

HEARING ON THE NOMINATIONS OF CHRISTOPHER FREY TO BE ASSISTANT ADMINISTRATOR FOR RESEARCH AND DEVELOPMENT AT THE ENVIRONMENTAL PROTECTION AGENCY AND JENNIFER CLYBURN REED TO BE FEDERAL CO-CHAIR OF THE SOUTHEAST CRESCENT REGIONAL COMMISSION

HEARING
BEFORE THE
COMMITTEE ON
ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE
ONE HUNDRED SEVENTEENTH CONGRESS
FIRST SESSION
OCTOBER 27, 2021

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COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

ONE HUNDRED SEVENTEENTH CONGRESS

FIRST SESSION

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WEDNESDAY, OCTOBER 27, 2021

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
Washington, DC.

The Committee, met, pursuant to notice, at 10:06 a.m. in room 406, Dirksen Senate Office Building, Hon. Thomas R. Carper (Chairman of the Committee) presiding.

Present: Senators Carper, Capito, Kelly, Inhofe, Ernst, and Graham.

**OPENING STATEMENT OF HON. THOMAS R. CARPER,
U.S. SENATOR FROM THE STATE OF DELAWARE**

Senator CARPER. Welcome, everyone. I call this hearing to order.

Today, we are privileged to hear from two nominees: Jennifer Clyburn Reed, whom President Biden has nominated to be the Federal Co-Chair of the Southeast Crescent Regional Commission, and Christopher Frey, whom the President has nominated to serve as the Assistant Administrator of the Office of Research and Development at the Environmental Protection Agency.

We warmly welcome both of you today.

Before we hear from our witnesses, Senator Capito and I would like to say a few words about each of them.

Dr. Jennifer Clyburn Reed has built an exemplary career as an educator and advocate for strengthening the economic, social, and physical health of communities in her home State of South Carolina. She is also a graduate of the University of South Carolina. I just wrote this in, and I hope this is correct, a proud Gamecock, a graduate of the University of South Carolina.

Dr. Reed has spent nearly 30 years as an educator and an education leader. Most recently, she was the Director of the Center for Education and Equity at the University of South Carolina, her alma mater, and Co-Director of the Apple Core Initiative, a scholarship program at the USC College of Education.

She is also CEO of the Palmetto Issues Conference, an issues based advisory group that promotes accessible and equitable policies in education, in health, in housing, and infrastructure.

I had the privilege of meeting with Dr. Reed virtually yesterday and found her to be an engaging leader who is deeply committed to helping communities across the Southeast Crescent region.

If confirmed, Dr. Reed will be the Southeast Crescent Regional Commission's first Federal Co-Chair since it was created in 2019. Just let me repeat that: If confirmed, Dr. Reed will be the Southeast Crescent Regional Commission's first Federal Co-Chair since it was created in 2019.

Having her in this role will allow this agency to fully commit its resources toward addressing economically distressed areas across parts of Virginia, the Carolinas, Georgia, Alabama, Mississippi, and Florida.

I am delighted that Dr. Reed could join us here today. We look forward to hearing her vision for this role.

I am sure she will introduce a couple of relatives and maybe some friends that are in the audience, but Senator Capito and I have had the privilege of serving with your dad, and it is a special privilege to welcome him here today.

I would like to say we could see his lips move when you speak but with the mask on, we won't see his lips move at all, but we know he is here to provide encouragement and support.

[Laughter.]

Senator CARPER. President Biden nominated our second witness today, Henry Christopher Frey, who I believe goes by the name of Chris, to serve as EPA Assistant Administrator for the Office of Research and Development. Dr. Frey has built a remarkable, accomplished career as a pioneer in the fields of modeling human exposure to air pollution, as well as the measurement and modeling of vehicle emissions and applying those emissions estimates to risk assessments.

At a time when the EPA is recommitting itself to science driven decisionmaking, Dr. Frey's experience makes him an excellent choice to lead research and development at the agency. Dr. Frey has been a professor for 27 years at North Carolina State University, where he has dedicated himself to research and cultivating the next generation of scientific leaders.

He also has extensive experience working with the Environmental Protection Agency. In 1992, Dr. Frey was a AAAS; I had never heard of a AAAS; I have heard a lot of AAAs, but a AAAS, Environmental Science and Engineering Fellow at EPA. He has served as exposure modeling advisor in the EPA's Office of Research and Development's National Exposure Research Laboratory from I believe 2006 to 2007.

He also served in several other capacities at EPA through the years, including as a member of the EPA's Federal Insecticide, Fungicide, and Rodenticide Act, affectionately known as FIFRA; Science Advisory Panel from 2004 to 2006; as a member of the EPA's Clean Air Scientific Advisory Committee from 2008 to 2012; as Chair of that committee from 2012 to 2015; and as a member of the EPA Science Advisory Board from 2012 to 2018.

Let me also add that Dr. Frey has received public support from seven of his predecessors for this role, including both Republicans and Democrats, going back to the Reagan administration. There may be no better endorsement for a job than from someone who has held it before, much less seven former leaders who served in this role from both sides of the aisle.

I also had the opportunity to speak with Dr. Frey earlier this week, and he is quite impressive in person, as well. Should he be confirmed, he will be an undeniable champion of science based decisionmaking and scientific integrity at the EPA's Office of Research and Development.

We are looking forward to hearing more from him today.

But before we do, we are going to hear from our Ranking Member, Senator Capito, for her opening statement.

Senator Capito.

**OPENING STATEMENT OF HON. SHELLEY MOORE CAPITO,
U.S. SENATOR FROM THE STATE OF WEST VIRGINIA**

Senator CAPITO. Thank you, Mr. Chairman.

I want to thank our two witnesses today for being willing to serve. I think it is an admirable trait, public service, and we certainly appreciate those efforts. We look forward to hearing from both of you.

Thank you, Chairman Carper, for having the hearing.

As Chairman Carper mentioned, Dr. Jennifer Clyburn Reed will be the first to lead the Southeast Crescent Regional Commission, which is going to be an interesting exercise for me to watch since we have the Appalachian Regional Commission in our States, and we have seen how that has developed over the years.

Then of course, the Environmental Protection Agency Office of Research and Development, Dr. Chris Frey.

Each of you has devoted the majority of your careers to education. For that, you deserve great recognition, and I thank you.

Dr. Clyburn Reed, it is nice to see your father in the audience today. I had the pleasure of playing golf with him one time. He is quite the golfer.

I commend you for your service in education at all levels because you have obviously taught at every level in a lot of different types of situations, and for what you have done for your State of South Carolina. I look forward to hearing about you and what your plans are for the Commission.

Dr. Frey, I know you have been a college professor for 27 years, including time at the University of Pittsburgh and North Carolina State University, and you are now nominated for this position. As we discussed during our meeting last week, when we spoke, and I thank you for that, this is one of science, a scientist, not a policymaker or a politician. The research conducted in this office is used to inform critical policy decisions made by the agency's regulatory offices.

Establishing public trust requires that the scientific studies are developed in an open and transparent fashion, you and I talked about this, not hidden from robust public scrutiny. Transparency, I take the opportunity every time I get the chance to talk at this dais to talk about the frustrations that I have with this Adminis-

tration on transparency. Because it is not only critical in the scientific process, but also in policy proposals and the accountability that accompanies these decisions that this Administration is making.

I am very disturbed about this Administration's lack of transparency, particularly on climate and environmental issues. I have asked repeatedly the EPA and the White House several times now how the new U.S. Nationally Determined Contribution, or NDC, under the Paris Agreement was calculated. I am still waiting to hear how that calculation was made, the pledge being to reduce emissions 50 to 52 percent by 2030, and how is that possible, and what regulations would be put in place to make that possible.

Administrator Regan committed to me back in April to provide EPA information used to develop the NDC. He has not fulfilled that promise. I am actually going to have breakfast with him next week. I will have to make sure not only here in a public forum but privately to reiterate this.

At the end of October, and after repeated attempts to get information, I still do not have a substantive response. I get the sense that slow rolling this information hoping that this tax and spending spree that we see being squabbled over over on the House side, would have been enacted by now, and overshadowing some of the regulations the Administration has planned. That hasn't happened yet.

Now the Administration is trying to have something to present to the climate conference in Glasgow to show the world it will meet its overly ambitious targets. They appear focused on that audience, rather than the American public, workers, their families, and the folks that are elected to represent them in Congress as everybody watches their energy bills begin to skyrocket.

Proving this point in remarks earlier this year, John Kerry, the White House international climate czar, called for the U.S. intelligence community to verify the authenticity of Paris pledges by China, Russia, and other countries, stating that, "I think the President would want to know if something is just baloney, or if a country is misleading." This Administration has eyes wide open for the pledges of other countries, but they have then closed the door on the accountability to Congress or the American people on what the costs and what the sacrifices and the benefits would be.

At the same time, the Administration, through an interagency working group, is pursuing options to develop and apply a new cost for emitting greenhouse gases. President Biden wants to use this figure, known as the social cost of carbon, in all areas of Federal decisionmaking. Following several requests from me and other Members of Congress, the leaders of the interagency working group admitted they will not hold a single public meeting on this issue. Despite the potentially wide ranging effects of their proposals, Administration leaders are yet again hiding the ball from the American people.

Administration officials make vague, ominous remarks about using untested regulatory pathways to cut emissions. Yet the President, President Biden still has not put forth a nominee to lead one of the EPA's most significant offices, the Office of Air and Radiation; that is the very office that is reportedly developing the costly

and far reaching environmental regulations that the President will tout in Glasgow next week.

In the midst of a major supply chain and transportation crisis, the President has also not put forward a nominee to lead the Federal Highway Administration. The agency responsible to oversee the safe use of our Nation's nuclear energy power plants, the NRC, is currently working with just three commissioners and two vacancies.

Instead of ensuring transparency and accountability to the American people, the President has chosen to rely on his climate czars who are sitting in the White House and not accountable to us. Both of us are ready to advise and consent on nominees the President brings. It is time for him to stop delaying and to nominate individuals for the positions I mentioned and stop shielding the Administration's decisions.

This morning, we just have two nominees testifying, and they are great nominees, but it should be more.

I want to thank you again, Chairman Carper, for holding today's hearing.

I want to thank our two nominees again for being with us today. Thank you.

Senator CARPER. Thanks very much, Senator Capito.

I had breakfast with Administrator Regan maybe a month or 2 ago. I think you will find that constructive and helpful.

Senator Capito and I try to meet most Thursdays either in person or by phone if we are on the road. Some of the vacancies that you mentioned that we are looking for nominees, let's just talk about those and see what we can do to shake a few loose from the trees.

With that, thank you for your comments, Senator Capito.

Now we look forward to hearing from our nominees. We are going to start with Dr. Jennifer Clyburn Reed.

Dr. Reed, you are recognized for your statement. Please proceed.

**STATEMENT OF JENNIFER CLYBURN REED, NOMINEE TO BE
FEDERAL CO-CHAIR, SOUTHEAST CRESCENT REGIONAL
COMMISSION**

Ms. REED. Chairman Carper, Ranking Member Capito, and members of this Committee, good morning, and thank you for granting me this opportunity to appear before you as you consider President Joe Biden's nomination of me for Federal Co-Chair of the Southeast Crescent Regional Commission.

I also want to thank your staffs for the time spent with me over the past several days. The discussions have been engaging and informative.

I am grateful to President Biden for the faith and confidence placed in me by this nomination. If afforded the opportunity to serve, I pledge to prove your confidence well spent and do my family and friends proud.

Here with me today are my husband of 29 years, Mississippi native and Florida A&M graduate, Walter Reed.

Senator CARPER. Did you say Walter Reed?

Ms. REED. Walter Reed, yes.

Senator CARPER. As in the hospital?

Ms. REED. Yes.

[Laughter.]

Ms. REED. My father, Hon. Jim Clyburn, with whom you are probably somewhat aware. Joining me remotely, my son, Walter AC Reed, a graduate of Coastal Carolina University; my daughter, Sydney Reed, a Mississippi State graduate and third year medical student at the Medical University of South Carolina; my sisters, Mignon and Angela Clyburn; my father and sister-in-law, Jackson State alumni, Dr. Walter Reed and Dr. Kathy Taylor. And to the kinship and friendship circles supporting me from home, thank you.

I began my professional career 29 years ago as a public school educator with a Master's Degree. Over the next 25 years, I served as a classroom teacher, a middle school basketball coach, and a State Department of Education specialist. Along the way, I earned two additional academic credentials, an Education Specialist and a Doctorate from Nova Southeastern University in Florida.

I concluded my educational career as Director of a teaching equity center at the University of South Carolina, where I also co-founded the Apple Core Initiative, a teaching, recruitment, and retention scholarship program. I have continued my commitment to education as a committee member of the Emily E. Clyburn Honors College endowment at my State's only publicly supported HBCU, South Carolina State University.

Throughout these professional roles, I have remained true to my father's counsel that one should find something to do for which you are not paid. My community service began as a Girl Scout, then tutor at a public housing tutorial center with my sorority sisters of Delta Sigma Theta Sorority, Inc. I served as board chair of the Greater Columbia Community Relations Council and currently serve as president of a non-profit which promotes first time homeownership and the preservation and restoration of distressed and abandoned properties.

I believe that this background would be beneficial to me as I seek to continue my public service in a broader capacity in a wider community through the Southeast Crescent Regional Commission.

The Commission, which was authorized in 2008, focuses on distressed economic conditions in portions of six States: Mississippi, Alabama, Georgia, South Carolina, North Carolina, Virginia, and all of the State of Florida. Six States share two active regional commissions, the Delta Regional Authority and the Appalachian Regional Commission.

If confirmed, my initial goal will be to assess the needs and assets of each community within the Commission's 342 counties and identify challenges and determine the tools needed to progress them from distressed into transitional and attainment status. The Commission would then work closely with economic development districts, in partnership with State and local leaders, to formulate regional action plans using current and trending statistics with the input of community voices.

Believe me, I learned early in my career that one size does not fit all. The Commission would seek to fund entities that make economic development a sustainable priority, while stimulating local entrepreneur development and nurturing private investment.

The formula used to target distressed counties through Congressman Clyburn's 10-20-30 plan states that 10 percent of certain appropriated funds be targeted to persistent poverty communities identified by the Census Bureau where 20 percent or more of the population has lived at or below the poverty level for 30 or more years. According to a report from the Congressional Research Service defining persistent poverty counties, there 407 in the United States. Ninety-two, or 22.6 percent of them, fall within the jurisdiction of the Southeast Crescent Regional Commission.

Working in tandem with State and local municipalities to create opportunities to fill gaps in education attainment, work force preparedness, job creation, and physical and human infrastructure are challenges that beg for cooperation at all levels. And if confirmed, the Commission will not waste valuable time re-creating the wheel. Instead, it will consult with other Federal Co-Chairs to emulate best practices.

I will carry out the objectives of the Commission to strengthen areas with the greatest needs, and I look forward to working with this Committee to ensure that the Southeast Crescent Regional Commission works for all of its citizens.

Chairman Carper, Ranking Member Capito, and members of the Committee, thank you again for this opportunity to appear before you today. And I look forward to any questions you have.

[The prepared statement of Ms. Reed follows:]

Statement of Dr. Jennifer Clyburn Reed
Hearing on Nominations
Committee on Environment and Public Works
United States Senate
October 27, 2021

Chairman Carper, Ranking Member Capito and Members of the Committee; Good morning and thank you for granting me this opportunity to appear before you as you consider President Joe Biden's nomination of me for Federal Co-chair of the Southeast Crescent Regional Commission. I also want to thank your staffs for the time spent with me over the past several days. The discussions have been engaging and informative.

I am grateful to President Biden for the faith and confidence placed in me by this nomination. If afforded the opportunity to serve, I pledge to prove your confidence well spent and do my family and friends proud.

Here with me today; my husband of 29 years, Mississippi native and Florida A&M graduate Walter Reed; virtually, my son Walter AC Reed, a graduate of Coastal Carolina University and daughter Sydney Reed, a Mississippi State University graduate and 3rd year medical student at the Medical University of South Carolina. My father, The Honorable Jim Clyburn, with whom you are probably familiar, my sisters Mignon and Angela Clyburn, father and sister-in-law, Jackson State alumni, Dr. Walter Reed and Dr. Kathy Taylor. And to the kinship and friendship circles supporting from home, thank you.

I began my professional career 29 years ago as a public school educator with a Master's degree. Over the next 25 years, I served as a classroom teacher, middle school basketball coach and State Department of Education specialist. Along the way, I earned two additional academic credentials, an Education Specialist and doctorate from Nova Southeastern University in Florida. I concluded my educational career as Director of a teaching equity center at the University of South Carolina, where I also co-founded the Apple Core Initiative, a teacher recruitment and retention scholarship program. I have continued my commitment to education as a committee member of the Emily E. Clyburn Honors College endowment at my state's only publicly supported HBCU, South Carolina State University.

Throughout these professional roles, I have remained true to my father's counsel that one should, "Find something to do for which you are not paid." My community service began as a Girl Scout, then tutor at a public housing tutorial center with my sorority sisters of Delta Sigma Theta Sorority, Inc. I served as board chair of the Greater Columbia Community Relations Council and currently serve as president of a non-profit which promotes first-time homeownership and the preservation and restoration of distressed and abandoned properties. I believe that this background would be beneficial to me as I seek to continue my public service in a broader capacity to a wider community through the Southeast Crescent Regional Commission.

The Southeast Crescent Regional Commission, authorized in 2008, focuses on distressed economic conditions in portions of six states – Mississippi, Alabama, Georgia, South Carolina,

North Carolina, Virginia, and all of Florida. Six states share two active regional commissions – Delta Regional Authority and Appalachian Regional Commission. If confirmed, my initial goal will be to assess the needs of each community within the Commission’s 342 counties to identify challenges and determine the tools needed to progress from distressed into transitional or attainment status. The Commission would then work closely with economic development districts, in partnership with state and local leaders, to formulate regional action plans using current and trending statistics with the input of community voices. Believe me, I learned early in my career that one size does not fit all. The Commission would seek to fund entities that make economic development a sustainable priority, while stimulating local entrepreneur development and nurturing private investment.

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Working in tandem with state and local municipalities to create opportunities to close gaps in educational attainment, workforce preparedness, job creation, and physical and human infrastructure, are challenges that beg for cooperation at all levels. And, if confirmed, the Commission will not waste valuable time re-creating the wheel. Instead, it will consult with other Federal co-chairs and emulate best practices.

If confirmed, I will carry out the objectives of the Commission to strengthen areas with the greatest needs and I look forward to working with this Committee to ensure the Southeast Crescent Regional Commission works for its citizens.

Chairman Carper, Ranking Member Capito, and members of the Committee, thank you again for the opportunity to appear today.

I look forward to your questions.

Senator CARPER. Thank you, Dr. Reed.

Senator Capito, my first thought is the apple did not fall far from the tree.

Dr. Frey; we were joking yesterday about how he pronounces his name. A lot of people, F-R-E-Y, they pronounce it Fry. But he pronounces it Fray. He is a big music fan. He loves a band called The Fray, from Colorado, How To Save a Life.

You are on, Dr. Frey. Welcome.

STATEMENT OF CHRISTOPHER FREY, NOMINEE TO BE ASSISTANT ADMINISTRATOR FOR RESEARCH AND DEVELOPMENT, ENVIRONMENTAL PROTECTION AGENCY

Mr. FREY. Thank you, Senator Carper, and good morning, Ranking Member Capito, and members of the Committee.

I am honored that President Biden has nominated me to serve as Assistant Administrator in the Office of Research and Development at the U.S. Environmental Protection Agency.

I also want to thank my wife, Deanna, and my daughter, Loren, who are with me today, for their support.

Senator CARPER. Which one is your wife?

Mr. FREY. The really good looking woman sitting behind me.

[Laughter.]

Senator CARPER. Would you raise your hand, ma'am? Nice to see you. Welcome. Thanks for sharing him with all of us.

Mr. FREY. Thank you, sir.

In fact, she is sharing me with all of you, and I am honored that she is.

I also want to thank my extended family in New York, West Virginia, South Carolina, Georgia, and Florida, who are watching today.

Science and the environment have long been my passions and my purpose. I grew up in lower Manhattan in the 1960s and 1970s. My family lived in a rent controlled, walk up building built in the 1880s. There was lead paint on the walls, choking smog outside, and greasy flakes of soot wafted from the sky, smearing my bedroom windowsill.

This affected me so much that when I was 8 years old, I wrote an essay titled Pollution. I posited that pollution is bad for people and animals, too. Although I didn't realize it at the time, I identified multiple environmental media, fate, and transport pathways, and adverse effect outcomes.

My father typed and copied my essay and gave it to all of our neighbors. This was my first publication. I trace my career, and my passion and purpose to that essay and to my first hand experience with environmental pollution while growing up.

My parents instilled in me a passion for the environment as well as a sense of duty to serve the public. My father served honorably in the United States Marine Corps. After his military service, he became an oceanographer and a professor. He spent the last 22 years of his career with the National Oceanic and Atmospheric Administration. And he now rests at Arlington National Cemetery.

My mother's passion was art. She was a painter and a writer. Her last book was a novel about dolphins, for which she conducted extensive research. Although not rich in a material sense, she had

enormous wealth of spirit. She taught me to listen to many different voices, understand how things work, and work with others to find solutions.

With my parents teaching me the value of listening, observing, and public service, it is no surprise that I found my way to environmental science and engineering.

I have been privileged to have spent most of my career in academia, including 27 years at North Carolina State University. While there, I researched how to improve the efficiency and reduce the cost and emissions of coal fired power plants. I helped governments and industry develop cost effective solutions for emissions prevention. I researched improved quantitative methods for uncertainty in exposure and risk assessment. My research has also focused on measurement and modeling of vehicle emissions and human exposure to air pollution.

My research has helped inform a variety of decisions from improving traffic signal timing to reduce vehicle emissions as well as the selection of ambient air quality standards taking into account uncertainty in risk assessment.

As an experienced researcher and professor, I am a champion of science and its essential role in keeping American families healthy and safe. I am proud of the quality, scope, and impact my work has had, as demonstrated by my extensive peer reviewed publication record and numerous awards, including the Excellence in Air Pollution Control Award from the Air and Waste Management Association.

I have been invited to share my expertise on numerous national and international expert advisory panels. As Senator Carper noted, I have worked multiple times with the Office of Research and Development, and I have served on the Science Advisory Board and chaired the Clean Air Scientific Advisory Committee.

I believe that I have the scientific credentials, expertise, experience, vision, and commitment to serve as ORD's Assistant Administrator and to lead ORD's world class research staff.

Senators, applying science to solve complex challenges that affect the lives of the American people has been my highest priority throughout my career. It would be a tremendous privilege to continue this dedication at EPA.

And I recognize, as Senator Capito alluded to, that science is just one of the many factors that inform policy decisions. If confirmed, my leadership will start with listening. The complex environmental challenges our Nation faces require an all hands on deck approach, drawing on the experience, expertise, and perspectives of numerous stakeholders, including all of you, Senators.

Thank you, and I look forward to your questions.

[The prepared statement of Mr. Frey follows:]

**Statement of Chris Frey
Nominee for the Position of Assistant Administrator for the
Office of Research and Development
in the
United States Environmental Protection Agency
Before the
Committee on Environment and Public Works
United States Senate**

October 27, 2021

Good morning Chairman Carper, Ranking Member Capito, and Members of the Committee. I am honored that President Biden has nominated me to serve as Assistant Administrator for the Office of Research and Development at the U.S. Environmental Protection Agency.

Science and the environment have long been my passions – and my purpose.

I grew up in lower Manhattan in the 60s and 70s. My family lived in a rent-controlled walk-up building built in the 1880s. There was lead paint on the walls, smog outside, and greasy flakes of soot wafted from the sky, smearing my bedroom windowsill. This affected me so much that when I was eight, I wrote an essay titled “Pollution” in which I posited that “Pollution is bad for people and animals too.” Although I didn’t realize it at the time, I identified multiple environmental media, transport and fate pathways, and adverse effect outcomes. My father typed and copied my essay and gave it to all of our neighbors. This was my first publication. I trace my career – my passion and my purpose – to that essay and to my firsthand experience with environmental pollution while growing up.

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National Oceanic and Atmospheric Administration. He now rests at Arlington National Cemetery.

My mother's passion was art. She was a painter and a writer. Her last book was a novel about dolphins, for which she conducted extensive research. Although not rich in a material sense, she had enormous wealth of spirit. She taught me to listen to many different voices, understand how things work, and collaborate with others to find solutions.

With my parents teaching me the value of listening, observation, and public service – it's no surprise that I found my way to environmental science and engineering.

During summers in college, I worked as a civilian engineering aid for the U.S. Army and U.S. Navy. These experiences were some of my earliest appreciating the practical application science has in our everyday life. I conducted quality assurance tests on an adsorbent used to scrub carbon dioxide inside submarines. The lab science I was doing was keeping our servicemembers safe. Seeing the direct impact that science has in protecting people - I was hooked.

I have been privileged to have spent most of my career in academia, including 27 years at North Carolina State University. While there, I researched how to improve the efficiency and reduce the emissions and cost of coal-fired power plants. I helped governments and industry develop cost-effective solutions for emissions prevention. I researched improved quantitative uncertainty methods for exposure and risk assessment. My research has also focused on measuring and modeling real-world emissions from vehicles and human exposure to air pollution. My research has helped inform a wide variety of decisions – from improving traffic signal timing that reduces vehicle emissions to selection of ambient air quality standards taking into account uncertainties in health risk assessment.

As an experienced researcher and professor, I am a champion of science and its essential role in keeping American families healthy and safe. I am proud of the quality, scope, and impact my work has had, as demonstrated by my extensive peer reviewed publication record and numerous awards, such as the Excellence in Air Pollution Control Award from the Air & Waste Management Association. I have been invited to share my expertise on numerous national and international expert advisory panels. I also have extensive experience with EPA: I completed a fellowship in the Office of Research and Development in the early 90s; I was an Exposure Modeling Advisor to ORD in the mid-2000s; and I have served on multiple EPA advisory committees for many years, including the Science Advisory Board and chairing the Clean Air Scientific Advisory Committee. I believe that I have the scientific credentials, expertise, experience, vision, and commitment to serve as ORD's Assistant Administrator and to lead ORD's world class research staff.

Senators, applying science to solve complex challenges that affect the lives of the American people has been my highest priority throughout my career. It would be a tremendous privilege to continue that dedication at EPA. I recognize that science is just one of the many factors that inform policy decisions. If confirmed, my leadership will start with listening. The complex environmental challenges our Nation faces require an "all hands on deck" approach, drawing on the experience, expertise, and perspectives of numerous stakeholders, including all of you.

Thank you, and I look forward to your questions.

Senate Committee on Environment and Public Works
Hearing Entitled, "Hearing on the Nominations of Christopher Frey to be Assistant Administrator for Research and Development, at the Environmental Protection Agency and Jennifer Clyburn Reed to be Federal Co-Chair of the Southeast Crescent Regional Commission"

October 27, 2021

Questions for the Record for Dr. H. Christopher Frey

Senator Kelly:

1. I wanted to begin by asking you about the Safe and Sustainable Water Resources Research Program within the Office of Research and Development. As you know, Arizona's ongoing drought conditions will require water and wastewater utilities throughout our state to make investments into water system resilience technologies and water reuse technologies. Research from EPA into what types of technologies can protect the security of our water systems, and allow for safe, potable water reuse can help our utilities make smart investments as we adapt to ongoing drought conditions. What can you share about your goals for the Water Resources Research Program, if you are confirmed?
 - a. And what actions do you believe that your office could take to help Arizona utilities make informed decisions as we adapt to ongoing drought conditions?

RESPONSE: EPA's Safe and Sustainable Water Resources (SSWR) research program provides the science and innovative technologies that the Agency and the nation need to maintain drinking water resources and systems, as well as to protect the chemical, physical and biological integrity of the nation's waters. It uses an integrated, systems approach to support the availability of the clean, adequate, and equitable water supplies necessary for human well-being and resilient aquatic ecosystems.

The SSWR research program is one of six integrated and transdisciplinary research programs in EPA's Office of Research and Development (ORD). Each of the six programs is guided by a Strategic Research Action Plan (StRAP) that reflects the research needs of Agency program and regional offices, states, and tribes, and is implemented with their active collaboration and involvement. The SSWR FY 2019-2022 StRAP continues a practice of conducting innovative scientific research aimed at solving the problems encountered by the Agency and its stakeholders. ORD is currently in the process of developing the StRAP for FY 2023-2026, based on input from our partners.

ORD has published several manuscripts on risk models for fit-for-purpose water reuse. This much-needed information will help identify treatment targets for wastewater and other sources of water for multiple beneficial purposes, such as agriculture and irrigation, groundwater replenishment, and industrial processes—including utilities.

In FY22, the SSWR research program intends to continue to address climate change impacts/resiliency, among other things. As part of the climate change impacts/resiliency work, the SSWR research program will:

- Integrate the impacts of climate change on water bodies and water infrastructure, including wildland fire, extreme drought and precipitation events, harmful algal blooms, and other impacts on water quality and availability;
 - Evaluate stormwater capture for enhanced aquifer recharge (EAR) and develop best practices for EAR implementation; and
 - Provide water reuse research support for safe, fit-for-purpose potable and non-potable use by states, tribes, and local communities. Information includes risk-based treatment guidance to inform state-level regulations and web-based tools to estimate life cycle costs and impacts to aid infrastructure decision making.
2. I also wanted to talk with you about the PFAS Roadmap that EPA released last year. First off, I want to thank the whole team at EPA for focusing on the science, and in particular additional research into the chemistry of PFAS, and into the technologies needed to reduce PFAS in the environment. As Congress prepares to make significant investments in PFAS remediation, I think it is particularly important to ensure that there are effective and affordable technologies available to water and wastewater utilities to effectively treat all PFAS chemicals – including shorter chain PFAS like PFBS. As EPA seeks to expand its research into technologies that can remove PFAS from drinking water, can you provide an overview of what your research focus areas will be and what success should look like in this research?
- a. How will EPA partner with the private sector and other federal agencies?

RESPONSE: Addressing PFAS is a top priority for the President and Administrator Regan and will be one of my top priorities if confirmed as ORD's Assistant Administrator.

EPA's decisions regarding PFAS will be grounded in scientific evidence and analysis. The current body of scientific evidence clearly indicates that there are real, present, and significant hazards associated with specific PFAS, but significant gaps remain related to the impacts of other PFAS on human health and in the environment. Regulatory development, either at the state or federal level, would greatly benefit from a deeper scientific understanding of the exposure pathways, toxicities, and potential health impacts of less-studied PFAS. The federal government, states, industry, academia, and nonprofit organizations—with appropriate coordination and resources—have the capability to conduct this necessary research.

Science and research are the foundation of EPA's work on PFAS. Research is one of EPA's three central directives in its integrated approach to PFAS, as outlined in the PFAS Roadmap. EPA will invest in research, development, and innovation to increase understanding of PFAS exposures and toxicities, human health and ecological effects, and effective interventions that incorporate the best available science. EPA will develop and validate methods to detect and measure PFAS in the environment, advance the science to assess human health and environmental risks from PFAS, and evaluate and develop technologies for reducing PFAS in the environment, which includes research on treating PFAS in drinking water. This work includes intramural and extramural research, as well as partnerships with the private sector and other federal agencies.

To break the cycle of contamination and exposure from PFAS, additional research is needed to identify and develop techniques to permanently dispose of or destroy these durable compounds. Government agencies, industry, and private laboratories need tools and validated methods to measure PFAS in air, land, and water to identify pollution sources, demonstrate facility compliance, hold polluters accountable, and support communities during and after cleanups.

Coincident with the EPA's public release of the PFAS Roadmap on October 18, 2021, the White House announced the creation of a high-level Interagency Policy Committee focused on PFAS actions, managed by the White House Council on Environmental Quality (CEQ). The first meeting of this new committee convened on October 18, where agency leaders across the government met to discuss their progress and plans for addressing PFAS contamination and reducing the risks to American families. The new committee will coordinate and help develop new policy strategies to support research, remediation, and removal of PFAS in communities across the country. In addition to EPA, other agencies on the committee include the Department of Defense, the Food and Drug Administration, the Department of Agriculture, the Department of Homeland Security, the Federal Aviation Administration, and components within the Department of Health and Human Services including the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry.

ORD has established and continues to seek collaborations with the private sector to support field work to understand PFAS sources, transport and fate, and options for reducing PFAS in the environment.

b. And what can Congress do to better support research into PFAS technologies?

RESPONSE: ORD's research on PFAS has focused on development of methods for measurement of PFAS, characterization of exposure to PFAS, assessment of toxicity, and evaluation of management approaches. The latter work includes bench, pilot, and field scale work to assess the potential role of incineration with regard to destruction of PFAS. ORD will continue this work with the resources provided to it by Congress, and will seek partnerships with other Federal

agencies, as well as with state, local, tribal, and community partners, and with private industry. Given the large number of PFAS, and the large number of sites and communities that are known or suspected to be impacted by PFAS contamination, there is an ongoing need for research to provide the scientific foundation to inform decisions that will be effective at protecting public health and the environment.

Ranking Member Capito:

1. During your hearing, you stated the Office of Research and Development (ORD) will “provide the science needed to inform those kinds of [regulatory] decisions.” Do you commit to lead ORD in a transparent way that does not obscure the underlying science, even if those scientific results do not say what the policymakers want them to say?

RESPONSE: If confirmed, I commit to lead ORD to provide the science that is needed to inform EPA decision-making. I am honored to be considered for this position and to be on Administrator Regan’s team at EPA as we restore the role of science and transparency at the Agency.

2. During your hearing, I asked you about EPA initiatives in regulating the power sector that could have the effect of forcing coal, and perhaps natural gas, electric generation to reduce operations on net and possibly close. You responded to my question that “it is the role of ORD to provide scientific support, and advice and information to support the work of our program offices” and that “certainly there are discussions within the agency on initiatives.” Regarding specifics on what EPA’s Office of Air and Radiation (OAR) was considering, you promised to take the question back to the Agency. Have you specifically discussed this initiative with any OAR staff or with EPA’s senior leadership? Please provide the specific policy issues and future regulatory actions that OAR staff or EPA’s senior leadership have provided to you regarding EPA’s initiative to regulate the power sector.

RESPONSE: The EPA’s Office of Air and Radiation (OAR) has the Agency’s lead role in addressing air pollution from the power sector at EPA. EPA is continuing to move forward with using its statutory authority to be sure that we protect the public from harmful pollution, including greenhouse gas pollution, that contributes to the degradation of air quality. It is standard practice for ORD to participate in EPA’s internal process for developing regulations, including proposed and final regulations that affect the power sector. Through EPA’s internal process, ORD is a resource for, and a steward of, sound science in agency decisions and helps to ensure that the best available science is considered at all appropriate points in the decision-making process. The specific scientific support ORD is providing to OAR is undergoing development and includes information that relates to pending or contemplated executive action and is therefore deliberative and pre-decisional.

If confirmed, I look forward to leading ORD in its efforts to develop the best available science relevant to the decision-making needs of our partners, including regulatory program offices such as OAR.

3. In response to another question during the hearing, you committed to get back to me to provide an accurate answer of ORD studies that have supported or are supporting the Agency's efforts to regulate the power sector. Please provide a list of such studies and any other ORD assistance to OAR regarding the power sector initiative.

RESPONSE: The specific scientific support ORD is providing to OAR is still undergoing development and includes information that relates to pending or contemplated executive action and is therefore deliberative and pre-decisional. If confirmed, I look forward to leading ORD in its efforts to develop the best available science relevant to the decision-making needs of our partners, including regulatory program offices such as OAR.

4. You led the unofficial Independent Clean Air Scientific Advisory Committee (CASAC) Particulate Matter (PM) Review Panel, which included other former CASAC members and issued its own views and recommendations. Part of the role of the official CASAC panel is to provide policy advice to EPA on the Agency's decisions to retain or revise the National Ambient Air Quality Standards (NAAQS) for different criteria pollutants. Do you feel that your decision to set up a shadow CASAC undermined or politicized the work of the actual CASAC at EPA?

RESPONSE: Throughout my career as an experienced researcher and professor, I have been an advocate for the role of science to inform decisions. I have served in science advisory roles as a member of many scientific review panels. Thus, I know how critical it is for these panels to be comprised of leading-edge scientists at the forefronts of their disciplines, and for the Agency to have advice from scientists of many disciplines. For example, I was a member of the chartered CASAC from 2008-2012 and chair of the CASAC from 2012-2015. I served on the CASAC Particulate Matter (PM) Review Panel as a member from 2007-2010 in the review cycle that culminated in the 2012 revision of the PM National Ambient Air Quality Standard (NAAQS). I served on the CASAC PM Review Panel that was appointed in 2015 but disbanded by the previous Administration on October 10, 2018, just five days before the draft Integrated Science Assessment (ISA) for particulate matter was released for external review.

In consideration of our initial commitment to provide a public service prior to our unexpected dismissal by the Agency, my fellow scientists and I jointly decided to form the Independent Particulate Matter Review Panel (IPMRP) to continue our work and to provide EPA staff and leadership with access to the best scientific foundation for decision-making about the PM standards. The Panel held deliberations in public, provided an opportunity for public comment, and developed a detailed report of its advice and findings in accordance with

procedures typical of those when our panel had been official. Our panel had multiple experts in key disciplines and was able to deliberate on complex scientific issues with a high degree of rigor.

The chartered CASAC recommended, in its April 11, 2019 letter to Administrator Wheeler, that “the EPA reappoint the previous CASAC PM panel.” The IPMRP contributed to public CASAC meetings via the public comment process, thereby providing the chartered CASAC with access to our advice. The IPMRP also submitted its report to the Administrator and to the public docket for the PM NAAQS review.

5. You have worked extensively with other researchers and groups on NAAQS reviews over the years. In your current role at EPA, are you still working on these issues or with any of the same groups? How do you intend to address any associated perceived conflicts of interest?

RESPONSE: I take seriously my ethical obligations as a public servant and, if confirmed, I will continue to work with EPA’s Designated Agency Ethics Official and OGC/Ethics for consultation and advice about meeting my ethical obligations. I began working at EPA in my current role on January 31, 2021. Upon joining the Agency, I consulted with the Office of General Counsel’s ethics program (OGC/Ethics) regarding my ethical obligations. I fully disclosed all my affiliations and past experiences, and I have been advised that I am subject to the federal conflict of interest statutes, Executive Order 13989, and the Standards of Ethical Conduct for Employees of the Executive Branch. OGC/Ethics has advised me that I have financial interests stemming from my academic positions at the North Carolina State University (NC State) and the Hong Kong University of Science & Technology (HKUST), from which I am currently on a two-year, unpaid leave of absence. As noted in my ethics agreement, if confirmed, I will resign from my unpaid adjunct position at HKUST. I understand that I may not personally and substantially participate in any particular matter that, to my knowledge, has a direct and predictable effect on my financial interests unless I first obtain a written waiver or am otherwise permitted to participate as determined by EPA’s career ethics officials.

I have been advised that my prior CASAC and academic experience presents no conflict of interest. Based on the advice of OGC/Ethics, I executed a recusal statement on May 11, 2021, to memorialize my ethical obligations. I understand my recusal statement was provided to your staff on June 8, 2021.

6. In your previous roles on Independent CASAC PM Review Panel and other groups, you have advocated for a lowering of the primary and secondary standards for particulate matter. After you joined EPA earlier this year, the Agency called for lowering the PM_{2.5} standards from 12 micrograms per cubic meter of air to a level as low as 8 micrograms, in contrast with the previous Administration’s finding.¹ That

¹ <https://www.eenews.net/articles/biden-epa-to-tighten-soot-standards-trump-left-unchanged/>

lowered level is the same level that your Independent CASAC PM Review Panel called for, and if finalized, could cause a large number of areas across several states to be designated in nonattainment, triggering restrictions on new development. How many states would have areas potentially out of attainment if the standard is lowered?

RESPONSE: On June 10, 2021, EPA announced that it will reconsider the previous Administration's decision to retain the particulate matter (PM) National Ambient Air Quality Standards (NAAQS), which were last strengthened in 2012. EPA is focused on restoring the role of science in EPA's decision-making process and scientific integrity as a core value. The Agency is reconsidering the December 2020 decision because available scientific evidence and technical information indicate that the current standards may not be adequate to protect public health and welfare, as required by the Clean Air Act.

These rulemaking processes are led by EPA's Office of Air and Radiation. ORD has supported the current rulemaking process by developing a draft *Supplement to the 2019 Integrated Science Assessment for Particulate Matter*. EPA expects to follow an open, transparent process with opportunities for public review and public comment. The EPA is restoring the central role of scientific peer review and advising by augmenting the chartered CASAC with a PM Review Panel, consistent with decades of best practice and precedent. The CASAC and PM Review Panel will conduct a review of the draft *Supplement to the 2019 Integrated Science Assessment for Particulate Matter* developed by career staff in ORD and of a draft policy assessment developed by career staff in OAR.

If confirmed, I look forward to leading ORD in its efforts to develop the best available science relevant to the decision-making needs of our partners, including regulatory program offices such as OAR.

7. In March 2021, Administrator Regan ordered the dismissal of all members of the Science Advisory Board (SAB) and CASAC. Did you have any role in the decision to dismiss all members of CASAC and SAB? If so, please describe your role.

RESPONSE: On March 31, 2021, Administrator Regan announced his decision to reestablish the membership of the EPA's Science Advisory Board (SAB) and Clean Air Scientific Advisory Committee (CASAC), reorient the SAB standing committees, and return to the established practice of augmenting the CASAC with pollutant-specific review panels. This decision reversed deficiencies caused by decisions made in recent years. For example, in July 2019, a Government Accountability Office report on EPA Advisory Committees found that EPA was not following the standard process for appointing committee members. Administrator Regan's decision reinstates well-established EPA processes for bringing a balanced group of world-renowned scientific experts to these committees. As the Deputy Assistant Administrator for Science Policy in ORD, I provided Administrator Regan advice on this decision based on my experience.

8. Do you recognize that having CASAC members from geographically diverse areas of the country is important because different areas face differing air quality factors?

RESPONSE: It is important for EPA to appoint members to CASAC and its review panels based on breadth, depth, and diversity of scientific expertise, experience, and perspectives. CASAC members should be well-qualified experts from a cross-section of disciplines and experience needed to provide advice to EPA leadership in support of the Agency's mission to protect human health and the environment, consistent with the Agency's need to use the best available science to inform decisions.

9. Do you believe EPA should also endeavor to reflect the geographic diversity of the United States in the membership of its other scientific advisory boards because different regions face different environmental and public health circumstances?

RESPONSE: I share President Biden's and Administrator Regan's commitment to diversity, equity, inclusion, and accessibility. As explained above, I believe the EPA's science advisory boards should have members appointed based on the need for breadth, depth, and diversity of scientific expertise, experience, and perspectives. Well qualified experts from a cross-section of disciplines and experience are necessary to provide advice to EPA leadership in support of the Agency's mission to protect human health and the environment, consistent with the Agency's need to use the best available science to inform decisions.

10. At a briefing EPA provided to Committee staff earlier this year, ORD staff said they were considering changes to the IRIS assessment nomination process. Does EPA still intend to retain the assessment nomination process that was established during the Trump Administration?

RESPONSE: A comprehensive and transparent IRIS nomination process helps ORD better plan and address the Agency's chemical assessment needs, including those of the regions. It also helps ORD increase its responsiveness, as well as outreach and transparency amongst IRIS users. Moving forward, ORD intends to further improve the nomination process to focus on science-based decisions and to ensure transparency and full engagement of Agency offices so that we can identify IRIS assessments that meet Agency needs.

11. What additional details can you provide on any updates to the IRIS assessment nomination process currently being considered?

RESPONSE: ORD continues to engage with partners across the Agency to develop a more transparent, sustainable, and durable approach to identify assessment needs across the Agency in the years to come.

12. Will you commit to providing Committee staff a briefing on any updates to the IRIS assessment nomination process prior to making them public?

RESPONSE: I understand the importance of Congress' need to obtain information necessary to perform its legitimate oversight functions and, if confirmed, I commit to working with EPA staff to accommodate Congress' interests.

13. Your initial recusal statement detailed plans to take "a two-year, unpaid leave of absence" from Hong Kong University of Science and Technology. As you detailed during the hearing, after being nominated as Assistant Administrator, you agreed to resign from this position, if confirmed. What prompted this change in your view of whether it was proper to take a leave of absence from a foreign institution? Did the mainland People's Republic of China's erosion of political and academic independence in Hong Kong contribute to this decision? If so how; and if not, why not?

RESPONSE: I take seriously my ethical obligations as a public servant and, if confirmed, I will continue to work with EPA's Designated Agency Ethics Official and OGC/Ethics for consultation and advice about meeting my ethical obligations. As detailed in my recusal statement, since joining EPA I have taken a two-year leave of absence from my unpaid adjunct position with HKUST. I took this leave of absence based on the advice I received from EPA's Office of General Counsel/Ethics Office. I understand from OGC/Ethics that, consistent with White House policy spanning several administrations, political appointees (with the exception of Senate-confirmed appointees) are permitted to take a leave of absence from a foreign academic institution during their government tenure, provided that the required recusals are in place to avoid a potential or actual conflict of interest. Since I have been nominated to the Assistant Administrator position, however, OGC/Ethics has advised me upon confirmation to resign this position which I intend to do as is reflected in my ethics agreement.

As I explained in my hearing, my relationship with my colleagues at HKUST is one of research and mentorship of students and of collaboration on scientific research regarding human exposure to air pollution. That region of the world is facing severe air pollution. There are a lot of interesting science issues there from which we can learn to inform science here in the United States. My work has been in the realm of science, not in the realm of the policy or geopolitical issues you mention. The science I conducted with my colleagues is open, transparent, and rigorous, based on numerous conference and seminar presentations as well as publications in the peer reviewed literature.

14. Your recusal statement disclosed previous work with the Hong Kong Environmental Protection Department. Since this work is not reflected in the Questionnaire you provided the Committee, please describe the type of work you have done for the Hong Kong Environmental Protection Department.

RESPONSE: I take seriously my ethical obligations as a public servant and, if confirmed, I will continue to work with EPA’s Designated Agency Ethics Official and OGC/Ethics for consultation and advice about meeting my ethical obligations. As outlined in my recusal statement (delivered to your staff on June 8, 2021) and reflected in my nominee financial disclosure report, I provided consulting services in areas related to energy, air pollution, and human and ecological risk through my environmental consulting company, Energy, Air, and Risk Associates, LLC. One of those clients within the past two years was the Hong Kong Environmental Protection Department, but I was not their employee.

Pursuant to Section 1, Paragraph 2 of Executive Order 13989, I have additional ethics obligations with respect to my former clients, including the Hong Kong Environmental Protection Department. I have recused myself from participating in EPA matters in which any of my former clients is a party or represents a party for two years from my appointment date, or until January 31, 2023, unless I first obtain a written waiver or am otherwise permitted to participate as determined by EPA’s career ethics officials.

15. In 2015, you wrote a letter to the editor published in the *Raleigh News & Observer*, titled “Taking on Clean Power Plan Claims.” In this letter, you agreed that extended legal battles on the Clean Power Plan would be inevitable but stated that “many new federal environmental regulations are litigated by ‘special interests.’” A bipartisan group of more than 200 members of Congress opposed the Clean Power Plan in a brief to the DC Circuit and 26 states filed an application asking the Court to stay the Clean Power Plan—which it did in 2016. Given this broad and geographically-diverse opposition, please explain what you meant by “special interests.”

RESPONSE: On August 21, 2015—shortly after EPA finalized the Clean Power Plan and before any litigation began—the *Raleigh News and Observer* published a letter to the editor that I wrote with a colleague, entitled “Taking on Clean Power Plan Claims.” As we stated, our purpose was “not to advocate the plan but to share accurate information.” We noted that “many new federal environmental regulations are litigated by special interests” as part of a broader point that “EPA actions are subject to judicial review.”

Consistent with Administrator Regan’s commitment to follow the science, follow the law, and be transparent, I appreciate Administrator Regan’s view that EPA now has the ability to look back at previous efforts to reduce greenhouse gas emissions from power plants, consider what worked and what could have worked better, and adhere to applicable court decisions as the Agency moves forward. EPA’s Office of Air and Radiation has the lead role for this regulation. If confirmed, I look forward to leading ORD in its efforts to develop the best available science relevant to the decision-making needs of our partners, including regulatory program offices such as OAR.

16. In recent testimony before this Committee on PFAS, a senior EPA official stated, “As the Agency does more, it will learn more.” Do you think the other program offices within EPA should initiate rulemakings when ORD lacks essential data needed to inform those rulemakings?

RESPONSE: Science and research are the foundation of EPA’s work on PFAS. Research is one of EPA’s three central directives in its integrated approach to PFAS, as outlined in the PFAS Roadmap. EPA will invest in research, development, and innovation to increase understanding of PFAS exposures and toxicities, human health and ecological effects, and effective interventions that incorporate the best available science. ORD’s job is to provide the science that is needed to inform decisions as our partner program’s consider options for rulemaking. If confirmed, I look forward to leading ORD in its efforts to develop the best available science relevant to the decision-making needs of our partners within and outside of the Agency.

17. Do you commit that you will advocate for this deliberative, science-informed approach with Administrator Regan, other senior EPA leaders, and the respective leaders of the Agency’s regulatory offices?

RESPONSE: Administrator Regan is intent on restoring the role of science at EPA and regaining the public’s trust. Restoring the public’s confidence in EPA through transparency and scientific integrity is critical to meeting our mission to protect human health and the environment. If confirmed, I will continue to champion scientific integrity and restore the role of science to inform decision-making at the Agency.

18. In August 2019 you submitted testimony to the EPA’s Science Advisory Board (SAB) faulting the previous Administration for proposing science-based regulations without input from the SAB. You stated that the previous Administration either “ignores or flouts” the statutory requirements in the Environment, Research Development and Demonstration Authorization Act (ERDDAA) of 1978 for failing to notify and seek advice from the SAB on science-based rules. During your time as ORD’s leader, EPA took regulatory action on phasing down hydrofluorocarbons (HFCs) and proposed regulations for greenhouse gas emissions from light-duty vehicles and trucks. Since you joined EPA, has the Agency notified and sought advice from SAB on any proposed EPA regulations—including HFCs and vehicles—as required by ERDDAA? If so, please provide details on these engagements, including the full list of regulations, the corresponding response from the SAB, and any anticipated future engagement with SAB.

RESPONSE: I am a strong advocate for the development of best available science according to well established scientific practices, including the role of peer review. I would first like to note that the Science Advisory Board Staff Office (SABSO) is part of the Office of the Administrator and, thus, is separate from the Office of Research and Development. Additionally, the process of

development of the regulations referenced above rests with the relevant program office, in this case the Office of Air and Radiation. However, as a member of the EPA Science Advisory Board from 2012 to 2018, I participated in review of the scientific information that informed numerous regulations, with a focus on the science and not the policy. My observation is that the SAB does not engage in a scientific review pertaining to a planned action that is primarily administrative, that is an extension of an existing initiative, or that does not involve novel scientific issues. My observation is also that the SAB typically does not engage in its own review of the science pertaining to a planned action when there has already been fit-for-purpose peer review conducted in accordance with EPA's Peer Review Handbook. If confirmed, I look forward to working with the SAB, and other advisory committees, to obtain their consultation, advice, and review of scientific matters related to ORD.

19. What procedures are being used by EPA to determine which rules to seek SAB advice, to comply with ERDDAA?

RESPONSE: In 2012 to 2013, the EPA and the SAB developed a process to strengthen SAB review of the scientific and technical basis of proposed regulations. In February 2020, EPA Administrator Andrew Wheeler implemented an alternate Regulatory Review Process for the SAB. The Agency is evaluating lessons learned and identifying best practices from the prior processes with a goal to formulate a more robust process that meets the scientific needs of the Agency.

20. Executive Order 13990 directed the Interagency Working Group on the Social Cost of Greenhouse Gases (IWG) to publish final social cost of carbon estimates for greenhouse gases by January 2022. Have you, or any of ORD staff, participated or engaged in any way with the IWG? If so, please detail the extent of the participation, including dates of meetings and subject areas that were discussed.

RESPONSE: ORD has not participated in the Interagency Working Group on the Social Cost of Greenhouse Gases.

21. Please provide a list of who is representing EPA in the IWG, including the title, role of each staff, and how they were selected.

RESPONSE: ORD has not participated in the Interagency Working Group on the Social Cost of Greenhouse Gases. EPA's Office of Policy has the lead role for this issue at EPA.

22. Do you believe revisions to the social cost of greenhouse gases (SC-GHGs) qualify as highly influential scientific information under the Office of Management and Budget guidelines implementing the Information Quality Act and "Highly Influential Scientific Assessment" EPA's Peer Review Handbook?

RESPONSE: ORD has not participated in the Interagency Working Group on the Social Cost of Greenhouse Gases. EPA's Office of Policy has the lead role for this issue at EPA.

23. Do you support submitting the SC-GHG calculations to an independent peer review?

RESPONSE: ORD has not participated in the Interagency Working Group on the Social Cost of Greenhouse Gases. EPA's Office of Policy has the lead role for this issue at EPA.

Senator CARPER. Dr. Frey, thanks very much for your testimony. Thank you both for your testimony and your presence.

We are now ready to begin with the questions for our two witnesses. Senator Capito and I have agreed to two 5 minute rounds of questions with additional rounds at the discretion of the Chair and the Ranking Member.

To begin, this Committee has three standing yes or no questions that it asks all of our nominees who appear before us. So I am going to ask each of you these questions.

First, do you agree, if confirmed, to appear before this Committee or designated members of this Committee and other appropriate committees of the Congress, and provide information subject to appropriate and necessary security protections with respect to your responsibilities?

Do you, Dr. Reed?

Ms. REED. Yes, sir, I do.

Senator CARPER. Dr. Frey?

Mr. FREY. Yes, sir, I do.

Senator CARPER. Second question, do you agree to ensure that testimony, briefings, and documents and other electronic forms of communication or information are provided to this Committee and its staff and other appropriate committees in a timely manner?

Dr. Reed, do you?

Ms. REED. Yes, I do.

Senator CARPER. Dr. Frey?

Mr. FREY. Yes, sir, I do.

Senator CARPER. One more. Do you know of any matters which you may or may not have disclosed that might place you in a conflict of interest if you are confirmed?

Dr. Reed, do you?

Ms. REED. No, sir, I don't.

Senator CARPER. Dr. Frey?

Mr. FREY. No, sir.

Senator CARPER. Dr. Reed, you spent many years as an educator, and one who I am sure has taught and inspired other educators. I love to go into schools. I know my colleagues Senator Capito and Senator Inhofe do as well. I really enjoy school assemblies, even with little kids.

I always remember being in an elementary schools, it was kindergarten to grade 5. They had an assembly with a couple hundred kids. Front row was third grade, and I spoke for a little bit, and then we had a Q and A.

This little girl in the third grade raised her hand. I said, "Yes, ma'am, what would your question be?" She said, "What do you do?" I said, "I'm a United States Senator. We have 50 States, and every State has two Senators. You have rules for your school, don't you?" She said, "Yes." I said, "You have rules on your bus?" She said, "Yes." I said, "You have rules at home?" She said, "Yes." I said, "We have rules for our country. Along with another Senator, Senator Chris Coons and our Congresswoman Lisa Blunt Rochester, I get to help make the rules for the country."

A little boy sitting next to her raised his hand, I said, "Yes, sir, what would your question be?" He said, "What else do you do?"

[Laughter.]

Senator CARPER. I told him that I try to help people, try to help people. And one of the ways we try to help people is to make sure they have clean air to breathe, and water to drink, and on and on.

If those third graders had been asking you what you would be responsible for doing, if you are confirmed for this position, how would you explain it to them that they and their parents and others could have a real appreciation for a position that has basically gone unfilled for I think decades?

Senator Capito talked about this Administration has not filled every seat that could be filled by a nominee. This is a job that has gone decades with nobody, Democrat or Republican, has ever nominated anyone for it. That is about to change—that has changed.

Go ahead, please. What do you do? What would you do?

Ms. REED. Thank you very much for that question, Senator.

I envision having several conversations with many of my former students and their children at this point to let them know that my vision has not changed from when I taught them in school. That is to help them become better citizens, to help their neighborhoods become more conducive to living and learning and growing and prospering.

The Commissions, they all have a purpose. And that is to create strong infrastructure, to create job development environments that are safe, and promote private investments and entrepreneurship and to really get that infrastructure, particularly in looking at broadband in the last mile.

The Commission will work with local leaders at the grassroots level and help them at their level. I have told people time and time again, the closer your government is to you, the more they influence your lives.

So that is the level of influence in which we would help, the Commission would help that level so that lives can be impacted immediately.

Senator CARPER. I am going to ask you to give us some preliminary answers to a question I am going to ask right now. The question is this, and you can answer for the record.

Are there ways that other agencies, or even Congress, even this Committee, might be of help to you as you stand up this Commission and lead it? How can we be helpful?

Ms. REED. Thank you for the question.

Other agencies that will be helpful, particularly your Committee and Congress, first of all, would be the appropriation of funds to help the Commission get off the ground. As we noted earlier, this Commission only exists on paper, so we would need to create small committees to stand up the committee in the southeast region.

Priority will be looking at where to have a presence, where would that presence be as a physical structure, and then move outward in a broad sense to meet those people who are at the table and at the grassroots level.

Senator CARPER. That is a good start.

Let me note, as it turns out there are seven of these regional commissions. This is one we are trying to stand up now.

Ms. REED. Yes.

Senator CARPER. One of them is the Appalachian Regional Commission, which is a big part of West Virginia. The Chair is some-

body you know, Gayle Manchin. Dr. Reed told me she was on the phone talking to Gayle Manchin the other day.

I like to say, find out what works; do more of that. One of the best ways you can do that is reaching out like you did with Gayle Manchin and the other regional commissions to find out what works and what doesn't. I am sure they will be happy to help you.

Ms. REED. Yes, absolutely.

Senator CARPER. Senator Capito.

Senator CAPITO. Thank you.

Senator Inhofe, do you want to go before me?

Senator INHOFE. I appreciate that very much. Thank you for the opportunity to move ahead of you. I have to get over to another committee.

Let me say first of all say, Ms. Reed, unfortunately I only served with your father for a year and a half, but that was a very rewarding year and a half. I consider him to have remained a good friend in that time.

Dr. Frey, the EPA's Robert S. Kerr Research Center, I know you are familiar with that, in Ada, Oklahoma. It has been there for a long period of time. It is leading the Nation on a type of water research known as enhanced aquifer recharge, or EAR for short. They have done a very good job for a long period of time.

As you know, it utilizes natural methods for the capture and replenishment of our Nation's aquifers. For years, Congress has allocated the funding, necessary funding to keep that going.

It was my understanding, and I got this second hand, so I honestly don't know, Dr. Frey, the source. But apparently there has been a hold up in coordinating the local entities as we normally are expecting. Would you make advancing research in this enhanced aquifer recharge a priority if you are confirmed?

Mr. FREY. Yes, thank you, Senator Inhofe. This is obviously an important issue for your State of Oklahoma because the aquifer, the Arbuckle-Simpson Aquifer, in particular, is a major resource for farmers, ranchers, and anyone who drinks water.

Yes, the program you allude to on enhanced aquifer recharge, ORD staff have been working with the U.S. Geological Survey on engineered methods to use stormwater to help recharge the aquifer. As you point out, that is being done at ORD's Ada, Oklahoma, lab.

Yes, this is an important priority for us. It is something that I anticipate and would expect under my leadership that we would continue to work with you on this issue because I know it is important to you and for Oklahoma. It is also important that the same issues are faced in other parts of the country as well.

Senator INHOFE. I appreciate that very much, and that you are familiar with that program.

I understand that you are on a leave of absence from, it is an unpaid academic position you have had with the Hong Kong University of Science and Technology. One Federal watchdog group called this Chinese university "anything short of an arm of the Chinese government."

I am pleased that you have committed to resigning this position with this university should you be confirmed. First, I want to ask you if that would be your intention.

Mr. FREY. Absolutely, sir, yes.

Senator INHOFE. Do you share the concerns that we have that with China's poor record? They are the largest polluter out there, on record, it particularly remains the world's largest polluter, as they still are, today.

What are your thoughts about that? Should that be a factor in your confirmation process?

Mr. FREY. Thank you, Senator Inhofe.

Senator INHOFE. I want to give you a chance to address that because others have talked about it.

Mr. FREY. Yes, and I really appreciate this opportunity.

My involvement with research colleagues in Hong Kong is because as an educator for 27 years, my goal has been to mentor students and to develop new knowledge. It is a very common practice in academia to seek out international collaborations, especially in areas of science where we can deal with challenging scientific issues that help us push the boundaries of our own science.

My relationship with colleagues at the HKUST, the university you mentioned, has been one of research and mentorship of students and collaboration specifically on issues of human exposure to air pollution.

I think we all know that region of the world is facing very severe air pollution. There is actually a lot of interesting science issues there we can learn from to inform best science here in the United States. My work has really been in the realm of the science, not in the realm of the policy or the geopolitical issues that you mentioned.

I will say that when I came onboard in my current role with the EPA 9 months ago, I fully disclosed all of my affiliations, including this unpaid adjunct affiliation. I have been following the advice of our Office of General Counsel at EPA and ethics officials. On that advice, if confirmed, I would resign this unpaid adjunct position.

Senator INHOFE. It has always been a concern to me that many of the extreme groups that are out there hold a great regard for China and their record, and yet they continue to be the greatest polluter around. I have often wondered how they get by with that.

Thank you very much, Dr. Frey.

Mr. FREY. You are welcome, Senator.

Senator INHOFE. And thank you, Senator Capito, for giving me some time up front.

Senator CARPER. Senator Capito, you are next.

Senator Graham, welcome. Once Senator Capito has asked her questions, you will be recognized. You will be next in line. Thank you. Thanks for joining us.

Senator CAPITO [presiding]. Dr. Frey, when we talked on the phone last week, I kind of hit you, I think, with a surprise. I am going to talk about the 2019 research paper of which you were one of many of the authors, that laid out an ideal situation on college football tailgating which would be a ban on idling, charcoal grills, and old generators. Well, we decided this was not realistic.

You did tell me that you grill out at least three times a week, and you are fuel agnostic. Thank you for clarifying that world changing research paper. Because, I can imagine those South Carolina Gamecocks would not be for that either.

[Laughter.]

Senator GRAHAM. That is the only reason we go.

Mr. FREY. Nor the Wolf Pack to be honest.

Senator CAPITO. Nor the Wolf Pack. Yes.

Let's talk a little bit, you wrote a letter to the editor of the Raleigh News and Observer taking on the Clean Power Plan claims. In the letter, you disputed assertions that the Clean Power Plan was "an act of overreach."

You are going to be dealing this and I would imagine are going to be asked to do research in this area. As we know, the Clean Power Plan has fallen and there is speculation, at least we are hearing, that there is going to be something that comes in to fill the space.

Do you believe that EPA acted within its statutory authority when it issued the Clean Power Plan? Should EPA use the Clean Power Act to regulate a power plant's carbon dioxide emissions outside the fence line?

Mr. FREY. Thank you, Senator Capito. Obviously, carbon emissions from power plants are a substantial issue of national environmental interest.

Early in my career, as a Ph.D. student at Carnegie Mellon University, I did research with the U.S. Department of Energy Laboratory in Morgantown, West Virginia, where I was doing techno-economic assessment of clean coal technologies. I have done a little bit of work looking, for example, at carbon capture in some of my research as well. I know this is an important issue.

With regard to the letter you that referenced, a colleague and I were mainly addressing what we viewed as some factual issues in an op-ed that had been published a week or so earlier. We weren't so much getting to the legal authority for the Clean Power Plan. I do know that is an issue of robust debate on the part of multi-stakeholders.

Certainly, if confirmed as an Assistant Administrator for the Office of Research and Development, it is really not my swim lane or space to weigh in on those legal policy issues. My commitment would be to lead ORD to provide the science that is needed to inform those kinds of decisions on the part of our partner program offices that would be considering those legal and policy issues.

Senator CAPITO. I would urge you, should you be in this position, this is where the transparency aspect comes in, not to shield part of the research or part of the science that comes from—maybe sometimes it does not say exactly what the policymakers want it to say. We know that happens frequently. So I would make that plea again for the transparency.

Dr. Clyburn Reed, you mentioned 342 counties in the Crescent. As I spoke about in my opening statement, I have quite a bit of experience with the ARC and the great work it can do. You said a couple things in your opening statement that are important.

First of all was partnerships. A Commission can't do it all. You have to work with your local—all up and down the spectrum from private to public entities. That is good.

The other thing I would say, you mentioned the persistent poverty counties, the 92 counties. You are going to have to prioritize. Obviously if you are starting anywhere, you have to figure out

where you can have the biggest bang for your buck but also make the most, as you said, make the most impact with what you have.

Is that how you would prioritize in terms of the lowest poverty? I would recommend that myself, I guess is what I am saying. Start with the places that you can really make improvements on.

And I liked your talk about broadband in answer to one of the questions. Because that is one way I think that you could see measurable improvements.

Have you thought about these 92 persistently poverty counties? I am sure some are in South Carolina, not everywhere. How would you attack that kind of economic development issue?

Ms. REED. Thank you for that question.

Yes, those 92 counties are really concerning. That is a lot.

Senator CAPITO. Right.

Ms. REED. First, as I have had a conversation with Gayle Manchin in the Appalachian, I will have a conversation with her chief of staff as well as to how they go about prioritizing. We would mirror our actions after what the ARC actually does.

In looking at the needs of my State in particular, one size does not fit all, like I said before. So the grassroots level community leaders working at the State level with the Governor's office, we would come up with a plan that would be conducive to the State that we are in.

Every State will be responsible for doing that, every Governor. We will look at seven different plans, and then we will prioritize those particular counties first, and then move from there.

Senator CAPITO. I would imagine, with your background as an educator, you have a good reach into that aspect of persistent poverty, what is the education availability levels and all those kinds of things I think probably contribute to some of the factors of the high poverty levels.

I will turn now to Senator Graham.

Senator GRAHAM. Thank you both very much, Senator Carper and Senator Capito.

I am here very quickly, because there is a hearing in Judiciary, to give my wholehearted support to Dr. Clyburn Reed for this job. I have known her family quite a while. This is an excellent choice. She will do a great job.

I know the entire family is proud, but all of us in South Carolina are very proud of the fact that you will be the co-chairman of this organization. I just want to thank you for being willing to serve.

Ms. REED. Thank you, Senator.

Senator GRAHAM. I would echo what Senator Capito said. Broadband is a game changer. We have learned from COVID if you can't go to school, and you are stuck at home, and the Internet does not work, your kids fall behind; that telemedicine is the future. Getting to the doctor, you don't have to get on the road as often to get to the doctor. You can consult your doctor if you have the right technology. That keeps people off the highway, keeps us safe, and allows medicine to be done in a new and different way.

As the electric co-ops changed rural America about 75 to 80 years ago, I think broadband is going to be the equivalent of that for the 21st century and beyond.

I want to recognize the work your father has done on this. Jim is here. I know he is here as a proud father, and as a distinguished Member of Congress, and a very well known and respected South Carolinian. I look forward to helping you with this nomination.

When you get the job, I want to do what Senator Capito did, let's put all of our resources into upgrading these rural counties which have been left behind, many of them predominantly African American.

Mr. Frey, I am glad to see you have changed your opinion about charcoaling at ball games. So all is good.

Thank you both.

[Laughter.]

Mr. FREY. Thank you, Senator.

Ms. REED. Thank you, Senator.

Senator CARPER [presiding]. Thanks very much for joining us, Lindsey.

I want to turn now to a question for Dr. Frey dealing with experience and goals for the EPA Office of Research and Development.

Dr. Frey, before joining EPA earlier this year as the Office of Research and Development's Deputy Assistant Administrator for Science Policy, you already had significant experience working with the agency, including 10 years in which you served as a member of the EPA's Scientific Advisory Board, a member for FIFRA's Scientific Advisory Board, and a member and Chair of EPA's Clean Air Scientific Advisory Committee.

How has this experience informed your approach to leading the Office of Research and Development? And what are your goals for this office if confirmed?

Mr. FREY. Thank you, Senator Carper, for that question.

Those experiences that you referenced have been very influential and informative in my preparation, if confirmed for this role through all of those Federal advisory committees that I have served upon. What I have learned from that is how incredibly important it is that the agency have access to the independent, external, scientific advice of world class experts who are leading scientists in their respective fields.

Also, the problems we face transcend so many boundaries, including boundaries of scientific disciplines. We really need all scientists on deck just like we need all hands on deck more broadly.

These committees are an important way that we engage with the external science community in an open and transparent manner, including public comment and the opportunity for our external experts to hear the views of multiple stakeholders and consider that in providing their advice and peer review to the agency. So it is a critical role.

In terms of my priorities, if confirmed, my three biggest priorities, No. 1, ORD has an outstanding career work force. I am so proud to work with the career scientists and all the support folks in ORD. We need to be positioned for emerging challenges and for challenges of the future. So it is critical that with the resources available to us from Congress that we hire scientists in key disciplines that will move us forward, and also that our work force becomes more diversified and that our work force looks more like the America that we are serving.

No. 2, we have so many high priority, urgent scientific challenges from the President, from the Administrator, and what we are hearing from our State stakeholders, tribal stakeholders, community stakeholders, and the scientific community, issues that I think you are all well aware of, climate and environmental justice, PFAS, lead, the aquifer recharge that Senator Inhofe referred to, harmful algal blooms and many, many others. ORD is a national resource, and I would be very proud to lead the science team at ORD to meet the science needs of the country and the agency.

Then the last thing is, we really need to help solve problems, but we have to do so, as Senator Capito alluded to, with credibility. It is important to me that we do our science with integrity and that we develop and translate the best available science to inform all of our partners. We need to do policy relevant science that answers policy questions, but we need to do rigorous, best available science. And that is the role of ORD.

Senator CARPER. Good. Thank you for that.

Dr. Reed, you had a chance to actually take a shot at the question I am going to ask you right now. If you want to amplify on what you said earlier, go ahead.

Here is my question. How does your experience in South Carolina inform your understanding of what the Southeast Crescent Regional Commission can do for communities across the Southeast Crescent Region?

Ms. REED. Thank you for that question.

My experience in South Carolina in education, let's start there first. As an educator, it is my job to do long range plans. Looking at our long range plans as an educator, I make monthly goals, then weekly lesson plans, then daily lesson plans. This is a process that I have done for over 30 years.

So in approaching the activities of the Southeast Crescent Regional Commission, I would start with a strategic plan. And in that strategic plan, then we would outline the needs and the assets of each one of the communities in each one of the States.

Particularly in South Carolina, we have seen how the lack of broadband in several areas has cost us economically. The primary goal of the Commission is economic development. So we would need to fill the gaps in our State and in other States where those gaps are, so that we can grow and prosper economically across the region.

Senator CARPER. All right; great. Thanks for that response.

Senator Capito.

Senator CAPITO. Thank you.

Dr. Frey, I wanted to ask you, I mentioned in my opening statement that there is no nominee for the Office of Air and Radiation. If there were a nominee, I would ask that nominee this question as well.

Apparently, Joe Goffman, who is the current, unconfirmed head of the Air Office, has said that the Administration is working an initiative regarding the power sector. That leaves us all to guess, what is that? It could be a suite of regulations to drive down carbon dioxide emissions by squeezing the power sector through regulations on issues other than carbon dioxide, like emissions, water,

waste. And the net effect being to force coal and perhaps natural gas plants to not only reduce operations but possibly close.

Are you aware of this initiative that is going on under his leadership? Have you provided research assistance on this?

Mr. FREY. Thank you, Senator Capito.

Yes, of course it is the role of ORD to provide scientific support and advice and information to support the work of our program offices. ORD, for example, has the capability to do energy mix modeling and life cycle analysis, and also to look at the health effects related to the operations of the energy sector. These would be the kinds of support that we can provide.

Certainly, there are discussions within the agency on initiatives. But as far as specific details of what the Office of Air and Radiation is considering, I would have to defer to that office, since our focus is on the science and not the policy.

I would be happy to take your question back with me to the agency.

Senator CAPITO. I guess my question too was to your knowledge—at present has this already involved the office of ORD to bring forward specific studies that would help with this regulatory goal? Or are you not aware? Do you want to get back to me on that?

Mr. FREY. I think I would want to get back to you on that to give you an accurate answer.

Senator CAPITO. All right. That sounds good.

Also the Office of Research and Development oversees the Integrated Risk Information Center, known as IRIS. Are you familiar with that?

Mr. FREY. Yes.

Senator CAPITO. Yes. The IRIS program, I guess you must have been alluding to this a little bit, health hazards of certain chemicals, and hazard assessments are then used for health standards. You know this is an issue I am very concerned about as it relates to the PFAS issue.

The GAO has criticized EPA for the length of time to complete an IRIS hazard assessment. The agency has been further criticized because of the lack of usefulness of some of those assessments.

Could you describe to me how you could modernize this system on this program to respond to some of the previous criticism?

Mr. FREY. Yes, thank you, Senator. The IRIS program has been with the agency for well more than a decade, I think longer than that. In my own career, in addition to the service I have had on EPA advisory committees, I have served on a number of National Academy of Science bodies, including the Board of Environmental Studies and Toxicology that has done a number of studies that oversee and provide advice and peer review of IRIS.

I know that over the years, IRIS has undergone maturation as a result of the expert peer review advice from the National Academies. In recent years, the staff have modernized approaches on things that we call systematic evidence mapping and related techniques for assessing the overall body of evidence. This has been based on recommendations from the National Academy of Science.

We also are very mindful that in using resources for this program, we need to complement and not be duplicative of any other

resource use in the agency. And so we do coordinate very closely with our partners in the program offices.

IRIS assessments do serve the needs of science, of really all of the regulatory programs, the Air, Water, Land, and Chemicals Offices. We work very closely with the programs as well as the EPA regions to understand for what chemicals do they see a need for assessment, so that when we do an assessment, it is on a chemical for which they need information that serves a practical purpose.

Senator CAPITO. All right, thank you. Thank you both.

Senator CARPER. I would like to refocus a little bit on PFAS, that is something, an issue that Senator Capito and I have focused on a lot, especially given the challenges they face in West Virginia with PFAS and in many other States, including Delaware around Dover Air Force Base in particular.

As you know, last week Administrator Regan, this is for Dr. Frey, Administrator Regan released a comprehensive strategic road map that lays out the agency's plans to address the complicated challenges of forever chemicals known as PFAS. Considering the role of the Office of Research and Development, I expect that your office would have a significant role in this effort.

My question is, under your leadership, how will the Office of Research and Development support the implementation of EPA's PFAS road map which was announced and laid out earlier this month?

Mr. FREY. Thank you, Senator Carper, for that question.

In the PFAS road map, the very first premise of that is research. And the President and the Administrator are committed to a science informed approach on PFAS. So ORD will certainly have, if confirmed, under my leadership, will have a front and center role on developing the science to support our partners throughout the agency, but also outside the agency. As you allude to, many States are dealing with PFAS, tribal communities, communities in general.

There are three main things that will be my focus. No. 1 is we actually need to develop more methods to measure PFAS in the environment. There are literally thousands of PFAS, and yet there are approved methods for really only a dozen or so. We need to be able to measure them in multiple environmental media. This is one of the research areas where ORD will contribute. This is necessary; we have to measure it to be able to manage it.

The second is ORD is I think leading, providing world class leadership on how to do the toxicity testing so that we can understand the human health and environmental effects of PFAS, recognizing because there are so many PFAS, they are not all the same. We have to account for variations among different PFAS to have effective management schemes.

The third is, we have to know how to manage PFAS. What can we do to remediate PFAS or to treat PFAS in drinking water or waste water or to destroy PFAS. These are technologies that ORD is assessing and providing advice to our partners.

Senator CARPER. You talked earlier about wanting to be guided by science. I think that is great. We hear that; we want to as well. We also want to make sure that we make some progress. The last Administration, I think it is unfair to say we have wasted 4 years,

but we didn't get much done in the last Administration. I am pleased that this Administration has laid out a road map. Senator Capito, myself, and others on this Committee are anxious to make sure that we make real progress in the next months as well as the coming year.

How to save a life? There are a lot of ways we can save a life. One of the ways we can save a life is to make sure we focus on PFAS and getting it right, and we are intent on doing that.

I have maybe one last question and then will yield to Senator Capito for any last questions or comments that she wants to make.

Let's talk a little about tribal nations. We work on this Committee a fair amount with tribal nations which was a surprise to me when I joined the Committee, but it is a pleasure and privilege. If you are confirmed, how will the Office of Research and Development work with tribal nations across our country to improve the natural environment and health of indigenous Americans?

Mr. FREY. Thank you, Senator.

You alluded to my current role at ORD. I have been with the agency for about 9 months. One of my priorities in coming onboard has been to engage with tribal communities and tribal representatives.

I am really proud that the Office of Research and Development has a Tribal Science Council. We have a collaborative model of working in partnership with tribal representatives from across the country on identifying science issues and working together with tribal scientists to address those issues.

Certainly, we are hearing from our tribal partners about climate change, environmental justice issues, water resources. We also have to recognize the importance of traditional ecological knowledge and tribal lifeways as factors that are important to Tribes in identifying problems Tribes think are important. We have to be careful not to assume that in our offices in Washington, we know the answers that the Tribes need. It is very important that we engage with Tribes.

I mentioned in my opening remarks that my leadership will start with listening. I have been listening to the Tribes. As part of our research planning efforts, which are actually ongoing at this time, we will be doing formal consultation with Tribes to internalize their concerns into our research agenda.

Senator CARPER. Thank you.

Senator Capito, any last thoughts or questions you would like to add?

Senator CAPITO. No. I would just like to thank both of you for being here and your families and your support. Again, I just want to express my gratitude for your willingness to serve. Thank you.

Mr. FREY. Thank you, Senator.

Senator CARPER. I would say I want to second that emotion.

I want to thank you both for being here today.

Dr. Reed, it is a real pleasure to see you in person.

Dr. Frey, thank you for being here today and teaching us how to pronounce your name.

[Laughter.]

Mr. FREY. Thank you, sir.

Senator CARPER. We are grateful for both of you and your willingness to serve our country, especially at a time when we are addressing our Nation's environmental challenges. There are plenty of them. Also, fostering economic development is so critical.

Dr. Reed, I spent some time as Governor, actually before that, focusing on job creation and job preservation. The Appalachian Regional Commission, a lot of that Commission is included in the State that Senator Capito represents, the State I was born in.

I mentioned to you when we spoke earlier this week, Governors don't create jobs, Senators don't create jobs, Presidents don't create jobs, even Chairs of regional commissions don't create jobs. But we help create a nurturing climate for job creation.

I mentioned the Center for Automotive Excellence in southern Delaware. It is housed at the Delaware Technical Community College campus. It is a partnership that involves auto dealers, poultry industry folks, the Economic Development Administration, Sussex County, State of Delaware, all of the above. It is like we tied our ropes, pieces of rope, tied them together to create a community rope. That is the best economic development I have seen is where we do that as a partnership.

You are going to have an opportunity to help provide some of the rope and help tie those ropes together. Make the most of that.

Again, I want to say to your families who are here, particularly to your dad, Dr. Reed, it is great to see him. I want to thank him and your mom for raising you and preparing you for all these opportunities you have had.

I would say again to Chris Frey, Dr. Frey, I know your wife is here. Thank you for our willingness again to share your husband. Is that your daughter over your right shoulder? What is her name?

Mr. FREY. Loren.

Senator CARPER. Loren, very nice to see you. Thank you for joining us. You have done a really good job raising your dad. You can be proud of the way he has turned out.

[Laughter.]

Senator CARPER. If I could be serious for a moment, it is not hard to understand why the President has nominated each of you for these important positions. Our hope is that you can be confirmed without delay so that you can go to work and assemble your teams. One of the most important things to do is assembling the team.

You have a great opportunity, Dr. Reed, to put together a team. It is like having a blank board. Make the most of it. Find the best people you can, and surround yourself with them.

Before we adjourn, we have a little bit of housekeeping. I want to ask unanimous consent to submit for the record a variety of materials that includes letters from stakeholders and other materials that relate to today's nomination.

Is there objection?

Hearing none, so ordered.

[The referenced information follows:]

October 20th, 2021

The Honorable Thomas R. Carper
Chairman
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

The Honorable Shelley Moore
Ranking Member
Committee on Environment and Public Works
United States Senate
Washington, D.C. 20510

Dear Chairman Carper and Ranking Member Moore,

As former Assistant Administrators of the Office of Research and Development (ORD) of the U.S. Environmental Protection Agency, we write in support of the nomination of Henry Christopher Frey of North Carolina to be the ORD Assistant Administrator.

The ORD Assistant Administrator role is a vital one for EPA and serves as the highest ranking scientist in the agency. The person in this position directs the development and translation of the best available policy-relevant science needed in the short, medium, and long-term to inform Agency decisions, consistent with the Agency's information quality, peer review, and scientific integrity policies. In spite of the importance of this position, ORD has not had a confirmed Assistant Administrator since 2012. Confirmation of Dr. Frey will demonstrate commitment to scientific integrity, and the role of best available science to inform policy.

Dr. Frey is an outstanding candidate for this position. His career includes periods where he worked closely with both industry and government. For 27 years preceding his current appointment as ORD's Deputy Assistant Administrator for Science Policy, he was on the faculty at North Carolina State University. At NC State, he rose to a chaired distinguished university professorship in recognition of his outstanding scientific accomplishments and leadership. He is recognized internationally for his significant contributions to quantitative risk assessment, probabilistic technology assessment, air pollution emissions measurement and modeling, and measurement and modeling of human exposure to air pollution. He has extensive prior service with the EPA. Dr. Frey was an AAAS/EPA Environmental Science and Engineering Fellow in 1992. He served as exposure modeling advisor in ORD's National Exposure Research Laboratory from 2006 to 2007. He was a member of the EPA FIFRA Scientific Advisory Panel (2004 to 2006), a member of the EPA Clean Air Scientific Advisory Committee (CASAC) (2008 to 2012), chair of CASAC (2012 to 2015), and a member of the EPA Science Advisory Board (2012 to 2018). He was a member of the CASAC Particulate Matter Review Panel that was dismissed in 2018; under his leadership, the panel reconvened as the Independent Particulate Matter Review Panel. Dr. Frey's leadership has been recognized via numerous invited roles on prestigious national and international science panels. Dr. Frey is a Fellow of the Air & Waste Management Association (A&WMA) and of the Society for Risk Analysis (SRA), served on the A&WMA Board of Directors (2015-2018), and was President of SRA in 2006. He received the Chauncey Starr Award in recognition of exceptional contributions to the field of Risk Analysis from the Society for Risk Analysis in 1999, the Lyman A. Ripperton Award from A&WMA in 2012, and the Frank A. Chambers Award from A&WMA in 2019. Dr. Frey has also received the Distinguished Engineering Research Award from the ALCOA Foundation

and the Lionel Ripperton Environmental Educator Award from the Air and Waste Management Association.

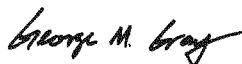
Yet, what makes Dr. Frey an outstanding candidate is his unique combination of leadership acumen, including listening, communication, and administrative skills, in combination with unparalleled integrity. He is open-minded and balanced. Based on training and his years of interdisciplinary collaboration and leadership, Dr. Frey has a unique ability to comprehend, distill, and integrate input from scientists of widely varying disciplines to address complex policy-relevant scientific questions. Dr. Frey is a skilled listener. He carefully considers all sides of a scientific debate, even when they may contradict his initial opinions and conclusions. Furthermore, he explicitly recognizes and considers the decision context, so that the science is focused on answering questions relevant to informing decisions. EPA career staff who have worked with Dr. Frey praise his commitment to scientific integrity, well-established scientific approaches, commitment to working collaboratively with academics, industry and all stakeholders within and outside the agency, and development of the best available science to inform decisions that protect human health and the environment.

For all of these reasons and more, we, the undersigned, offer our strong support for the confirmation of Henry Christopher Frey to be the ORD Assistant Administrator and urge both the Committee and the full Senate to approve his nomination as rapidly as possible.

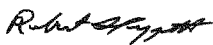
Respectfully,



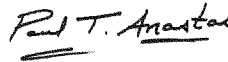
Dr. Bernard Goldstein
(EPA Assistant Administrator ORD 1983-1985)



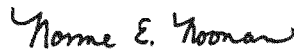
Dr. George M. Gray
(EPA Assistant Administrator ORD 2005-2009)



Dr. Robert J. Huggett
(EPA Assistant Administrator ORD 1994-1997)



Dr. Paul T. Anastas
(EPA Assistant Administrator ORD 2009-2012)



Dr. Norine E. Noonan
(EPA Assistant Administrator ORD 1998-2001)



Dr. Thomas A. Burke
(EPA Assistant Administrator ORD 2015-2017)
(twice nominated but not confirmed)



Dr. Paul Gilman
(EPA Assistant Administrator ORD 2001-2004)

Senator CARPER. Senators will be allowed to submit questions for the record through the close of business on Wednesday, November 3rd, 2021. We will compile those questions, send them to our witnesses, and ask our witnesses to reply by Wednesday, November 10th.

With that, this hearing is adjourned. Thank you all.

[Whereupon, at 11:14 a.m., the Committee was adjourned.]

