issues. But this was borne out recently with the 2001 hurricane and winter storms that we saw in the southeast that reduced 15 percent of chlor-alkali production. We heard a little bit of that today where that had a real impact on drinking water communities.

So I just urge you, as we consider this legislation, to factor these things in, as it is an important, critical part of the economy. I will conclude with the fact that we are committed to the safety of our workers. We have a strong track record in this regard. But the U.S. should avoid policies that could adversely impact public health, result in shortages, cost increases, and supply chain disruptions of the many critical products that rely on chlorine and caustic soda.

I look forward to answering any questions and appreciate the opportunity to share this information today.

[The prepared statement of Mr. Simon follows:]

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

Now we will turn to questions from our Senators. I will start off.

Mr. Simon, you mentioned the role of EPA in restricting and considering the uses of asbestos. The EPA acted in 1989 to ban asbestos, and it was thrown out in the courts in 1991.

Is it significantly possible, then, that any action the EPA might take now might also be thrown out by the courts in the future?

Mr. Simon. Thank you, Senator. I can't necessarily speak to that. I think the legal proceedings will be what they are.

What we would say is that underneath the new Toxic Substances Control Act which was just enacted by Congress several years ago, it has dramatically changed the process. For example, the risk evaluation process is very different than underneath the old TSCA.

So I think some of those important changes that have been made to the underlying statute would serve us well here. We support those.

Senator Merkley. I will note that the process is new. It is relatively untested. It has all sorts of new complexities. I am sure that just as in the past, folks have challenged the action of the EPA as they do on virtually everything the EPA does, we can see that in the future. So EPA has certainly no

significant guarantee of any restriction on asbestos.

Mr. Boone, you mentioned concern about the cost. We have seen over the last two decades, and we saw it in the chart that Ms. Reinstein put forward, significant replacement of manufacturing with asbestos to make chlorine, with manufacturing not using asbestos. Is there any indication that the chlorine gas that is produced with cell membrane, non-asbestos cell membrane, is more expensive than the chlorine gas that is purchased from asbestos diaphragm manufacturing?

Mr. Boone. Mr. Chairman, I do not know how chlorine is made. We don't know the chlorine that we purchase, whether it is made with the membrane or with the asbestos. We have no idea. We just know about the availability and the cost of it throughout the industry.

So we are seeing that that supply has decreased and the cost has increased throughout the entire industry.

Senator Merkley. Thank you very much. Mr. Simon explained that the storm that damaged the manufacturer had that impact.

But indeed, if the chlorine gas was more expensive, then the industry would not have converted over to that, because they wouldn't have been able to sell their chlorine gas. So I will just provide the answer for the benefit as, it is not more expensive. It is a commodity. The industry has been moving toward, on its own, for its own economic reasons, moving away

from the asbestos diaphragms to the non-asbestos cell membrane.

Ms. Reinstein, simple question. How big a risk does asbestos pose to the public?

Ms. Reinstein. To be clear, there is no safe level, as Dr. Whu has been talking about. What we are seeing now is cross-contamination and lots of misinformation. So with legacy asbestos in homes, schools, and buildings, and products coming in from overseas and elsewhere, asbestos remains a huge risk.

I think we also have to identify the fact that there are many pathways of exposure. It is not just engineering-controlled chlor-alkali plants. There are many people in fence line communities that unload from the dock, work with it being distributed to the plants, also disposal. We have to look holistically at the entire ripple of asbestos that impacts Americans.

Senator Merkley. And the way to look at it holistically is to say let's quit importing it, like 60-plus major developed nations have done.

Ms. Reinstein. Chairman Merkley, that is so true. That is what the United Nations ILO and WHO say, the way to eliminate diseases is to stop using asbestos, which is what your bill would do.

Senator Merkley. Thank you. Ms. Reinstein, as noted, the EPA has proposed a rule under the Toxic Substances Control Act,

under TSCA, to address the conditions and the use of chrysotile asbestos. Do you believe that that TSCA process will produce a comprehensive ban on asbestos?

Ms. Reinstein. I want to applaud the EPA for all the hard work. We fought very hard to get the Lautenberg bill passed about six years ago. It is deeply disappointing that we are looking at the health risks and management for one fiber, and they only determined that six conditions of use pose a risk.

We should be looking a ban from the EPA. Instead, we got a Band-Aid. We need all six chemicals banned. I know the EPA's hard work will probably sadly be challenged in court. I have attended many different webinars, and I can tell you that the industry is already setting up to sue. It will be highly litigated. The rule will come out probably next year, and then we will spend two to three years in court arguing why the EPA's Part 1 is not legal.

Senator Merkley. So, a very complicated process, subject to court challenges. We have been at this since 1989, and EPA has failed us now for three-plus decades. So no guarantee that it will succeed this time around.

Ms. Reinstein. I think that is very true. I also think the EPA gave us a gift, too. The economic analysis is excellent. It discloses exactly who is importing, where the plants are and about the safer substitutes that exist that are

economically viable. But it also talks about a two-year plan which is yes, very robust. But truthfully, I did research this weekend, when Bob and I were working. The industry has been talking about transitioning for almost 50 years, and I have the documents. This is not a new chlorine institute problem. This is old. We need to embrace innovative business technology to truly get to know asbestos.

Senator Merkley. I know that you have been immersed in this issue for a long time. I posed the question earlier, as industry transitioned, did the chlorine gases sold from the new plants that used cell membranes rather than asbestos diaphragms cost more to customers than the old product?

Ms. Reinstein. I can't really speak to the cost. That is not my area of expertise. But I can tell you that if there was a problem with the asbestos diaphragm plants that they were reducing 800 tons of chlorine on this last year, they wouldn't have done it. So I believe that it is economically viable to, yes, use the membrane technology, and they will be enhancing public health by coming to the stakeholder table to work with you and your colleagues to move this bill forward, come up with a reasonable plan.

Senator Merkley. Good. I will just note that as Mr. Simon testified, now two-thirds of the production is done by the cell membrane. They sell it because it sells at the same price. It

is a commodity.

Dr. Whu, as a doctor, can you speak to how asbestos damages the human body?

Dr. Whu. Yes, sir. The fibers will be inhaled. Then they will travel into the pulmonary system. That is just one of the ways that medical evidence suggests asbestos fibers cause disease. In there, they will hurt the lining of the lungs, the mesothelium, and then through the latency period, which has been recorded to be anywhere from 10 to 50 years, you will develop asbestos-induced mesothelioma, lung cancers, cancers through all the other parts of the body, and if not cancers, other diseases.

Senator Merkley. As I started to have folks educate me about this, what I had not realized until I was involved in this bill, and I will describe this, and see if I have this correct. You can set it straight for the record. With asbestos, it is not a chemical interaction, like a poison, if you will, but in fact the fibers are very short, very stiff, very pointy. They pierce the cell membranes and start doing all sorts of destruction as they move through the body.

Is that a fair way for me to describe it?

Dr. Whu. Yes, sir. It is a mechanical insult because of the shape of the fibers that you described. So being microns in size, they travel all the way down into the bottom of all of our organs and lungs, mainly, as we speak to here. Then the shape

of those fibers, the sharp edges, produce a mechanical insult. Because they are so small, you can breathe a lot of them, especially with repeated exposures. Then you compound the problem, because you are having more and more of those fibers travel down into your lungs and continuing to worsen the damage.

Senator Merkley. So in a situation like 9/11, when there was legacy asbestos from the building materials in the air, could fire fighters have breathed in hundreds or thousands of fibers in a short period of time?

Dr. Whu. I wouldn't preface it with the word could. We did. So the Towers was the largest asbestos job in the world. Tower One, the north tower, was coated with asbestos for the first 40 floors before the builders realized, we know where this is going, let's stop now. So they looked ahead and said, rather than to deal with a lawsuit of 220 floors, every tower was 110 floors of asbestos, they stopped at 40 floors. They abated it in place.

So they deemed it safe because it was abated. But then 9/11 happened. So everything came down. An estimate of 400,000 tons of asbestos was released, pulverized, aerosolized, only to be breathed by the people that were there.

Senator Merkley. This damage that you are describing as the short pointy fibers move through the body attacking and damaging one cell after another, are these diseases slow-moving,

painful, difficult, horrendous?

Dr. Whu. Yes, sir. If you figure, let's talk about lung cancer and mesothelioma, the latency of it being 10 to 50 years. If I put it in laymen's terms, imagine somebody starting to choke you, and finally kill you after 10 to 50 years of choking you. So there is a decrease in quality of life. It is not just the end of life that we are talking about.

So toward the end of that point, people are having severely diminished quality of life. Basically, you stop living many years before you actually die. So you see people that are walking around with oxygen concentrators. Imaging that and increase it exponentially. Because that is the damage that asbestos will cause. Once it starts hurting the lungs, the lungs can no longer expand and can no longer do the appropriate gas exchange. Then that is the choking that I am talking about.

Senator Merkley. Thank you. We are now joined by Senator Carper.

Senator Carper. Thank you, Mr. Chairman.

Welcome. We have a lot of hearings going on today. I am sorry that we are in and out. Thank you for holding this important hearing and for your passion and commitment on this issue.

I want to thank each of our witnesses not just for being here with us but also for taking the time to discuss these

issues and better inform us as we go about our day jobs.

I would like to ask a little bit about the health effects of asbestos exposure. Senator Susan Collins, a Republican from Maine, as you know, and I are co-sponsoring something called the Federal Fire Fighter Fairness Act of 2021. There are a lot of causes, as you may know, in the House and the Senate, and as the chairman knows, a lot of caucuses that deal with all kinds of issues, maybe defense issues, maybe agricultural issues, maybe environmental issues.

One of the largest caucuses is the Congressional Fire Services Caucus. A great majority of House and Senate, Democrats and Republicans, are members of that caucus. Senator Collins and I are the co-chairs of that caucus.

We are also the cosponsors of the Federal Fire Fighter Fairness Act of 2021, which would create a presumption that a disability or death of a federal fire fighter caused by certain diseases is the result of the performance of their duties. I will say that again. Cosponsoring legislation, Federal Fire Fighter Fairness Act of 2021, which would create a presumption that a disability or death of a federal fire fighter caused by certain diseases is the result of the performance of their duties.

Among fire fighters, duties that involve increased risk of exposure to asbestos which pose health risks are well

documented. I have a question of Dr. Whu. Would EPA's proposed Part 1 asbestos rule address health risks to fire fighters? I will say that again. Would EPA's proposed Part 1 asbestos rule address health risks to fire fighters? If not, what more needs to be done to address asbestos risks to our federal fire fighters?

Dr. Whu. Thank you, Senator Carper. First of all, let me start by thank you and Senator Collins for championing and supporting the Federal Fire Fighters Support Act. As you know, there is presumptive legislation in 49 out of 50 States for this disease and cancers that fire fighters get that are now known to be occupationally acquired. The Federal Government, sadly, does not have that presumption. You and Senator Collins are trying to change that. For that, we thank you.

Right now, as it stands, federal fire fighters have an impossible burden of proof. They have to prove, in order to get their earned workers compensation, which fires they went to throughout their entire careers that gave them the cancer that they are seeking benefits for. That is impossible, as somebody that was there for 30 years, I have been to one, I have been to 1,000. How do you tell me, pick the one where you got sick? Other than 9/11, I can't tell you with proof positive to any other emergency scene that I have been at that had asbestos. But I am sure there was.

So as to the EPA, I am not familiar with what they propose. But I am familiar with what they are doing now. Currently they are focusing their efforts on regulation that only deals with current uses of asbestos. That is great. If I can put it in fire fighter lingo, that is great to prevent the progression of a fire. But it does nothing to address the fire that is already there. That is legacy asbestos.

So what we need the EPA to do, and again, Chairman and Senator, we thank you, we need them to address legacy issues of asbestos. If you look at their charge, they are required to do that by law.

Senator Carper. Thank you, Doctor. Following up with a related question, part 2 of EPA's risk evaluation for asbestos will include, I am told, among other things, a description of legacy uses and methods of disposal of asbestos and an evaluation of the risks posed by other types of asbestos fibers, in addition to a word I can barely pronounce, chrysotile. EPA must publish its final part 2 risk evaluation by December 1st, 2024. So it will be another two and a half years until we have this risk evaluation completed. Then EPA must act according to the results of that evaluation.

My question is, Dr. Whu, how will this timeline impact public health and the health of our fire fighters and other emergency responders who will continue to be exposed to these

other asbestos fibers in the intervening years?

Dr. Whu. So how it would affect fire fighters, we would continue to be exposed to a proven, known carcinogen that is proven to kill. How would it affect the rest of Americans? At a rate of 40,000 American lives lost per year, in two and a half years, for them to get the results of their report, we will have buried 100,000 Americans.

So anything short of banning it is a Band-Aid. We need to ban it because medical evidence has already proven that asbestos is deadly. There are other ways to accomplish the things that the industry needs to accomplish. This is America. We have done it throughout our history. We are great innovators. Why continue to use something that kills fellow Americans when we can just put our heads together and come up with something that still accomplishes their needs and still provides for all Americans and yet saves 40,000 American lives every year and countless fire fighters that suffer many years before going into their deaths?

Senator Carper. All right. Tank you, sir.

Mr. Chairman, if I could, could I ask one more question?

Senator Merkley. Absolutely. We have plenty of time for as many questions as you would like.

Senator Carper. That is great. Then we will break for lunch, is that it?

Senator Merkley. Something like that.

[Laughter.]

Senator Carper. Ms. Reinstein, when my staff told me you were going to be here, I thought they said Linda Ronstadt, who I met when she was 20 years old, fronting a group called the Stone Ponies with a big hit record called You and I Travel to the Beat of a Different Drum. I would later meet her 30 years later at the Grand Opera House in Wilmington, Delaware. She had no recollection of meeting me when I was like 21 years old.

But I will call you by your correct name, Linda Reinstein, right?

Ms. Reinstein. Reinstein.

Senator Carper. Reinstein. Thank you. I am glad I asked.

My question, Linda, would be, EPA appears at long last to have initiated a robust and comprehensive two-part strategy to define and address the public health risks associated with several forms of asbestos. Could you help us understand why it is so important to legislate a ban on the manufacture, import, and use of asbestos in this Country?

Ms. Reinstein. I am happy to answer your question, Chairman Carper. First, the American people cannot do product testing to find out if product A is contaminated with asbestos. We need to have a full EPA ban on all six fibers to protect public health. It is fair to consumers.

Two, the EPA's six conditions of use is just ridiculous. I know they have worked very hard; we have put a lot of comments into the docket. So it is not of their fault. But we have talked about other products that have come in that were contaminated. We were unable, even their SAT committee were unable to broaden the scope.

I don't fault them. This has been a daunting task. But we need a full evaluation of the risks.

Lastly, this is going to be litigated again. I am 66 and a half. I am not getting younger. The reality is, if the EPA, when and if they would pass their proposed rule, it is probably another two years, then it will be litigated. Let's look at the calendar here. I would be over 70 years old. How many more deaths, like Dr. Whu said, will happen? We don't need the imports.

Worse yet, the EPA can't manage asbestos right now in the structures that they are required to investigate. So if we can't manage the risk that is in place, tell me why we are allowing one industry, the chlor-alkali industry, to import hundreds of tons for asbestos diaphragms? It doesn't make good business sense or public health sense when safer substitutes exist.

Lastly, I think it is important to look at the patient and the family. These diseases can cost upwards of a million

dollars. We call it death by a thousand cuts. The patient can't breathe, they can no longer work, they feel like they are a burden to their family, they have to go on government assistance many times. Why? These diseases are all preventable.

As Dr. Raja Flores says, at the Mount Sinai Medical Center, you can do more with your pen than he can do with his scalpel.

Senator Carper. Correct me if I am wrong, Mr. Chairman, but I understand for you, this issue is not just esoteric, it is not a theoretical issue. For you and your family, this is deeply personal. We appreciate your years of commitment and work in this regard. Thank you, and thanks for joining us today. Very nice to meet you.

Ms. Reinstein. Thank you, Chairman.

Senator Markley. Thank you very much, Chairman Carper.

We will now turn to Senator Markey.

Senator Markey. Thank you so much, Mr. Chairman.

I agree with Senator Carper. We have to ban all types of asbestos. It just makes no sense that we are not going to do that. We have to catch up to the rest of the world on this. It is just so important. We are making some progress at the EPA, but we just have to move so much faster than we have.

My staff director in Boston in the 1980s, Joe Zampitella, his father Joe Zampitella, Sr., was the President of the

Asbestos Workers of Massachusetts. Joe Zampitella, Sr. passed away from his exposure to asbestos in 1985. I will never forget all those asbestos workers who were at that funeral, all of them having been exposed without any real protection, without any real understanding of what they were doing to themselves and to their families.

It still claims tens of thousands of Americans each year. I think it is important for us to ban all of it. We have to move forward.

Ms. Reinstein, I have known you for years. I am grateful for your longstanding advocacy and partnership on this issue. I thank you for being a fighter for all the families out there who have been experiencing the grief and crisis due to asbestos exposure.

Dr. Whu, do you agree that it is important for the health of fire fighters and other populations to address the legacy issues and disposal of all types of asbestos?

Dr. Whu. In a word, Senator, yes.

Senator Markey. Thank you.

Dr. Whu. A little bit of expansion, it is asbestos, it is a killer, it is already here. So again, if you have a fire and you are able to prevent its further spread, that is great. We expose the forward progression. But now we have to go back and address what is already there.

So after we stop the forward progression, stopping it would be the next step to take.

Senator Markey. I want to focus on the chlor-alkali industry. You mentioned it, Ms. Reinstein, this is the sole importer of raw asbestos into the United States. This industry is advocating for the continued use of asbestos in order to make chlorine and other chemicals.

But we don't need asbestos to make chlorine. Most companies and most of the world has moved on to non-asbestos technologies and instead found a way to be innovative and produce chlorine without asbestos. Besides, for the three remaining companies that do use the asbestos process, they have been permanently shutting plants because they aren't cost-effective.

Ms. Reinstein, the industry has known about this problem for decades. There was a big discussion about it as we were passing the Toxics bill back in 2016. Some companies have transitioned to safer technologies. Other countries have moved on without economic harm.

So what possible justification is there for continuing to use these asbestos-based techniques?

Ms. Reinstein. That is the million-dollar question. To us it makes no sense. I believe what they are attempting to do is just delay the inevitable. They know safer substitutes do

exist. They are unable to import the right fiber type to use in the industry, and it is shown to import asbestos.

I think it is important to also look at what does the business climate look like for the chlor-alkali industry. The research that we did this weekend determined that about 800 tons of chlor-alkali was reduced or ended because of economic reasons from Olin and Occidental. So they understand the handwriting is on the wall. The real question is, how much asbestos have they stockpiled, how long will it take them to go through it, and what do they really need to transition. I think with the leadership of Chairman Merkley and yourself and the other members of this committee, we could have a roundtable discussion and speak robustly.

In Chelsea, Massachusetts, there was a dump outside in the public area from legacy asbestos. If we can't manage the risk of what is in legacy, why are we still allowing imports?

Senator Markey. Yes, and that was just last month that a pile of asbestos contaminated concrete was dumped along the road in Chelsea, Massachusetts, about two miles from my house. That asbestos can easily enter the air and travel into those homes over such short distances. It enters our lives through more direct means, too, including through commercial uses and building materials. It is all still out there.

So Ms. Reinstein, the chemical industry sometimes points to

PFAS as a reason not to transition away from asbestos technologies since the alternative technologies, which account for more than 80 percent of chlorine production worldwide, can include PFAS compounds. But isn't that a false narrative, since the asbestos methods use PFAS compounds themselves?

Ms. Reinstein. That is a very good question. There are two points to that. One, about 75 percent of the existing chlor-alkali plants do use membrane technology, which means there would be an element of PFAS. We know there is about 9,000 polymers. The EPA has already come out with a statement saying that the transition from asbestos to membrane technology is the recommended thing to do. They actually have in their economic analysis described that it will be safer to transition from asbestos to membrane technology.

So I am sorry to say that is just another smokescreen that is being used. It is not factual. If they are really concerned, and they talk about PFAS, then they need to look at the other 75 percent of their plants.

Senator Markey. Thank you. May I continue? I will just finish up then.

Senator Merkley. Yes, if you could finish up. Thank you.

Senator Markey. By pointing PFAS fingers at other industries while using PFAS themselves, these asbestos-addicted corporations are throwing stones in a glass house. In the

meantime, more innocent bystanders are getting hurt or killed by this toxic product. As you know, because of you, Senator Boxer put a hold on that bill back in 2015 and 2016, to get the strongest possible asbestos protections we could at that time. But there is still more work to be done. I thank you, Senator Merkley, for your leadership, so that we finish the job. Thank you.

Senator Merkley. Thank you very much, Senator Markey. Now we will turn to Senator Wicker.

Senator Wicker. Thank you, Mr. Chairman. I appreciate it.

Let me direct my first question to Mr. Boone. Thank you for being here, and also thank you for what you do for the Copenh Water Association. Just so members will know, citizens in small and rural communities up and down the State of Mississippi and across the Alabama line to Louisiana and Arkansas get their water in large portion from community water associations. Mr. Boone, you are representative of so many people.

What would this legislation do to your ability to have chlorine to purify the water? What would it do to the rates that your members would pay?

Mr. Boone. Senator Wicker, Mr. Simon has already pointed out that the demand for chlorine exceeds the supply. Any legislation that would hurt that would be detrimental to the

safety of the citizens or those consumers on water associations.

Chlorine gas is by far the most effective disinfection that we have. Any cause that would have us not be able to get it, or a price increase, would be detrimental to many, many water associations and their customers.

Senator Wicker. Is there an easy source to switch to? Could you just switch to something else?

Mr. Boone. No, sir. There are other ways of disinfecting water, but again, those are very cost prohibitive and nowhere near as effective as gas chlorine. We have what is called a residual that carries throughout the entire system. Chlorine gas is by far the most effective to carry that residual to do its job to disinfect the water through many miles of pipe, through tanks, all the way to the end of the system, to ensure that our customers are receiving safe and clean water.

Senator Wicker. You wouldn't provide water that didn't have that necessary tiny bit of chlorine?

Mr. Boone. No, sir.

Senator Wicker. Do you have any information whatever that the asbestos diaphragm filter is at all harmful to water?

Mr. Boone. No, we do not.

Senator Wicker. Mr. Simon, well first, Mr. Chairman, let me submit at this point, I ask unanimous consent to submit to the record three letters that further detail the issue that

water utilities and other industries would face if the supply of chlorine were constrained. One letter is from the National Association of Clean Water Agencies representing public wastewater agencies of all sizes. Another is from the American Water Works Association and the American Association of Metropolitan Water Agencies, representing drinking water systems that collectively serve over 80 percent of the Country. The third letter is from the U.S. Chamber of Commerce.

Senator Merkley. Without objection.

[The referenced information follows:]

Senator Wicker. Now, Mr. Simon, I will let you follow up. We have heard testimony from Mr. Boone about the impacts to water utilities of limiting the domestic supply of chlorine. Of course, if we can get chlorine some other way, we need to do that. I would be happy to do it if it doesn't cause people not to be able to afford their water.

But what about the harm this would do to other industries? Could you give us some examples?

Mr. Simon. Sure, thank you, Senator. Just real quick, there are some very legitimate issues that have been raised today. I want to be very clear: the use of chlor-alkali is very different and is not relevant for some of the issues we have talked about. We have made a lot of progress to address some of those issues and we want to continue to do that. I just want to recognize that very different use. The use of chlor-alkali is heavily regulated, it has been used for decades.

Second, we also have an ongoing review underneath the new Toxic Substances Control Act. So if there are additional issues here, we have a process for dealing with that.

But to your point, Senator, the socio-economic impacts of this legislation, which would impose a two-year ban within two years on chlor-alkali production, is completely unworkable. It will have a significant impact on the availability for drinking water, availability for pharmaceuticals, availability for crop

protection chemicals, and hundreds of other products that rely on chlorine.

Chlorine is a key feedstock as well as its coproduct, caustic soda. So it will have a significant impact, and you have to overlay that on top of where we are in the economy in terms of current inflation pressures and current supply chain constraints. It is just unworkable, and it will have those socioeconomic impacts.

Our feedback to the committee and the subcommittee is, as you are considering these policies, please take into account these important socioeconomic considerations, because they are very relevant. We factor those into our business.

Senator Wicker. So if I might, Mr. Chairman, there is no evidence that anyone has ever been harmed by drinking this water that used an asbestos diaphragm in the process back up the line.

Mr. Simon. No. And just to be clear, so the chrysotile asbestos used in chlor-alkali manufacturing is used in a closed loop process within our facilities. It does leave that, it does not enter. So no.

Senator Wicker. Okay. Thank you, Mr. Chairman.

Senator Merkley. Thank you very much.

If we turn to Europe and its production, Mr. Simon, since you are the expert on chemicals here, how much of the European production is produced with asbestos diaphragms?

Mr. Simon. Thank you, Senator. As you have heard today, there is transition underway in the marketplace. I have worked with some of you over the years. We transitioned from mercury cell technology not too long ago, and we worked with Congress to advance that. So there are alternatives, as you have heard. I would just reiterate our point that as you are making these transitions, it is important to consider the socioeconomic considerations, including the determination that this can be used safely.

But to your point, both the EU and Canada have issued phase-outs for the use of asbestos diaphragm technologies. What I would like to emphasize, though, in the case of Europe, it was 25 years. That was for essentially a very limited amount of the production. Also in Canada, that was 11 years, and that was for one facility.

So these socioeconomic considerations are very relevant here. While the industry is under transition, factoring those into any policy is absolutely critical.

Senator Merkley. You also heard the testimony about Occidental and Olin announcing that they are shutting down their asbestos diaphragm units. Why have the companies that have transitioned in the last two decades here in the United States, they have transitioned from asbestos diaphragms to membranes that do not have asbestos, how have they succeeded in the

marketplace? You are not contending that their product is more expensive, or they wouldn't be able to sell it, right? So they have done quite well. Two-thirds of the manufacturing has already transitioned.

Mr. Simon. Thank you, Senator. So just to be clear, there is a very significant economic cost for the transition. So while there are replacement technologies, one, they are not inexpensive, and they are not a drop-in replacement. This requires complete redesign of manufacturing facilities.

So there are millions of dollars of cost to making that transition. That is partly why our industry, as companies make individual decisions regarding the technologies they use, they factor in those business conditions, they factor in those socioeconomic considerations. You have seen this phased approach as they evaluate this.

Senator Merkley. But those companies that transitioned, did they go out of business because of these higher costs you are referring to?

Mr. Simon. Not that I am aware of.

Senator Merkley. No. They took over two-thirds of the industry. So my point is that we know that we have a commodity in this marketplace that is produced at a market price effectively, and that the industry has chosen for economic reasons, because they are not required to do so by law, to

transition, and that two-thirds of the industry has already transitioned. We are talking about this final third. So I just wanted to make that piece of the puzzle clear.

Ms. Reinstein, you have heard the concerns about the speed of transition for the remaining one-third of the industry. In this bill, we have the same two years that EPA has. Is that timeline something we should wrestle with any flexibility on?

Ms. Reinstein. There are two points. I thank you for asking the question, Chairman Merkley. One is, there are only eight plants left that use asbestos diaphragms. Only 8 out of 42. So we are on the downhill side of that.

As far as time, we know that from the EPA economic analysis, EPA actually has noted that there could be a cost savings if the industry does transition because it will be more efficient using membrane technology.

I am very concerned when we talk about the socioeconomic impact on other fence line communities. I want to be clear: the tons of asbestos coming into different cities like New Orleans, Houston, elsewhere, these communities are dangerously impacted by raw asbestos. It can be different.

I am hopeful that with this conversation today that we can look at all communities and come to the table for a transition period that works for everyone. I think you have opened up the discussion, Senator, and it is time that the eight plants end

the imports and use.

Senator Merkley. Thank you very much. I appreciate that.

It has become quite clear that the U.S. industry has been transitioning, and economically successfully. You pointed out that actually EPA analysis shows that there are cost savings to the transition which explains why companies not required to do so switched technologies already.

So if there are cost savings, and the companies that have transitioned have demonstrated that path, they did not go out of business, they did not have to sell their product at a higher market price, which would have put them out of business, then why are we continuing to import huge amounts of asbestos with all the problems that we know that are associated with it? The answer is, because this Congress has failed to act, and because when the EPA acted, they were struck down by the courts. And they will be struck down again.

So I conclude with the notion that it is way past time that America joined the other developed nations and end the importation and use of asbestos in manufactured products. I hope the entire committee will take to heart all the testimony they have heard today.

I do thank our witnesses for bringing your information forward. I ask unanimous consent from the members for the record to include materials that are being submitted relevant to

today's hearing. Hearing no objection, so ordered.

[The referenced information follows:]

Senator Merkley. Senators will be allowed to submit questions for the record through the close of business on June 23rd, 2022, with responses to be returned from witnesses. We would ask for your cooperation in this to the committee by July 7th, 2022.

With that, the hearing is adjourned.

[Whereupon, at 11:18 a.m., the hearing was adjourned.]